



2022-23 CATALOG



ACCREDITATION

Mt. San Antonio College is reviewed and accredited by the Accrediting Commission for Community and Junior Colleges (ACCJC) of the Western Association of Schools and Colleges. This accreditation authorizes the College to offer courses that parallel the first two years of the curricula for state universities. The ACCJC can be contacted by phone at **(405) 506-0234** or in writing at:

10 Commercial Boulevard, Suite 204
Novato, California 94949

Catalog Content Changes

Mt. San Antonio College has made every effort to ensure the accuracy of the information in this Catalog. Students and others should note that policies, rules, procedures, and regulations change and that these changes may alter the information in this publication. This Catalog is not intended to be a complete statement of policies, rules, procedures, and regulations. More current or complete information may be obtained from the appropriate administrative office.

The College reserves the right to change, without notice, any academic or other requirement, course offering, or course content contained in this Catalog.

The Catalog does not constitute a contract or terms of a contract between the student and the College.

Mt. San Antonio College
1100 North Grand Avenue
Walnut, California 91789

(909) 274-7500

Mt. San Antonio College (<http://www.mtsac.edu/>)

PRESIDENT'S MESSAGE

Welcome to Mt. San Antonio College!

Your educational journey is one of the most important you will take in your lifetime. As you can see in the *2022-2023 College Catalog*, we are your unwavering partner in success. This catalog is a compilation of courses, programs, support services, degree offerings, and transfer information that you will need to chart your course to academic success. All of this represents our commitment to provide you the finest education and support services.

In this catalog, you will find more than 200 degree and certificate programs, as well as a full range of basic skills and personal development courses. I encourage you to use the catalog as your planning resource guide to explore the vast scope of opportunities, services, and programs that Mt. SAC offers.

You will find a rich array of university transfer, career, and degree programs that can empower you with the knowledge and skills needed to succeed in a diverse and interconnected world. Be assured that our curriculum is in step with the fast-changing needs of today's dynamic employment sectors.

To the many freshmen who will enter Mt. SAC this fall, and to all returning students, we welcome you with open arms and wish you much success as you now become a part of our legacy of excellence.

Dr. William T. Scroggins

President & CEO

Board of Trustees

Judy Chen Haggerty, Esq.

Gary Chow

Dr. Manuel Baca

Robert Hidalgo

Laura Santos

Peter Hidalgo

Jay Chen

Juan Mendoza - Student Trustee

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The COLLEGE



THE COLLEGE

Mt. San Antonio College (Mt. SAC) is a public community college that offers a diversified educational program designed to prepare students for success in today's diverse economic, professional, technical, and cultural sectors. The objectives of the education program are to:

- prepare students for transfer to baccalaureate-level colleges and universities;
- increase vocational competence resulting in usable and marketable occupational skills;
- provide a general education emphasizing basic skills and appreciation of our shared scientific, technological, historical, and artistic heritage;
- promote continuing education and lifelong learning;
- assist the student through guidance to know and develop his/her abilities in relation to his/her potential; and
- provide community service and adult education.

The College offers courses of study through a semester system. Each semester, fall and spring, is 16 weeks in length, while summer and winter sessions are six weeks long. Many courses are offered in an accelerated mode.

History

The Mt. San Antonio Community College District was created in December, 1945, when voters of four local high school districts approved the formation of a community college district. Initially known as Eastern Los Angeles County Community College, the institution was later renamed Mt. San Antonio College after the most visible snow-capped mountain (popularly known as Mt. Baldy) in the distance behind the campus.

The 421-acre campus was originally part of the 48,000-acre La Puente Rancho. During World War II, the facility was converted into an Army hospital and later a Navy hospital.

Mt. SAC opened in the fall of 1946 with 635 students occupying a few Spanish-tiled buildings and temporary Navy barracks clustered below the San Jose Hills. Walnut, not yet an incorporated city, consisted of very little except dirt roads, cacti, and grasslands covered in the spring with wild mustard grass.

Not surprisingly, the growth of Mt. SAC has mirrored that of the local area. The College now serves the communities of Baldwin Park, Bassett, Charter Oak, Covina, Diamond Bar, the southern portion of Glendora, Hacienda Heights, City of Industry, Irwindale, La Puente, La Verne, Pomona, Rowland Heights, San Dimas, Valinda, Walnut, and West Covina.

Mt. SAC has emerged as a leader in education not only in the San Gabriel Valley, but in the state. It is California's largest, single-campus community college with a combined Credit, Continuing Education, and Community Service student enrollment of over 65,000.

While maintaining low fees, the college provides advanced academic training and state-of-the-art laboratories thanks to community support of more than \$500 million in bonds for campus facilities. Powered by dedicated teams of faculty, staff, and administrators, the College remains committed to keeping college within reach, providing quality programs

and services, as well as building an environment for educational excellence throughout the 21st century.

Mission, Vision, and Values

Mission Statement

The mission of Mt. San Antonio College is to support and empower all students in achieving their educational goals in an environment of academic excellence. Specifically, the College is committed to providing quality education, services, and workforce training so that students become contributing members of a diverse, sustainable, global society. The College pledges to serve students so that they may achieve their full educational potential for lifelong learning, for attaining associates degrees and certificates, for employment, and for the completion of career and transfer pathways. The College will carry out this commitment by providing an engaging and supportive teaching and learning environment for students of diverse origins, experiences, needs, abilities, and goals. The College is dedicated to serving our community through improving economic achievement, advancing civic engagement, enhancing personal well-being, developing critical thinking, and enriching aesthetic and cultural experiences.

Vision Statement

Mt. San Antonio College strives to be regarded as one of the premier community colleges in the nation. We will be viewed as a leader in community college teaching, programs, and services. We will provide access to quality educational programs and services, focusing on student success within a climate of integrity and respect. We will earn this reputation by consistently exceeding the expectations of our students, our staff, and our community.

Core Values

- **Integrity:** We treat each other honestly, ethically, and respectfully in an atmosphere of trust.
- **Equity and Diversity:** We value diversity in all aspects of the human condition. We pursue equity by reevaluating how we empower each person to achieve their success.
- **Community Building:** We work in responsible partnerships through open communication, caring, and a cooperative spirit.
- **Student Focus:** We address the basic human and academic development needs of students and the community both in our planning and in our actions.
- **Social Justice:** We serve the whole person by choosing restorative justice over discipline, offering wellness and behavioral support instead of exclusion, and creating an atmosphere of safety and support, not one of apathy.
- **Lifelong Learning:** We promote the continuing pursuit of high educational goals through equal access to excellence in both teaching and support services.
- **Positive Spirit:** We work harmoniously, show compassion, and take pride in our work.
- **Effective Stewardship:** We sustain and improve the institution and environment by efficiently using resources of time, talent, facilities, and funds.
- **Sustainability and Restoration:** We collaborate to maintain environmentally conscious practices, and we employ a restorative mindset to prioritize the planning and implementation of activities that improve the environment and make it whole.

COLLEGE ORGANIZATION

Board of Trustees

College Organization	Name
President	Judy Chen Haggerty, Esq.
Vice President	Gary Chow
Clerk	Dr. Manuel Baca
Member	Robert Hidalgo
Member	Laura Santos
Member	Peter Hidalgo
Member	Jay Chen
Student Trustee	Juan Mendoza
College President & CEO	Dr. William Scroggins

Administrative Services (909) 274-4230

College Organization	Name
Vice President, Administrative Services	Morris Rodrigue
Associate Vice President, Administrative Services	Vacant
Director, Accounting	Jackson Kuo
Director, Fiscal Resources	Marisa Ziegenhohn
Director, Payroll	Richard Lee
Director, Purchasing, Printing, and Mail Service	Angelic Davis
Coordinator, Cashier's Office	Gabriela Sesma
Director, SacBookRac, Bookstore	Suzanne Luetjen
Executive Director, Facilities Planning and Management	Gary Nellesen
Director, Maintenance and Operations	Ken Bohan
Assistant Director, Facilities Planning & Management	Bill Asher
Assistant Director, Maintenance and Operations	Ken McAlpin
Special Projects Director, Project Accounting	Valerie Arenas Rey
Senior, Construction Project Manager	Gary Gidcumb
Senior, Construction Project Manager	Carol Minning
Senior Construction Project Manager	Roger Sneed
Manager, Construction Projects	Patty Leon Encalade
Manager, Construction Projects	Fernan Siocon
Manager, Energy Projects	Vacant
Senior, Facilities Planner	Vacant
Manager, Special Projects	Vacant
Special Project Director	Kara Dannenbring
Special Project Director	John Gaston
Special Project Director	Alan Kinkaid
Special Project Director	Michael Ostby
Special Project Director	Maritza Valenzuela

Special Project Coordinator	Joseph Carbajal
Special Project Coordinator	Nafiseh Kaeni
Chief Technology Officer	Anthony Moore
Director, Enterprise Application Systems	Antonio Bangloy
Assistant Director, Enterprise Application Systems	Chuong Tran
Director, Academic Technology	Michael Carr
Assistant Director, Academic Technology	Pedro Luis Suarez
Director, Infrastructure and Data Security	Chris Schroeder
Director, IT Project Implementation	Monica Cantu-Chan
Assistant Director, Web and Portal Services	Eric Turner
Manager, Technical Support	Lee Jones
Chief, Police and Campus Safety	Michael C. Williams
Deputy Chief, Police and Campus Safety	Vacant
Director, Technical Services	Kevin Owen

Human Resources (909) 274-4225

College Organization	Name
Vice President, Human Resources	Dr. Sokha Song
Associate Vice President, Human Resources	Tika Davé-Smith
Director, Human Resources Operations & Employee Services	Alexis Carter
Director, Equal Employment Opportunity (EEO), Title IX, & Leaves Administration	Ryan Wilson
Acting Director, Professional & Organizational Development	Lisa Rodriguez
Acting Assistant Director, Professional & Organization Development	Lizette Henderson

President's Office (909) 274-4250

College Organization	Name
Director, Marketing & Communication	Uyen Mai
Director, Public Affairs	Jill Dolan
Executive Director, Mt. SAC Foundation	Bill Lambert

Instruction (909) 274-4200

College Organization	Name
Vice President, Instruction	Kelly Fowler
Associate Vice President, Instruction	Dr. Meghan M. Chen
Dean, Instruction	Sylvia Ruano
Acting Director, Dual Enrollment	Marlyn Holt
Acting Assistant Director, Dual Enrollment	Marisa Fierro
Dean, Arts Division	Mark Lowentrout

Associate Dean, Arts Division	Michelle Sampat, JD
Dean, Business Division	Jennifer Galbraith
Associate Dean, Business Division	Dr. Fawaz Al-Malood
Director, Child Development Center	Tamika Addison
Assistant Director, Child Development Center	Guadalupe Hernandez
Director, Career Education	Dejah Swingle
Director, Center of Excellence	Luke Meyer
Assistant Director, Center of Excellence	Juan Madrigal
Dean, Humanities and Social Sciences Division	Dr. Karelyn Hoover
Associate Dean, Humanities and Social Sciences Division	Lance Heard
Director, Writing Center	Trista Payte
Director, Honors	Vacant
Dean, Kinesiology, Athletics and Dance Division	Joe Jennum
Associate Dean, Kinesiology, Athletics and Dance Division	Tamara Knott-Silva
Dean, Library and Learning Resources Division	Dr. Romelia Salinas
Director, Learning Assistance Center	Dr. Kristina Alvarado Grassman
Dean, Natural Sciences Division	Matthew Judd
Associate Dean, Natural Sciences Division	John Vitullo
Dean, Technology and Health Division	Sam Agdasi
Associate Dean, Technology and Health Division	Sarah Plesetz
Director, Grants	Adrienne Price
Director, Research and Institutional Effectiveness	Dr. Patricia Quiñones

School of Continuing Education (909) 274-4220

College Organization	Name
Provost, School of Continuing Education	Dr. Madelyn Arballo
Dean, Continuing Education and Workforce Development	Dr. Tami Pearson
Associate Dean, Continuing Education Programs and Services	Dr. Liza Becker
Manager, Noncredit Workforce	Shannon Rider
Director, Adult Education	Lesley Johnson
Assistant Director, Adult Basic Education	Dr. Omideh Miri
Director, Education for Older Adults & Adults with Disabilities	Sage Overoye
Director, English Language Learners	Jody Fernando
Manager, ESL Instructional Support	Katalin Gyurindak
Director, Community and Contract Education	Vacant
Assistant Director, Community and Contract Education	Debbie Wong
Director, Off-Campus High School	Angelena Pride

Director, Short-Term Vocational	Diana Lupercio
Special Project Manager, Noncredit Engagement	Laura Sherwood
Special Project Manager, Accreditation	Dr. Minerva Avila
Manager, Regional Adult Education Consortium	Vacant

Student Services (909) 274-4505

College Organization	Name
Vice President, Student Services	Dr. Audrey Yamagata-Noji
Associate Vice President, Student Services	Thomas Mauch
Associate Dean, Student Engagement	Tannia Robles
Director, Outreach and Entry Services	Vacant
Director, Promise+Plus	Vacant
Director, Financial Aid	Manuel Cerda
Assistant Director, Financial Aid	Jenny Phu
Manager, Financial Aid & Special Programs	Desiree Marquez
Manager, Financial Aid & Special Programs, Outreach and Inreach	Rosario Esparza
Dean, Student Services	Dr. Koji Uesugi
Director, CalWORKS	Dr. LaTasha Hagler
Director, Extended Opportunity Programs and Services (EOPS/CARE)	Dr. Julie Marquez
Director, Student Life	Dr. Andrea Fejeran Sims
Assistant Director, Student Life	Alejandra Gonzalez
Dean, Counseling	Dr. Francisco Dorame
Associate Dean, Counseling	Lina Soto
Director, Center for Black Culture & Student Success Umoja Aspire Program	Clarence Banks
Director, El Centro	Vacant
Director, Rising Scholars	Vacant
Director, Transfer Center	Marci Matsushita-Sanchez
Director, TRIO Programs	Victor Rojas
Dean, Enrollment Management	Dr. George Bradshaw
Assistant Director, Admissions and Records	Patricia Montoya
Director, International Students	Dr. Christopher Dickson
Student Services Manager, Admissions and Records	Maria Macedo
Dean of Access and Wellness	Malia Flood
Director, Deaf and Hard of Hearing Services	Vacant
Director, Health Services	Vacant
Associate Dean of Student Success and Equity	Dr. Eric Lara
Director, Arise Program	Dr. Aida Cuenza-Uvas

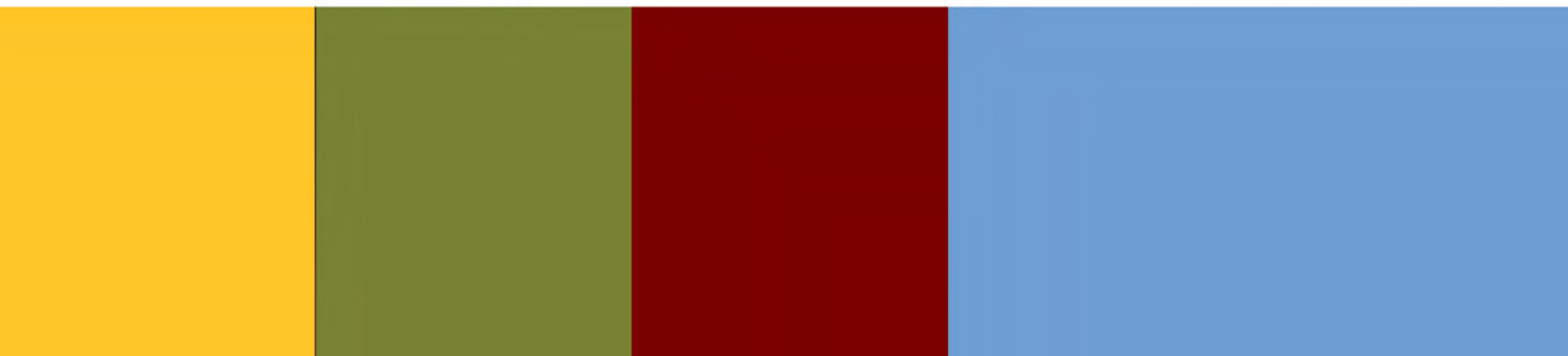
Director, DREAM Dario Fernandez

Director, REACH Guardian Scholars Jeze Lopez



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**STUDENT SUCCESS and
SUPPORT PROGRAMS**



STUDENT SUCCESS AND SUPPORT PROGRAM

Recognizing that student success is the responsibility of both the college and the student, the Student Success and Support Program was established to assure that students who attend a California Community College are given the best possible opportunity to succeed in accomplishing their academic goals. To accomplish this, the college will assure that appropriate services are provided to students to enhance their success. As a student, you must identify your academic goal and course of study as well as complete required core services including Assessment, Orientation, and Educational Planning. Follow the Steps to Apply & Register below to begin your academic career including information on the services you are required to participate in. This information can also be found in the student portal (<https://my.mtsac.edu>) in the "Student Success" tab.

Step 1 – Apply to Mt. SAC

Complete and submit a Mt. SAC Admission Application (<http://www.mtsac.edu/apply/>) for the term you wish to be taking classes. Computers are available in the Student Services Center for your convenience. For further information, contact Admissions Office at (909) 274-4415 or visit the Admissions Office website (<http://www.mtsac.edu/admissions/>) for important information and dates and deadlines.

Mountie Fast Track Info Session

Got questions? These Information Sessions were created to answer student questions and assist students in getting started at Mt. SAC! Register online at Fast Track Info Sessions (<http://www.mtsac.edu/fasttrackinfosessions/>).

Step 2 – Complete the Assessment Questionnaire

All Mt. SAC students are required to participate in assessment for course placement. The assessment and placement process has been established to enable all students the opportunity to be successful in their coursework and this is done through the Assessment Questionnaire (AQ). Please go to the Assessment Questionnaire (<https://www.mtsac.edu/aq/>). Upon completion of the AQ, you will be given your course placement in English, math and reading or will be advised on your next step in the assessment process. For further information, contact the Assessment Center at (909) 274-4265, or visit the Assessment Center website (<http://www.mtsac.edu/assessment/>).

Step 3 – Complete the New Student Online Orientation

The Mt. SAC online orientation is designed to help students transition to Mt. San Antonio College. Orientation will provide information about college life, educational planning and goals, student services, academic services, special programs, student conduct, and safety rules/regulations. Access the online orientation by logging into the Mt. SAC student portal account (<https://my.mtsac.edu>) and click on the "Student Success" tab. For further information, contact the Counseling Center at (909) 274-4380 or visit the Counseling Center website (<https://www.mtsac.edu/counseling/orientation.html>).

Step 4 – Apply for Financial Aid

Mt. SAC offers a variety of financial aid programs funded by federal and state agencies and private sources, including grants, fee waivers, work-study opportunities, scholarships, and loans. The Financial Aid Office can help with the application process and can be contacted at (909) 274-4450 or visit the Financial Aid Office (<http://www.mtsac.edu/financialaid/>).

Step 5 – Attend a Mountie Academic Planning Workshop (MAP) and Get Counseling

At the MAP workshop, a counselor will review your course placement and make recommendations based on the Assessment Questionnaire (AQ) and/or test scores including Advanced Placement (AP) or International Baccalaureate (IB) exams. Counselors will help you select courses based on your academic and career goals. Based on your placement, a counselor will help you develop your first semester course plan by helping you select the appropriate English, math, reading, general education, and major-specific courses needed to reach your educational goal.

Students new to Mt. SAC that have attended other colleges, or have an Associate's or Bachelor's degree do not need to attend a MAP Workshop. Schedule an appointment with a counselor to review your transcripts and discuss your goals.

Counselors are available to help if you:

1. are undecided about your major or career goal,
2. need assistance in planning your educational and/or career goal,
3. need assistance in choosing a university or college for transfer, or
4. have personal problems that impact your college success.

A MAP workshop is recommended but not required for you to be eligible to register.

You can connect with a counselor by visiting the Counseling Center located in the Student Services Building (9B) Second Floor or call (909) 274-4380 or visit the Counseling website (<http://www.mtsac.edu/counseling/>).

Step 6 – Register Online

Register online, based on your assigned registration date/time. Check your registration date by logging into your student portal account (<https://my.mtsac.edu>) and going to the "Student" tab. You will find your registration date under the #8 Registration Appointment/Hold" link one week before registration begins. For directions on how to add classes, visit Admissions_Register. (<https://www.mtsac.edu/admissions/register-for-classes/>)

Step 7 – Pay Fees

You can pay your fees online through your student portal (<https://my.mtsac.edu/>), under the "Student" tab, link "#25 Pay Fees", in person at the Cashier's Office (formerly Bursar's Office, Lower Level - Bldg. 4), by mail or through drop box. For information regarding fee payment options and payment policies, please visit the Cashier's Office website (<https://www.mtsac.edu/cashier/>), call the Cashier's Office at (909) 274-4960, or reference the Schedule of Classes.

Admission and Registration

Admissions

Any person who is 18 years old and not currently enrolled in High School or any person possessing a high school diploma or its equivalent is eligible for admission to Mt. San Antonio College (Mt. SAC). To gain admission to Mt. SAC prospective students must file an application for admission and submit transcripts from all high schools or college(s) they previously attended. It is the student's responsibility to request official transcripts from the last high school attended and any college(s) attended. Transcripts will be reviewed to determine eligibility for courses at Mt. SAC.

Application to the College

All inquiries regarding credit admission to the college should be directed to the Admissions and Records Office. Filing a college application is required for admission to Mt. SAC.

Applications to take credit courses are submitted online. To access the online application, visit the Mt. SAC Admissions (<http://www.mtsac.edu/admissions/>) website and click on Apply Now button.

Application assistance is offered through the Admissions and Records Office (Student Services Building 9B 1st Floor) in English, Spanish, Vietnamese, Chinese, and Sign Language. Information is also available in alternative formats (Braille, enlarged text, e-text, etc.).

Concurrent Enrollment

Concurrent Enrollment allows high school students to take high school courses and college credit courses at the same time. We offer two concurrent enrollment programs, Dual Enrollment and Special Admit.

Special Admits (K-12th Grade)

The Special Admit Program is designed for high school sophomores (10th grade), juniors (11th grade), and seniors (12th grade) who would benefit from enrolling in advanced scholastic or vocational work at Mt. SAC. Students must submit a college application and a special admit application each term.

Students must meet the following criteria to participate in the Special Admit Program:

- a. Be recommended by their high school's principal or counselor;
- b. Be approved to participate by a guardian;
A Guardian Approval Form allowing the student to participate in the Special Admit Program must be submitted as part of the application process. A guardian must acknowledge that their student will be instructed in an adult environment and that the student will be expected to adhere to all college policies, rules, and regulations.
- c. Have a 3.0 cumulative high school grade point average or higher and enroll in a degree appropriate course, or a 2.0 or higher GPA for a vocational course;
- d. Meet all course prerequisites and/or co-requisites.

Visit the Special Admit (<http://catalog.mtsac.edu/registration-policies/admission-registration/www.mtsac.edu/specialadmit/>) website for more information and to access the Special Admit application packet.

Students who were previously enrolled and dropped their courses and/or did not make satisfactory progress may not be allowed to continue with their participation in the Special Admit Program.

Highly-gifted students enrolled in K-9th grade may be considered for limited enrollment. To participate, students must meet all of the same criteria required for 10th, 11th, and 12th grade Special Admit students.

All high school students will be required to attend a Special Admit orientation prior to registering for a Mt. SAC Course.

College credit will be earned as a result of taking courses at Mt. SAC and grades for those courses will become part of the student's permanent college record. High school credit may be possible at the discretion of the receiving high school. Students are advised to contact their high school counselor about receiving high school credit.

Only college-level courses may be taken as part of the Special Admit Program. Students needing to make up a high school deficiency

can apply to participate in the High School Referral Program. For more information, contact the Continuing Education Center at (909) 274-4937 or visit High School Referral Program (<https://www.mtsac.edu/highschoolreferral/>). Students who intend to continue enrollment at Mt. SAC after high school will have to reapply to Mt. SAC and may need to change their status with the Office of Admissions and Records.

Dual Enrollment (10th, 11th, and 12th grade)

The Dual Enrollment Program provides high school sophomores (10th grade), juniors (11th grade), and seniors (12th grade) the opportunity to take college-level courses at a Mt. SAC partnering high school campus. Students must submit a college application and a dual enrollment application.

Students must meet the following criteria to participate in the Dual Enrollment Program:

- a. Attending one of the partnering high school campuses;
- b. Seek guidance and approval from partnering high school liaison;
- c. Complete Dual Enrollment packet;
Guardian approval allowing the student to participate in the Dual Enrollment Program. Guardian must acknowledge that their student will be instructed in an adult environment and that student will be expected to adhere to all college policies, rules, and regulations.
- d. Meet all course prerequisites and/or co-requisites.

Dual Enrollment applications and enrollment steps can be obtained by going to the Dual Enrollment website (<https://www.mtsac.edu/dualenrollment/>).

All Dual Enrollment students and guardians are provided with program orientation to provide them with regulations and expectations of being a Mt. SAC student.

College credit will be earned as a result of taking a dual enrollment course at their partnering high school. Grades for those courses will become part of the student's permanent college record. High school credit will be determined at the discretion of the receiving high school.

Dual Enrollment offers courses that are part of a pathway, college-level academics, and/or Career and Technical Education (CTE).

Students will work with their high school to become a student in the Dual Enrollment Program. Visit the Dual Enrollment website (<https://www.mtsac.edu/dualenrollment/>) for more information.

Evaluation of Other College Coursework

Mt. San Antonio College reserves the right to evaluate work completed at other regionally accredited colleges and universities. Transfer students with acceptable grades will be granted advanced standing insofar as the work corresponds with the curriculum of this institution or the lower-division work offered in regionally accredited colleges or universities. Each applicant should file with Admissions and Records an official transcript of their records from all colleges and universities previously attended. For information regarding military credit, see Section 3 in this Catalog.

It is the student's responsibility to request the evaluation of official transcripts from other colleges. Students will need to request an evaluation upon submission of their graduation petition. This may be accomplished by submitting a completed "Evaluation Request" form at Admissions and Records.

Students planning to use courses taken at other colleges for placement in Mt. San Antonio College courses who did not have transcripts sent to Admissions and Records Office must bring official copies of their transcripts to the Admissions and Records Office to be reviewed prior to placement being granted.

Transcripts submitted for admission become the property of Mt. San Antonio College and will not be returned to the applicant or forwarded to other institutions.

Acceptance of Domestic Coursework from Accredited Colleges & Universities in the U.S.

The College will accept "degree appropriate" or "baccalaureate" level courses from regionally accredited colleges and universities in the United States. These course units will, at a minimum, be granted "elective credit" status.

To determine General Education and/or Associate Degree equivalency and for granting of unit credit, the course must be easily identifiable as the equivalent course taught at Mt. San Antonio College by a commonly used course prefix, title, and description. To be verified, sufficient information, including prerequisite information, must be available from the regionally accredited college/university to substantiate granting course equivalency and course credit. The College reserves the right to deny acceptance of any course for the purpose of General Education, Associate Degree graduation requirements, or subject requirements. If denied, the student may petition for an in-depth evaluation but will be required to provide official course information from the institution of record or from the college/university catalog.

To determine "subject" requirements for an established vocational program, the course must be evaluated by a representative from the respective academic department in which the major resides. If the course is determined acceptable as a substitution for a required course in the program, the department representative will complete a "variance" form verifying this acceptance and send the complete the paperwork to the Admissions and Records Office.

Acceptance of International Coursework from Accredited Colleges & Universities outside the U.S.

Mt. San Antonio College may accept for equivalence, general education, and courses that meet other local graduation requirements, that have been successfully completed at institutions of higher education outside the United States from international college and universities where the primary language of instruction is other than English, provided substantial documentation exists for the equivalences to be determined. The exceptions to this are courses to meet Area A: Communications in the English language and the Reading Competency requirement. These requirements must be fulfilled at a regionally accredited institution of higher education within the United States.

Students completing coursework at international higher education institutions in which English was the language of instruction may submit a petition for special review to the Admission and Records Office to determine the equivalence of coursework in Area A and the Reading Competency. Mathematics course credit will only be granted for coursework completed at the level of Intermediate Algebra or higher.

Official Transcripts must be accompanied by evaluation documents provided by an approved credential evaluation agency. A listing of local credential evaluation agencies is available at the Admissions and Records Office.

Articulation with High Schools, ROPs, and Adult Schools

Articulation Agreements with secondary schools (High Schools, Regional Occupational Programs, and Adult Education) are established annually during the fall and are valid for the current school year. Articulation is a faculty driven process that rewards student achievement in the Career Technical Education courses taken at the secondary level. Credit by exam is the method used to award credit for students.

Students participating in these agreements must meet an exam requirement as stated in California Code of Regulations, Title 5. Students that successfully meet the exam requirement and supply the correct paperwork will be awarded a grade and units of credit. The credits will appear with a notation of "by exam" on a Mt. SAC transcript in the semester closest to the completion of their secondary course.

Articulation with secondary programs is a time sensitive process. Secondary students must complete the required paperwork and pass required exams at the completion of their secondary course. If a course sequence is required at the secondary level, the student must request the units at the completion of the course sequence. The required paperwork must be submitted by the instructor of record on the Articulation Agreement within two months of course or sequence completion. Students may not seek college units retroactively.

Required paperwork includes:

- Student Articulation Request Form
- High School Transcript, or
- ROP/Adult Education Certificate of Completion

Enrollment information and instructions are provided by participating secondary instructors. Secondary instructors submit all required paperwork to the Career Pathways Articulation office at Mt. San Antonio College. Articulation forms will be accepted from authorized secondary instructors only.

College credit issued by ROP and/or Adult Education centers will be accepted if the issuing program is accredited by the Accrediting Commission for Community and Junior Colleges (ACCJC) or the Senior College Commission, under the auspices of the Western Association of Schools and Colleges (WASC).

For more information on High Schools, ROPs, and Adult Schools, please contact the Career Pathways Articulation Office at (909) 274-5252.

Registration

Registration for classes is conducted online via the web by logging into the student portal account (<https://my.mtsac.edu>). Students who enrolled in the previous semester or intersession preceding the enrollment term are eligible to register for classes. Students may check their date and time to register by logging into the student portal account (<https://my.mtsac.edu>).

Schedule of Classes

The Mt. SAC Schedule of Classes, which indicates intended course offerings and teaching assignments for credit, noncredit, and continuing education courses, is available on the Mt. SAC website at schedule of classes (<http://www.mtsac.edu/schedule/>). The College reserves the right to cancel, reschedule, or combine classes and to change professors where such action is deemed necessary.

Enrollment Fees and Expenses

The Enrollment Fee is \$46 per unit. Students who qualify for the California College Promise Grant are not required to pay this fee. Additional fees

include the Student Health Fee, Student Representation Fee, Student Transportation Fee, Student Activities Fee, and Parking Permit Fee. In addition, Non-Resident and International Students pay a Tuition Fee. Additional information regarding these fees is provided below. Fees are subject to change. Financial aid, scholarships, and the California College Promise Grant Fee Waiver may be available to assist with fee payment. Please consult the Schedule of Classes online for current fees and related information (BP 5030, AP 5030).

Students are responsible for purchase of their own textbooks and supplies. Costs for books and supplies for full-time students may average \$300-\$600 per semester depending on the program of study selected.

Non-Resident and International Student Tuition

Out-of-state Tuition Fees are \$295 per unit and are required of all students who have not established residency in the state of California for a period of one year prior to the day before classes begin. International Student Tuition Fees are \$295 per unit and are required of all nonresident international students attending Mt. SAC on an F-1 Visa. Contact Admissions & Records at (909) 274-4415 with residency questions.

Student Health Fee

The Student Health Fee is required of all credit students. The fee is \$21 for Fall and Spring semesters and \$18 for Winter and Summer intersessions. Students who qualify for the California College Promise Grant Fee Waiver pay a reduced fee of \$15 per semester and \$12 per intersession. Pursuant to Section 76355 of the Education Code, Mt. SAC has a process by which students may request to waive the Student Health Fee. To qualify for a waiver, students must provide documentation of active membership in a religious organization that relies exclusively upon prayer for healing. Students need to submit the documentation from their religious organization and the Health Services Fee Waiver request form to the Student Health Center (67B). The Health Services Fee Waiver request form is available on the Health Services web page. The form will only be accepted for the first two weeks of the semester and the first week of the intersession.

Student Representation Fee

The purpose of the Student Representation Fee is to provide Mt. SAC students the means to state their positions and viewpoints before city, county, district, and state government agencies. The \$2.00 fee is collected for the Fall and Spring semesters. A student may choose not to pay the Student Representation Fee for political, religious, financial, or moral reasons. If a student chooses to opt-out of paying the fee for the stated reasons, the student must contact the Cashier's Office (formerly known as Bursar's Office). Refunds for the Student Representation Fee will only be approved for the first two weeks of the semester. For more information or concerns regarding the Student Representation Fee, please contact the Student Life Office or Associated Students.

Student Transportation Fee

Effective Summer 2015, a mandatory transportation fee for the Foothill Transit Class Pass Program will be charged to full and part-time students. California Education Code Section 76361 authorizes the governing board to require students to pay a fee for the purposes of partially or fully recovering transportation costs incurred by Mt. SAC. The Student Transportation Fee is \$8 for part-time students and \$9 for full-time students. The fee is collected for the Fall and Spring semesters only and provides students a free bus pass for the semesters the fee is paid.

Student Activities Fee

The Student Activities Fee is an \$11 fee collected every Fall and Spring semesters to provide numerous Student Life and Associated Student

programs and services on campus including book scholarships, cultural programs, scholarships, social activities, and discounted tickets sold at the SacBookRac. To waive this fee the student must email the Cashier's Office at cashiersoffice@mtsac.edu. Refunds for the Student Activity Fee will only be approved for the first two weeks of the semester. For more information or concerns regarding the Student Activities Fee, please contact the Student Life Office or Associated Students.

Parking Permit

Students wishing to park in the student parking lots are required to have a valid Student Parking Permit. Student Parking Permits are available for purchase online through the student portal (line #31) or at the Cashier's Office (formerly Bursar's Office). If you need to replace a Parking Permit, fees do apply.

Refund of Fees

To be eligible for a refund, students must drop their classes by the refund deadline for that class. The deadlines can be found on the Student's Schedule Receipt (<https://inside.mtsac.edu>) (Student Tab, link #11). If the student's class has been officially dropped, or cancelled by the College, the student will receive a refund. Please see the current Schedule of Classes for refund information.

- **Military Refund:** In the case of students who are members of an active or reserve military unit and who receive orders compelling a withdrawal from courses, the College shall, upon petition by the affected student, refund the parking fee, health fee, student activities fee, entire enrollment fee and non-resident tuition fee unless academic credit is awarded.

Cancelled Classes

Classes may be cancelled at the discretion of the College. Students enrolled in such a class will be permitted to enroll in other open classes. Students who have a class or classes cancelled by the College because of low enrollment and have paid their fees for those classes will receive a refund.

Student Obligations

Mt. San Antonio College will withhold grades, diplomas, and registration privileges, or any combination thereof, from any student or former student who fails to pay a valid financial obligation to the College (e.g., returned check, unpaid enrollment fees, unpaid loan, equipment breakage, etc.). The hold shall be released when the student satisfactorily meets the financial obligation. When an outstanding financial obligation owed to the College is sent to our collection agencies, Chancellor's Office Tax Offset Program, the collection cost incurred will be added to the original amount owed.

There is a processing fee of \$25 for returned checks or stop payment of checks.

Any student having a disciplinary hold with the Student Life Office will not be allowed to view grades, register or drop for classes, verify enrollment, or petition for graduation until the hold is satisfied. (BP 5035, AP 5035)

Residency Guidelines

This statement is a general summary of the principal rules of residency and their exceptions and should not be construed as the actual expression of the laws used by the Mt. San Antonio College Admissions Officer for residency determination. Reference should be made to Chapter 1 (commencing with Section 68000) of Part 41 of Division 5 of the California Education Code, regulations of the Board of Governors of the California Community Colleges in Chapter 5 (commencing with Section 54000) of Division 6 of Title 5 of the California Code of Regulations,

and the regulations and guidelines available in the Admissions and Records Office. Students wishing to change their residency must submit a Residency Reclassification form to the Admissions & Records Office prior to the deadline listed in the Schedule of Classes.

Residence Classification

Each person enrolled in or applying for admission to Mt. San Antonio College will, for purposes of admission and/or tuition, be classified as a "resident," or a "nonresident."

- a. **Resident:** A "resident" is a person who is eligible to establish California residency for tuition purposes or who has resided within California for at least one year and who has established a legal residence in California prior to the residency determination date.
- b. **Nonresident:** A "nonresident" student is one who has not resided in the State for more than one year prior to the residency determination date and who has not established legal residence or who is not eligible to establish California residency for tuition purposes.

Criteria for Determination of Legal Residence

To determine a person's place of residence, reference is made to the following:

- a. Every person has, by law, a residence.
- b. Every person who is married or 18 years of age or older, and under no legal disability to do so, may establish residence.
- c. In determining the place of residence, the following rules are to be observed:
 - i. There can be only one residence.
 - ii. A residence is the place where one remains when not called elsewhere for labor or other special or temporary purposes, and to which that person returns in seasons of repose.
 - iii. A residence cannot be lost until another is gained.
 - iv. The residence can be established and/or changed only by the union of act and intent.
 - v. A man or a woman may establish his or her residence. Thus, it is possible that a woman who is married to, and living with, her husband may have a residence separate from his. A woman's residence shall not be derivative from that of her husband.
 - vi. The residence of the parent with whom an unmarried minor child maintains his/her place of abode is the residence of the unmarried minor child. When the minor lives with neither parent, his or her residence is that of the parent with whom he/she maintained his or her last place of abode; however, the minor may establish his or her own residence provided both parents are deceased and a legal guardian has not been appointed.
 - vii. The residence of an unmarried minor who has a living parent cannot be changed by his or her own act, by the appointment of a legal guardian, or by relinquishment of a parent's right of control, unless the student qualifies for the self-supporting exception.

Burden of Proof

The burden of proof is on the student to clearly demonstrate both physical presence in California and intent to establish California residence.

Residence Classification Appeal

Any student, following a final decision on residency classification by the Admissions and Records Office, may make a written appeal to the Appeals Committee of Mt. San Antonio College within 30 calendar days of notification of final decision regarding classification.

Admission of International Students

Mt. San Antonio College encourages applications from students holding or attempting to obtain the F-1 Visa. The following items are required from international applicants:

- **Mt. San Antonio OpenCCC Application**
- **F-1 International Student Application:** Access the F-1 International Student Application through your Student Portal. Upload all of your required documents via the F-1 International Student Application.
- **\$50 USD Application Fee (non-refundable):** The application fee is non-refundable and must be paid in U.S. currency (credit card, check or money order). Please make check payable to "Mt. San Antonio College." Personal checks must have the account holder's name and address pre-printed on them. To pay by credit, log into your student portal and select "Application Fee."
- **Confidential Financial Support:** Current proof of funding must be in the form of a bank letter or bank statement with official signature/seal. All bank verifications should indicate U.S. currency and be dated within six months of the term start date.
- TB (tuberculosis) test required at the time of acceptance.

ENGLISH LANGUAGE VERIFICATION

If English is not the official government language of your home country you will be required to show proof of English proficiency to apply. Submit ONE of the following methods of proof:

- **TOEFL:** (minimum score of 133 on the computer-based test, or 450 on the paper-based test, or 45 on the Internet-based Test). Information regarding TOEFL may be obtained at www.ets.org (<http://www.ets.org>). If you are mailing your score report directly, our institution code is "4494."
- **IELTS:** (overall band score of 4.5 or higher). Information regarding IELTS may be obtained at www.ielts.org (<http://www.ielts.org>).
- **High School English Verification Letter:** If you have attended an American High School either on foreign soil or in the U.S. for at least three years provide an Official Letter from Principal or Head master stating level of proficiency.
- **Proof of completion of an acceptable ESL Level:**
 - ELS: (<https://www.els.edu/>) Level 109
 - Cal Poly English Language Institute (<http://www.cpp.edu/~cpeli/>): Level 5

Transferring into Mt. San Antonio College

The following items are required for current F-1 Visa students transferring into Mt. SAC:

- Copy of I-20
- Copy of I-94
- Transfer form
- F-1 Visa

The deadlines to apply for the school year are as follows:

	Application Deadline	Classes Begin
Summer Intersession	April 30	End of June
Fall Semester	June 15	End of August
Spring Semester	November 15	End of February

F-1 Visa students can obtain all application materials from our College Website (International Students (<http://www.mtsac.edu/international/>)). (<http://www.mtsac.edu/international/>) TOEFL scores, IELTS scores,

admission applications (both college and International Student Application), and all supporting materials must be received on or before the term deadlines listed above. Applications received after the deadline will be considered for the following semester. The application fee must accompany the admission application. (AP 5010)

Assessment and Placement

Students attending Mt. San Antonio College are required to participate in assessment. The assessment and placement process has been established to enable all students an opportunity to achieve probable success along their academic pathway.

The college will no longer utilize a placement test to determine students' readiness for English, math, and reading courses. High school information and/or other measures will be used to determine appropriate course placement.

Students have the right to access transfer-level English, math, and reading courses. Non-Native Speakers may select to take credit English as a Second Language (ESL) courses.

Assessment Process at Mt. San Antonio College

All students at Mt. San Antonio College will receive placement recommendations in English, math, and reading based on an assessment utilizing multiple measures. Students must complete the Assessment Questionnaire (AQ) to receive course placement in English, math, and reading.

Students who have received college credit from accredited institutions may be able to receive course enrollment eligibility by submitting official transcripts. Consult with a counselor to review eligibility.

Assessment Questionnaire (AQ)

To help ensure students take the right English, math, and reading courses, students must complete the college's online **Assessment Questionnaire (AQ)** for course placement in **English, math, and reading**. Most students will immediately receive placement results based on their answers on the AQ. The questions on the AQ pertain to your high school GPA, and the English and math courses taken in high school, and grades in those courses.

Students who complete the AQ will be eligible for the following.

- **English:** Upon completion of the assessment process, all students will have the opportunity to take transfer-level English. Students with a U.S. high school diploma or equivalent will automatically be eligible for transfer-level English upon completion of the AQ. For English language learners, credit ESL courses are available through the American Language (AMLA) Department.
- **Math:** All students will be eligible for transfer-level math upon completion of the AQ.
- **Reading:** Students with a U.S. high school diploma or equivalent will automatically be eligible for transfer-level reading upon completion of the AQ.

To complete the AQ, go to www.mtsac.edu/aq. (<http://www.mtsac.edu/aq.%20/>) It is recommended that you have a copy of your high school transcripts with you when you are completing the AQ. Follow the questionnaire directions carefully as it can be completed only once. After

completing the questionnaire, you will be given your course placement recommendations.

- If you feel that the course placements you receive do not reflect your current abilities in the subject matter, you may make an appointment with a counselor.
- If you have questions about your placement results, you may talk to a counselor.
- You can always take a course at a lower level than the course you are placed.
- If there was an error in the questionnaire you submitted, please see a counselor.

Non-Native Speakers of English

After completing the AQ, some non-native speakers of English might be directed to contact the American Language (AMLA) Department to continue the assessment process. These students will consult with an AMLA Guided-Self Placement facilitator, who will recommend appropriate coursework. Reading course advice will be based on writing course placement.

Non High School Graduates

After completing the AQ, students who have attended but not graduated from a U.S. high school will be referred to a counselor to assist with English and reading course placement.

Counseling, Advisement & Orientation

Counseling Center services are provided to enrolled students who are in need of additional assistance regarding course selection, major selection, and transfer information and planning. Students are encouraged to meet with a counselor during their first term of enrollment to develop a Mountie Academic Plan. The Mountie Academic Plan lists the courses needed to complete a specific major and general education, as well as identifying graduation and/or transfer requirements.

Students who are undecided about their major and/or career and educational goals, should make an appointment with a counselor. Career counseling services are available to students at no cost, to assist students in making the most appropriate choices about their future.

Exemption from Assessment, Orientation, and Counseling, Advising, or Education Plan Development

The goal of the Student Success and Support Program (SSSP) is to increase student access and success by providing core SSSP services, including (1) orientation, (2) assessment and placement, and (3) counseling, advising, and other education planning services with the goal and declared course of study.

Exemptions from Student Success and Support Program

As part of the matriculation process, all services listed above are provided by the college. Students may choose to request to be exempt from the required services. If you are requesting an exemption, please identify the basis for your request based on the criteria below.

A student is exempt from assessment, orientation, and counseling, advising, or education plan development if the student has:

- graduated with an Associate degree or higher from a regionally accredited institution. Must provide a copy of transcripts as documentation of degree attainment

- b. enrolled at the college for a reason other than career development or advancement, transfer, attainment of a degree or certificate of achievement, or completion of a basic skills or English as a Second Language course sequence
- c. completed these services at another community college within a time period identified by the district
- d. enrolled at Mt. SAC solely to take a course that is legally mandated for employment as defined in section 55000 or necessary in response to a significant change in industry or licensure standings
- e. enrolled as a special admit student pursuant to Education Code section 76001

Exemption Request Forms are available at the Counseling Center located in the Student Services Building (9B), Second Floor

Orientation – Credit Students

Orientation is required for all new students who are enrolling in Mt. San Antonio College. Orientation includes information regarding college programs, services, procedures, student responsibilities, and other related information.

The College has determined the importance of an orientation to college as a factor in success. Prospective students are urged to complete an online orientation immediately after filing an application and completing the Assessment Questionnaire (AQ).

Visit the New Student Online Orientation (<https://www.mtsac.edu/counseling/orientation.html>).

Prerequisites, Corequisites, and Advisories

Mt. SAC faculty have established prerequisites, corequisites, and advisories for courses. If a student does not meet the prerequisite or corequisite requirements, the student will be blocked from enrolling in those courses. Transcripts and grade report cards from other colleges used to determine whether pre or corequisites have been met must be evaluated prior to registration.

Prerequisite

Prerequisites to a course are those courses which must have been taken previously as preparation for the course. To enroll in a class that has a prerequisite, the required preparation must have been completed prior to enrolling in the course. In some instances, English and Math prerequisites may be met by attaining eligibility through assessment. All course prerequisites listed must be completed with a grade of "C" or better, unless otherwise stated.

Corequisite

To enroll in a course that has a corequisite, the corequisite course must be taken concurrently. In some instances, a corequisite may have been taken previously.

Advisory

An advisory to a course is preparation which is highly recommended by faculty teaching the course. Although students may enroll in a course if they do not possess the advisory skills, they are encouraged to abide by an advisory whenever possible.

Challenging Prerequisites and Corequisites

In accordance with Title 5 Section 55003(p) and (q), Student Challenge of Prerequisites or Corequisites, students may challenge a prerequisite or corequisite for a course. A prerequisite or corequisite cannot be "waived," but students have the ability to demonstrate that they meet the prerequisite or corequisite on the following criteria, and course eligibility may be granted. The challenge must be based on at least one of the following specific grounds:

- The College will accept prerequisite or corequisite courses from regionally accredited colleges and universities in the United States. (The student will meet with the appropriate department chair)
- A student may request a prerequisite or corequisite variance to demonstrate that the student has the knowledge or ability equivalent to the prerequisite or corequisite for the course in question, but has not formally met the established prerequisite or corequisite. (The student will meet with the appropriate department chair)
- The prerequisite or corequisite course has not been made reasonably available, and waiting until the prerequisite or corequisite is offered will create an undue delay in meeting educational goals. (The student will contact the Assessment office)
- The prerequisite or corequisite is being applied in a discriminatory manner. (The student will contact the Assessment office)
- The prerequisite violates the provisions of the State Education Code. (The student will contact the Assessment office)



2022-23
CATALOG

ACADEMIC POLICIES and REQUIREMENTS

ACADEMIC POLICIES & REQUIREMENTS

Academic Freedom

It is the policy of Mt. San Antonio College to maintain and encourage freedom for its faculty, within the law, of inquiry, teaching and research, and the pursuit of knowledge. In the exercise of this right, the professor may discuss his/her subject or area of competence in the classroom, as well as other relevant matters, including controversial materials, so long as he/she distinguishes between personal opinions and what is contemporarily regarded as factual information by leading academicians in the discipline being discussed.

The professor shall use no material in any teaching assignment nor make any speech in order to incite students or others to unlawful acts or to create a clear and present danger to the students and/or the College and/or the community. Professors may not use the classroom to promote a particular religious belief. (BP 4030, AP 4030)

Academic Standards

Probation and Dismissal

There are two forms of probation: Academic Probation and Progress Probation.

Column 1	Column 2
Academic Probation	A student is placed on Academic Probation when the student has attempted at least 12 units and earned a cumulative grade point average (GPA) below 2.00
Progress Probation	A student is placed on Progress Probation when the student has enrolled in a total of at least 12 units, and the cumulative percentage of all units in which the student has enrolled for which entries of "W", "I", and "NP" are recorded, reaches or exceeds fifty percent

Upon recording of Academic or Progress Probation, a student shall have their registration restricted, be required to participate in a prescribed counseling intervention and be limited to enroll in a maximum of 12 units in subsequent semesters, and 4 units in a winter or summer intersession, while on probation. (BP 4250, AP 4250)

Clearing Probation

Column 1	Column 2
Academic Probation	The student shall be cleared from Academic Probation when the student's cumulative grade point average is 2.0 or higher
Progress Probation	The student shall be cleared from Progress Probation when the student's cumulative percentage of units with "W", "I" and "NP" drops below fifty percent (BP 4250)

Probation and Dismissal Status

a. Probation

- i. Academic Probation - occurs at the end of that first semester in which the student has attempted at least 12 units and has earned a cumulative grade point average below 2.0, or
- ii. Progress Probation - occurs at the end of that first semester in which the student has attempted at least 12 units and the cumulative percentage of all units in which the student has enrolled for which entries of "W", "I" and "NP" are recorded reaches or exceeds fifty percent.

b. Continued Probation

- i. Continued Academic Probation - occurs when the student in a second consecutive semester continues to have a cumulative grade point average below 2.0, or
- ii. Continued Progress Probation - occurs when the student in a second consecutive semester continues to have a cumulative percentage of all units enrolled recorded as "W", "I" and "NP" at fifty percent or higher.

- c. **Dismissal** occurs after three consecutive semesters of Academic or Progress Probation. The student shall be dismissed for at least two semesters. If the student has enrolled in the subsequent semester or intersession before the Dismissal status has been determined through the posting of the previous semester's grades, the student shall be dropped from all classes.

For the purposes of this section, semesters shall be considered consecutive on the basis of the student's enrollment, so long as the break in the student's enrollment does not equal two primary semesters or more.

Appeal of Dismissal

A student who is subject to dismissal may request an appeal of dismissal through the Counseling Center by the stated deadline prior to the beginning of the following semester. If approved, the student shall be required to participate in a prescribed counseling intervention and complete a contract,

which shall include the number of units in which the student shall enroll. If the student chooses not to make the request, or the request is denied, the student shall be dismissed for two consecutive semesters. Students will be dismissed for a minimum of one year.

Reinstatement after Dismissal

A dismissed student may request reinstatement through the Counseling Center after an interval of two semesters. Requests must be made **no later than two weeks before** the beginning of the Fall or Spring semesters only. Requests for reinstatement will not be allowed after the above stated deadline or for Winter and Summer intersessions. If approved, the reinstated student shall be required to participate in a prescribed counseling intervention and complete a contract for reinstatement, which shall include the number of units in which the student shall enroll.

A reinstated student shall remain on a probationary, reinstated status until clearance of probation and must see a counselor with an academic progress report for unit clearance prior to every registration period. A reinstated student shall also remain on contract until clearance of probation. Failure to comply with the terms and conditions of the contract may result in subsequent dismissal. (BP 4250, AP 4255)

Attendance

Students are expected to attend all class meetings. It is the students' responsibility to know the attendance and absence policies of their professors.

Professors may take attendance at all class meetings. It is the responsibility of each professor to inform their classes of the attendance and absence policies at the beginning of each term.

It is the student's responsibility to officially drop a class whenever he or she determines that he or she can no longer attend the class. Failure to officially drop a class may result in a failing grade and/or a financial obligation to the college.

Professors may drop students from their class rolls through the last day of the tenth week of instruction of a regular semester for excessive absence as defined by the professor or at an earlier date for intersession or short-term classes.

Students on college-authorized field trips will not be penalized for absences incurred in other classes during the field trips (AP 4300).

Auditing Courses

Students may not audit courses at Mt. San Antonio College. All students must be officially enrolled in a course in order to attend that course.

Student Unit Limits

Students may enroll in a maximum of 18 units each semester and up to seven units each summer and winter intersession. Students who have completed a minimum of 15 college units in a given semester with a grade point average of at least 3.0 and have a minimum cumulative grade point average of at least 3.0 may petition for permission to enroll in units above the maximum.

Students are required to see a counselor as part of the petition process. Petitions are available in the Counseling Center, located on the upper level of the Student Services Center.

100 Unit Appeal

Effective Summer 2014, new state regulations impact the registration date of students who have earned more than 100 degree applicable units at Mt. SAC. Students who have already surpassed or will have earned 100 or more Mt. SAC degree applicable units when registration begins for any term will be assigned a later registration date.

Students who have completed 100 or more Mt. SAC degree applicable units may file an appeal with the Counseling Center to keep their original registration date for the following term. The 100 Unit Appeal form can be downloaded from the Counseling website, Counseling Center Forms (<http://www.mtsac.edu/counseling/forms.html>). There is a deadline for submitting the appeal for every term. **The deadline date is noted on the appeal form.** Forms are also available at the Counseling Center, located on the upper level of the Student Services Center (Building 9B).

Students who wish to appeal have to schedule an appointment with a counselor to create a Mountie Educational Plan (MAP) which must be included with the appeal, and to clarify other requirements. Appointments can be scheduled online through the Counseling website (<http://www.mtsac.edu/counseling/>), in person, or by calling (909) 274-4380.

Basic Skills Limitations

Students are limited to completing no more than 30 units of courses identified as "Pre-collegiate Basic Skills" while enrolled at Mt. SAC. Courses in this category include pre-collegiate basic skills courses in Math, English, Reading, and Learning Skills. Students enrolled in the American Language program and students with learning disabilities are exempted from this policy. Waivers to exceed the 30 unit limit are available to students who show significant progress and will be limited to a specified period of time and/or number of units. Students requesting this waiver must submit a Petition for Exceptional Action to the Board of Appeals. Petitions are available in the Counseling Center and in Admissions & Records. Students who reach 30 units of pre-collegiate basic skills courses and who are not ready to pursue degree applicable courses are subject to remedial dismissal. (BP 4220, AP 4222)

Petitions for Exceptional Action

Student Petitions for Exceptional Action forms are available from the Admissions and Records Office in the Student Services Center. Students may complete these forms and submit them to Admissions and Records. Subsequent action on a petition will be taken either by the appropriate administrator or the Board of Appeals.

Definitions

Primary Term: A primary term is either the Fall or Spring semester. In contrast, both Winter and Summer intersessions are not considered to be primary terms.

Continuing Student:

- A continuing student is one who enrolls in at least one credit course and receives a grade (including a W) in any term during the academic year.
- A continuing student retains rights to follow graduation and/or certificate requirements for the year they entered or any catalog thereafter, as long as the student maintains in continuous enrollment.

Catalog Rights

- A student may use that initial catalog year or any subsequent catalog until the student petitions for graduation, if the student has remained in continuous attendance.
- Continuous attendance is enrollment and attendance in any credit course (past the census date) during the last academic year.
- In order to maintain catalog rights at Mt. SAC, based on the initial term of enrollment, a student may:
- Attend another regionally accredited post-secondary institution.
- Maintain "continuous attendance" at a regionally accredited post-secondary institution while away from Mt. SAC.
- A student who meets the requirements noted above but who has not been enrolled in any course at Mt. San Antonio College at the time of the class census date during any session of the previous two years, may not use requirements more than two academic years prior to the current requirements, except as required by law.

Dropping Courses and Withdrawing from the College

It is the students' responsibility to drop or withdraw from courses they no longer attend. Students should check their schedule/receipt, available on the "My Mt SAC" portal Link #11 for information regarding key dates. Dates vary and are often course specific. Failure to drop may result in a failing grade and/or fees owed.

Full 16-week courses

For 16 week courses, students who drop a class, withdraw from the college, or are dropped from a class by the professor by the Sunday at the end of the second week of classes will not receive any mark or notation on their permanent academic record.

Students who drop a class, withdraw from the college, or are dropped by the professor beginning Monday of the third week of a 16 week class will receive a mark of "W" (Withdrawal) on their permanent record.

Professors may not drop students from a class and students may not drop themselves from any class or withdraw from the college after 60% of the class has elapsed. All students who are registered for a class after 60% of the class has elapsed shall receive an academic grade (A, B, C, D, F, P, NP) or an Incomplete mark for the class.

A "W" Withdrawal mark shall not be assigned to any student enrolled after the last day to drop a class except in the case of an approved petition due to extenuating circumstances. A "W" Withdrawal remains a permanent part of a student's academic record.

Intersessions and other short term classes

For short term classes, students who drop a class, withdraw from college or are dropped from a class by the professor prior to the conclusion of the first 20% of the class will not receive any mark or notation on their permanent record.

Students who drop a class, withdraw from the college, or are dropped by the professor after 20% of the class has elapsed will receive a mark of "W" (Withdrawal) on their permanent record.

Professors may not drop students from a class and students may not drop themselves from any class or withdraw from the college after 60% of the class has elapsed. All students who are registered for a class after 60% of the class has elapsed shall receive an academic grade (A, B, C, D, F, P, NP) or an Incomplete mark for the class.

A "W" Withdrawal mark shall not be assigned to any student enrolled after the last day to drop a class except in the case of an approved petition due to extenuating circumstances. A "W" Withdrawal remains a permanent part of a student's academic record.

Repeatable Courses

Certain courses may be taken more than once for credit if the course is designated as repeatable. The course may be repeated for the number of times allowable. The following types of courses may be repeatable:

- a. Courses for which repetition is necessary to meet the major requirements of CSU or UC for completion of a Bachelor's degree.
- b. Intercollegiate athletics courses in which student athletes are enrolled to participate in an organized competitive sport.
- c. Intercollegiate academic or vocational competition courses that are designed specifically for non-athletic competitive events. Enrollment in a course or series of courses related in content is limited to four times, whether or not a passing grade is earned.

There may be financial aid implications for students who are recipients of Title IV and/or state funding. Federal and state law limits financial aid funding to two enrollments in a course, unless multiple enrollment of the same course is stipulated as required for academic program completion. Please seek guidance from the Financial Aid office for further clarification.

Families of Courses

The college has grouped Families of Courses that are closely related active participatory courses in physical education, visual arts, or performing arts. Within any given course family, students are only permitted four experiences while attending Mt. San Antonio College. An experience is defined as enrolling in a course and receiving any letter grade (including D, F, NP or W). A Family of Courses may consist of more than four courses, but students are limited to enrolling in a maximum of four courses in any family. All grades, including W, will count toward the enrollment limitation of four courses.

Students can repeat courses that are included in Families of Courses in which a grade of NP, D, or F was earned or a W was assigned. However, all enrollments count toward the four enrollment maximum for each family of courses. Once a student has received four experiences in a given family, they will not be permitted to enroll in any other class within that family, even to alleviate a sub-standard grade.

These Families of Courses are listed below in the disciplines in which they apply.

Dance Families

Course Prefix	Course Name	Units
Ballet		
DNCE 1	Ballet Fundamentals	0.5-2
DNCE 2A	Ballet I	0.5-1
DNCE 2B	Ballet II	0.5-1
DNCE 31	Classical Dance	0.5-2
Modern Dance		
DNCE 10	Modern Fundamentals	0.5-1
DNCE 12A	Modern I	0.5-1
DNCE 12B	Modern II	0.5-1
DNCE 30	Contemporary Dance	0.5-1
Jazz Dance		
DNCE 14A	Jazz I	0.5-1
DNCE 14B	Jazz II	0.5-1
DNCE 17	Jazz Fundamentals	0.5-2
Tap and Musical Theater		
DNCE 18A	Tap I	0.5-1
DNCE 18B	Tap II	0.5-1
DNCE 28	Theater Dance I	0.5-1
DNCE 29	Theater Dance II	0.5-1
Social Dance		
DNCE 8	Latin Dance I	0.5-1
DNCE 11A	Social Dance Forms I	0.5-1
DNCE 11B	Social Dance Forms II	0.5-1
Performance Technique		
DNCE 3	Ballet Performance	0.5-1
DNCE 13	Modern Performance	0.5-1
DNCE 15	Jazz Performance	0.5-1
DNCE 19	Tap Performance	0.5-1
Choreography and Career		
DNCE 4	Choreography	0.5-2
DNCE 33	Improvisation	0.5-1
DNCE 34	Dance Directives	0.5-1
Stage Performance		
DNCE 22	Dance Rehearsal	0.5-1
DNCE 24	Dance Production	1-2
Pilates		

DNCE 39	Pilates Fundamentals	0.5-1
DNCE 41	Pilates I	0.5-1
DNCE 42	Pilates II	0.5-1
DNCE 43	Pilates III	0.5-1
Dance Conditioning		
DNCE 32	Commercial Dance	0.5-1
DNCE 36	Commercial Dance II	0.5-1
DNCE 40	Conditioning Through Dance	0.5-1

Fine Arts Families

Course Prefix	Course Name	Units
Foundational Courses		
ARTD 20	Design: Two-Dimensional	3
ARTS 22	Design: Three-Dimensional	3
ARTS 33	Ceramics: Hand Construction	3
Color Concepts		
ARTD 15B	Drawing: Intermediate	3
ARTD 21	Design: Color and Composition	3
ARTD 25A	Beginning Painting I	3
ARTD 27	Painting: Watercolor	3
Drawing		
ANIM 104	Drawing Fundamentals	3
ARTD 15A	Drawing: Beginning	3
ARTD 16	Drawing: Perspective	3
ARTD 43A	Introduction to Printmaking	3
Gesture		
ANIM 101A	Drawing - Gesture and Figure	3
ANIM 101B	Figure Gesture - Design	3
ANIM 101C	Figure Gesture Expressive Design	3
ANIM 107	Figure in Motion	3
Anatomical Study		
ARTD 17A	Drawing: Life	3
ARTD 17B	Drawing: Life-Intermediate	3
ARTD 19A	Figure Painting	3
ARTD 23B	Drawing: Intermediate Heads and Hands	3
Figure Concepts		
ARTD 23A	Drawing: Heads and Hands	3
Painting		
ARTD 25B	Beginning Painting II	3
ARTD 26A	Intermediate Painting I	3
ARTD 26B	Intermediate Painting II	3
Ceramics		
ARTS 30A	Ceramics: Beginning I	3
ARTS 30B	Ceramics: Beginning II	3
ARTS 31	Ceramics: Intermediate Studio	2
Sculpture		
ARTS 40A	Sculpture: Beginning	3
ARTS 40B	Sculpture: Intermediate	3
ARTS 40C	Sculpture: Carving	3
ARTS 41A	Sculpture: Life	3
Molding		
ARTS 41B	Sculpture: Intermediate Life	3
ARTS 42	Sculpture: Mold Making	3
ARTS 46A	Sculpture: Special Effects Makeup	3
ARTS 46B	Sculpture: Special Effects Makeup	3
Planography		
ARTD 44A	Printmaking: Introduction to Lithography I	3

ARTD 45A	Printmaking: Introduction to Screenprinting	3
ARTD 45B	Printmaking: Intermediate Screenprinting	3
Intaglio Printmaking		
ARTD 43B	Intermediate Printmaking in Intaglio and Relief	3
ARTD 46A	Printmaking: Introduction to Monotype	3
ARTD 47A	Printmaking: Photo and Alternative Processes	3
Art Survey and Exhibition		
ARTB 14	Basic Studio Arts	3
ARTG 20	Art, Artists, and Society	3
ARTG 21A	Introduction to Exhibition Production	3
ARTG 21B	Intermediate Exhibition Production	3

Kinesiology Families

Course Prefix	Course Name	Units
Aquatics		
KINA 8A	Swimming - Beginning	0.5-1
KINA 8B	Swimming - Intermediate	0.5-1
KINA 8C	Swimming - Advanced	0.5-1
KINA 14	Water Polo	0.5-1
KINA 20	Aquatic Fitness	0.5-1
Cardiorespiratory and Body Composition		
KINF 4	Cardiovascular Conditioning	0.5-1
KINF 34A	Cardiorespiratory Training Beginning	0.5-2
KINF 34B	Cardiorespiratory Training Intermediate	0.5-2
KINF 38A	Aerobics - Beginning	0.5-1
KINF 38B	Aerobics - Intermediate	0.5-1
Combatives		
KINI 25	Mixed Martial Arts	0.5-1
KINI 27A	Jeet Kune Do - Beginning	0.5-1
KINI 27B	Jeet Kune Do - Intermediate	0.5-1
KINI 29	Self Defense and Martial Arts	0.5-1
KINI 30A	Filipino Martial Arts - Beginning	0.5-1
KINI 30B	Filipino Martial Arts - Intermediate	0.5-1
KINI 31A	Jiu-jitsu - Beginning	0.5-1
KINI 31B	Jiu-jitsu - Intermediate	0.5-1
KINI 33A	Kickboxing Beginning	0.5-1
KINI 33B	Kickboxing Intermediate	0.5-1
KINI 34	Women's Self Defense	0.5-1
Muscular Strength and Endurance		
KINF 10A	Weight Training - Beginning	0.5-2
KINF 10B	Weight Training - Intermediate	0.5-2
KINF 19	Strength Training	0.5-2
KINF 25	Core Performance and Foundation Movement	1-2
KINF 36A	Circuit Training Beginning	0.5-2
KINF 36B	Circuit Training Intermediate	0.5-2
Individual Sports		
KINI 4A	Badminton - Beginning	0.5-1
KINI 4B	Badminton - Intermediate	0.5-1
KINI 4C	Badminton - Advanced	0.5-1
KINI 18A	Golf - Beginning	0.5-1
KINI 18B	Golf - Intermediate	0.5-1
KINI 18C	Golf - Advanced	0.5-1
KINI 40A	Tennis - Beginning	0.5-1
KINI 40B	Tennis - Intermediate	0.5-1
KINI 40C	Tennis - Advanced	0.5-1
Flexibility and Balance		
KINI 37A	Tai Chi Chuan - Beginning	0.5-1

KINI 37B	Tai Chi Chuan - Intermediate	0.5-1
KINI 37C	Tai Chi Chuan - Advanced	0.5-1
KINI 50A	Yoga	0.5-1
Team Sports		
KINS 2A	Basketball Beginning	0.5-1
KINS 2B	Basketball Intermediate	0.5-1
KINS 10A	Beginning Soccer	0.5-1
KINS 10B	Soccer Intermediate	0.5-1
KINS 16A	Co-Ed Slow Pitch Softball	0.5-1
KINS 24A	Volleyball - Beginning	0.5-1
KINS 24B	Volleyball - Intermediate	0.5-1
KINS 24C	Volleyball - Advanced	0.5-1
Fire Technology/Administration of Justice		
KINF 51A	Agility Test Preparation Law and Fire - Beginning	1
KINF 51B	Agility Test Preparation Law and Fire - Intermediate	1
KINF 52A	Fitness and Conditioning for Law and Fire - Beginning	1
KINF 52B	Fitness and Conditioning for Law and Fire - Intermediate	1
KINF 53	Physical Training for the Basic Fire Academy	2.5

Music Families

Course Prefix	Course Name	Units
Class Piano		
Intended for students with emphasis on learning basic piano skills and piano literature.		
MUS 17B	Intermediate Piano	1
MUS 18	Advanced Piano	1
MUS 170	Piano I	1
Key Board Skills		
Intended for music majors with emphasis on developing keyboard skills for the music educator.		
MUS 171	Piano II	1
MUS 172	Piano III	1
Class Vocal Study		
Intended for all students.		
MUS 20A	Elementary Voice	1
MUS 20B	Intermediate Voice	1
MUS 21	Advanced Voice	1
Class Guitar		
Intended for all students		
MUS 23A	Elementary Guitar	1
MUS 23B	Intermediate Guitar	1
MUS 24	Advanced Guitar	1
Techniques		
For the development of technical skills		
MUS 25A	Jazz Improvisation	1
MUS 25B	Advanced Jazz Improvisation	1

Academic Honors

- **President's List** - The President's List is an honors list comprised of those students who have achieved a 3.50 or better grade point average in a minimum of twelve (12) letter-graded Associate Degree applicable units per semester at Mt. San Antonio College.
- **Dean's List** - The Dean's List is an honors list comprised of those students who have achieved between a 3.0 to 3.49 grade point average in a minimum of twelve (12) letter-graded Associate Degree applicable units per semester at Mt. San Antonio College.

Graduation Honors

- **Academic Distinction** - The "Academic Distinction Honor" designation is placed on the transcript and degree of the graduate who has achieved an overall grade point average (GPA) of 4.00.
- **Scholastic Honor** - The "Scholastic Honor" designation is placed on the transcript of the graduate who has achieved an overall grade point average (GPA) of 3.90 through 3.99.

- **With Honors** - The "With Honors" designation is placed on the transcripts and degree of the graduate who has achieved an overall grade point average (GPA) of 3.75 through 3.89.

Honors Program

Building 26A-1680, (909) 274-4665

Mt. San Antonio College offers an Honors Program for students who have demonstrated academic excellence. Honors courses are specially designed sections of transferable courses and, with a few exceptions, are part of the IGETC requirement list.

Completion of the Honors Program makes a student eligible for priority admission consideration from many universities and/or their honors programs. Those universities include UCLA, UC Irvine, Chapman University, Pitzer College, and Pomona College. In addition to an enhanced curriculum for motivated students, Honors Program students receive library privileges at UC Irvine and UCLA and an Honors Certificate upon completion of honors certification.

Entrance Requirements

- **High School Students** — Eligibility for ENGL 1A; 3.2 unweighted GPA; letter of recommendation; short essay
- **College Students** — Nine transferable units; Eligibility for ENGL 1A; 3.2 transferable GPA, short essay, letter of recommendation (may be waived if transferable GPA is 3.5 or higher)

Requirements for "Honors Scholar" Designation

- Completion of 15 units of honors courses with a minimum 3.2 transferable GPA in those courses
- Overall 3.2 transferable GPA

Alpha Gamma Sigma

Mt. San Antonio College sponsors the Zeta Chapter of Alpha Gamma Sigma, the scholastic honorary organization for California Community Colleges. Full-time and part-time students are eligible for membership. Membership requires campus and community involvement (service hours).

There are three categories of membership eligibility. Only degree appropriate courses/units (those that grant credit for an Associate or Bachelor's degree) may be used to establish eligibility for membership (Exception: Temporary Membership).

- Temporary:** (First college semester only) Must hold a California Scholastic Federation (CSF) Life Membership OR be a high school graduate with a cumulative grade point average of 3.5 or higher. This membership is intended as an introduction to Alpha Gamma Sigma and is not to be considered as an initial membership.
- Initial:** (First time membership) Must have completed 12 degree appropriate units in a maximum of three (3) semesters with a degree appropriate cumulative grade point average of 3.0 or higher.
- Continuing:** (Previous membership) Must have achieved for the previous semester a degree appropriate grade point average of 3.0 or higher OR have maintained a degree appropriate cumulative grade point average of 3.0 or higher.

Permanent membership in Alpha Gamma Sigma is an honorary lifetime AGS title for students who have completed 60 degree appropriate units; a minimum of 30 of the total 60 units must have been completed at Mt. SAC. A permanent membership application must be submitted by the graduation petition deadline. To apply, students must: a) have a cumulative G.P.A of 3.25 or higher for 60 completed degree appropriate units and b) complete a minimum of two semesters as an active or inactive member. Only permanent members receive recognition at graduation. Scholarships provided by the Zeta Chapter and the State Alpha Gamma Sigma Organization are available to actively involved members. Some baccalaureate granting institutions provide scholarships limited to Alpha Gamma Sigma members. For further information and review of academic eligibility and applications, students should consult an Alpha Gamma Sigma Officer or an Alpha Gamma Sigma Adviser. Contact information can be found here: <https://agszetamtsac.weebly.com/>

Phi Theta Kappa

Mt. SAC sponsors the Alpha Omega Alpha Chapter of Phi Theta Kappa, an international honor society for two-year colleges. To be eligible for membership, students must have completed a minimum of 12 transferable units with a 3.4 GPA.

Several advantages accompany this honor including recognition at graduation and access to scholarships offered to members by hundreds of U.S. colleges and universities. For further information and an application for membership, students should consult the Honors Program in Building 26A, Room 1680 as well as Phi Theta Kappa Honor Society. (<https://www.ptk.org/default.aspx>)

Definition of Educational Records

Educational records consist of those files maintained by the following offices: Admissions and Records, Counseling, Assessment, Financial Aid, Student Life, and those files maintained for individual students by departments.

Challenge of Educational Records

- Any student may file a written request with the Records Officer of the District (Dean, Enrollment Management) to remove information recorded in the student's records which is alleged to be: 1) inaccurate; 2) an unsubstantiated personal conclusion or inference; 3) a conclusion or inference outside of the observer's area of competence; or 4) not based on the personal observation of the named person with the time and place of the observation of the named person noted.

- b. If the student is not satisfied with the determination made by the Dean, Enrollment Management, the student may utilize the existing college student grievance process. (AP 5045)

Academic Renewal

The Academic Renewal Policy is provided for students in specific circumstances where previously recorded substandard academic performance is not reflective of the student's present demonstrated ability. Academic renewal applies only to substandard coursework completed at Mt. SAC. Students with substandard coursework at other colleges or universities need to contact those institutions to see if they are eligible for academic renewal under the provisions of academic renewal of said institution.

- A maximum of twenty-four units may be alleviated.
- Since completion of the work to be disregarded, the student's cumulative grade point average for all units completed at the time of adjustment must be at least 3.0 for 18 semester units, 2.5 for 24 semester units, or 2.0 for 30 units. The cumulative grade point average may include coursework completed at Mt. San Antonio College and other accredited colleges or universities. Courses used to qualify for Academic Renewal which were completed at another college or university must be verified by official college transcripts.
- A time period of at least two years must have elapsed since the end of the term of substandard work to be disregarded.
- Academic renewal will apply only to substandard grades: D, F, and NP.
- The permanent academic record shall be annotated in such a manner that all work remains legible, insuring a true and complete academic history.
- Mt. San Antonio College does not guarantee that academic renewal will be honored by institutions outside of the District. This determination will be made by the transfer institution.
- Students requesting academic renewal should meet with a counselor to file a petition. (BP 4240, AP 4240)

Transcripts

Official transcripts of work completed at Mt. San Antonio College may be ordered online through MyPortal (<http://my.mtsac.edu/>) student portal. The first two requests for transcripts are free; subsequent standard transcript requests are \$5.00 each. Unofficial/student copies of transcripts may be obtained at MyPortal (<http://my.mtsac.edu/>) (AP 5040)

Further information regarding transcript services is available at Records and Graduation (<http://www.mtsac.edu/records/student-records/transcripts.html>)

Definition of a Unit of Credit

The standard "unit" represents one hour in class recitation and two hours of outside preparation per week or its equivalent for one semester. By this definition, "unit" is synonymous with "semester lecture hour." In laboratory work and certain activity courses such as kinesiology, choir, drafting, etc., a greater number of in class hours per week is required for each unit of credit. During summer and winter intersessions, one unit of credit represents three hours of lecture per week.

Classification of Students

Students at Mt. San Antonio College are classified as follows:

Classification of Students	Definition
Full-time	enrolled in 12 or more units in a fall or spring semester, or 4 or more units during a six-week summer or winter intersession
Part-time	enrolled in less than 12 units during the fall or spring semester or less than 4 units during a six-week summer or winter intersession
Freshman	a student who has completed less than 30 units of credit
Sophomore	a student who has completed 30 units of credit or more

Grading System

Scholastic grades showing the academic achievement of students are issued at the end of each term. Any student enrolled as of the first day of the fourth week in a full semester course for any term shall receive one of the designated grading scale marks on his/her permanent records.

Grading Scale

Evaluative Symbol	Definition	Grade Point Value
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Passing (less than satisfactory)	1
F	Failing	0

Pass	Passing (at least equivalent to a "C" grade. Units awarded are not counted in determining the student's grade point average.)
NP	Not Passing (Equivalent to a "D" or "F" grade. No units awarded, and units are not counted in determining grade point average. No-Credit grades will be considered in probation and dismissal procedures.)

Incomplete

A student may request an Incomplete or the professor may initiate the petition on behalf of the student who is currently passing the class under the following circumstances: verifiable illness or emergency or verifiable work conflict. Incompletes may only be issued for requirements missed commencing the fourteenth (14) week of a regular semester class or after 85% of a short-term or summer or winter intersession class. Re-enrollment in the same course for purposes of making up the Incomplete is prohibited. The petition is subject to the approval of the professor. If granted, the student must complete all outstanding course requirements stipulated by the professor within one year, or the Incomplete will become a letter grade assigned by the professor.

Grading System	Definition
IP - In Progress	The "IP" symbol shall be used to denote that the class extends beyond the normal end of an academic term. It indicates that work is "in progress," but that assignment of a substantive grade must await its completion. The "IP" symbol shall remain on the student's permanent record in order to satisfy enrollment documentation. The appropriate evaluative grade and unit credit shall be assigned and appear on the student's record for the term in which the course is completed.
RD - Report Delayed	The "RD" symbol may be assigned only by the Admissions and Records Office. It is to be used when there is a delay in reporting the grade of a student due to circumstances beyond the control of the student. It is a temporary notation to be replaced by a permanent symbol as soon as possible. "RD" shall not be used in calculating grade point averages.
W - Withdrawal	Withdrawal from a class or classes shall be authorized through the last day of the 10th week of instruction of a regular semester-length class. No notation ("W" or other) shall be made on the academic record of the student who withdraws during the first three weeks of a regular semester-length class. Withdrawal between the first day of the 4th week and the last day of the 10th week of instruction shall be recorded as a "W" on the student's record. The "W" shall not be used in calculating grade point averages, but excessive "W's" shall be used as factors in probation and dismissal procedures. Withdrawal from short term classes of less than regular semester length, but greater than six weeks, is authorized for a period of time through 60% of the course, and a mark of "W" shall be made on the student's academic record. No notation shall be made on the academic record of a student who withdraws from a short term class of less than regular semester length, but greater than six weeks, provided the student withdraws no later than the end of the first 20% of the course.
MW - Military Withdrawal	The "MW," military withdrawal, mark shall be assigned only for students who are members of an active or reserve military unit, and who receive orders compelling a withdrawal from courses. Upon verification of such order, this symbol may be assigned at any time after the period established by the governing board during which no notation is made for withdrawals. The "MW" shall not be counted in determining registration priority, progress probation, and dismissal calculations. A "W" previously incurred commencing January 1, 1990, and which meets the definition of "MW" may be changed to "MW" (AP 5013). A student may petition for the MW by submitting a Petition for Exceptional Action along with documentation to the Admissions and Records Office.

EW - Excused Withdrawal

The "EW," excused withdrawal (effective Fall 2018) , mark shall be assigned only when a student is permitted to withdraw from a course(s) due to specific events beyond the control of the student affecting his or her ability to complete a course(s) and may include a job transfer outside the geographical region, an illness in the family where the student is the primary caregiver, when the student is incarcerated in a California State Prison or county jail, when the student is the subject of an immigration action, or other extenuating circumstances. Upon verification of these conditions and consistent with the district's required documentation substantiating the condition, an excused withdrawal symbol may be assigned at any time after the period established by the governing board during which no notation is made for withdrawals. The "EW" shall not be counted in progress probation and dismissal calculations or toward the number of permitted withdrawals or counted as an enrollment attempt. A student may petition for the EW by submitting a Petition for Exceptional Action along with documentation to the Admissions and Records Office.

Final Examinations

A final examination shall be administered in all classes in compliance with the Final Exam Schedule prepared each term. If a student is unable to attend a scheduled final examination, he/she must contact his/her instructor to make other arrangements. A student who does not take a final examination and who does not qualify for an "Incomplete" (see Grading System-Incomplete), shall be assigned the grade "F" or "Zero" for the examination, and this grade shall be averaged in determining the final course grade.

Pass/No Pass Grades

The Pass or No Pass (P or NP) grading option was designed to encourage students to explore subject areas of interest outside of their major areas of competence or known abilities without being overly concerned with a grade or with jeopardizing their grade point average and to afford an opportunity for departments to offer courses in which there is a diminished emphasis on grades.

Courses may be offered for Pass or No Pass in either of the following categories and will be specified in the catalog and schedule of classes:

- **Pass/No Pass Only Grade**

Courses wherein all students are evaluated on a Pass or No Pass basis only.

- **Option of Letter Grade or Pass/ No Pass Grade**

Courses in which each student has the option to individually elect Pass or No Pass or letter grade.

In courses offering the grading option, students are automatically registered on a letter grade basis at the time of registration. If a change is desired, the student can make the change on their student portal within the first 20% of the course or in person with a picture ID at the Admissions and Records Office located in the Student Services Center (Bldg 9B) within the first 30% of the course. The grading option is not reversible after the deadline to request a grade change has passed.

The student is held responsible for all assignments and examinations required in the course. The standards of evaluation are identical for all students in the course. A grade of "P" is earned for coursework equal to a grade of "C" or better. A grade of "NP" is earned for coursework equal to a grade of "D" or "F". Neither "P" nor "NP" grades are used in computation of grade point average; however, P or NP units will appear on the transcript of record.

Students are advised that four-year institutions may limit the number of units acceptable for transfer completed with a P or NP notation. Students should investigate the policies of the institutions to which they may wish to transfer to determine the acceptability of P (Pass) grades in courses in the student's major. Before selecting the pass or no pass option, students should consult with a counselor.

Historical View of Temporary Changes to Academic Marks due to COVID-19

Column 1	Column 2
Spring 2020 Term (EW, P/NP)	Implementation was mid-semester, just prior to the start of the 2nd 8 week of instruction after the college had shifted to 100% online/virtual instruction and services. Some students had already dropped without a "W". The remaining students who had dropped with a "W" were changed to "EW"s. Refunds were made for EWs and drops with a "W" as well as Spring parking.
Summer 2020 (EW)	EW withdrawal option was made available. Refunds for EWs were processed.

Fall 2020 (EW, P/NP)	EW with refunds was implemented (same as Spring 2020). Refunds of Spring parking continued through Fall. However, only classes approved for the P/NP option were eligible for Fall 2020. New option of changing "F" grades to "NP" to be implemented after grades are submitted only for classes that allow the P/NP option.
Winter 2021 (EW, P/NP)	EW with refunds was implemented (same as Spring 2020). Refunds of Spring parking continued through Fall. However, only classes approved for the P/NP option were eligible for Fall 2020. New option of changing "F" grades to "NP" to be implemented after grades are submitted only for classes that allow the P/NP option.
Spring 2021	EW with refunds was implemented (same as Spring 2020). Refunds of Spring parking continued through Fall. However, only classes approved for the P/NP option were eligible for Fall 2020. New option of changing "F" grades to "NP" to be implemented after grades are submitted only for classes that allow the P/NP option.

Credit for Extra Institutional Learning

Philosophical Basis

This policy of granting credit for extra-institutional learning is provided for students under special conditions in recognition of learning that has been attained outside the sponsorship of legally authorized and accredited post-secondary institutions. (AP 4285)

General Policy Statement

Credit for extra-institutional learning will be awarded to those students who have attained competency of subject matter through experiences outside of the sponsorship of legally authorized and accredited post-secondary institutions.

The College will accept the recommendations of the American Council on Education in reference to the *Guide to the Evaluation of Educational Experiences in the Armed Services* and the *National Guide to College Credit for Workforce Training*; The College Board in reference to its recommendation of Advanced Placement Examinations, and credit recommendations from other similar nationally recognized academic institutions, including Mt. San Antonio College's policy for comprehensive examinations.

Policy Regulations

- Of the 60 units required for the Associate Degree, at least twenty-four (24) units must be earned in courses that contribute to the grade point average.
- Extra-institutional learning credit will normally not be evaluated unless the credit is necessary for graduation.
- Credit for non-collegiate courses will be awarded only for work applicable toward the Associate Degree. Credit may be granted for upper division courses provided the student has earned less than 60 units at the time the upper division work is attempted.
- To petition for extra-institutional learning credit, a student must have at least a 2.0 grade point average, not be on probation, and be in good standing.
- The permanent academic record shall be annotated in such a manner to ensure that a true and complete history of extra-institutional learning credit has been granted.
- In cases where a student is seeking a degree/certificate from the College, all standard graduation and residency requirements apply and must be met by completing a minimum of 12 units earned from Mt. SAC courses.

Credit for Current License Holders

Mt. San Antonio College may grant units of credit toward an associate's degree to current license holders in the following areas: Emergency Medical Technology (Paramedics), Psychiatric Technology, and Radiologic Technology. The total number of units granted will be equal to the current total unit requirement for the equivalent program certificate. License holders must meet the college's residency requirements and complete an application to the college before the request for extra-institutional learning credit may be made. The application date will determine the catalog year.

The Department Chair from the appropriate program will validate the license and its currency. Admissions and Records will certify that the requirements have been met, grant the appropriate number of units, and apply extra-institutional learning credit toward the degree. (AP 4285)

Credit for Military Training

Mt. San Antonio College will grant four units of Baccalaureate level elective credits for military experience without regard to the field of service. Additional credit may be allowed for specific programs of training and credits earned through the United States Armed Forces Institute. (AP 4285)

Credit by Examination

The general philosophy of Mt. San Antonio College is that the interaction which takes place between the student and professor is of critical importance to the learning process. However, quality instruction places a premium on meeting individual student needs. Therefore, Mt. San Antonio

College provides for Credit by Examination enabling the student to accelerate his/her educational program by providing opportunity to obtain credit in those fields in which he/she has already achieved proficiency independently or by informal means. (BP 4235, AP 4235)

Course Prefix	Course Name	Units
Arts Division		
Commercial and Entertainment Arts		
ANIM 108	Principles of Animation	3
PHOT 9	Digital Image Editing for Photographers	3
PHOT 10	Basic Digital and Film Photography	3
PHOT 20	Color Photography	3
R-TV 19A	Beginning Video Production	3
Music		
MUS 17B	Intermediate Piano	1
MUS 110	Music Fundamentals	3
MUS 110A	Music Fundamentals for Musicians	4
MUS 170	Piano I	1
MUSA 100	Fundamentals of Audio Technology	3
MUSA 120	Electronic Music	3
Theater		
THTR 9	Introduction to Theater Arts	3
Business Division		
Accounting and Management		
BUSA 11	Fundamentals of Accounting	3
BUSA 68	Business Mathematics	3
BUSA 71	Personal Financial Planning	3
BUSA 72	Bookkeeping - Accounting	5
BUSO 5	Business English	3
Child Development		
CHLD 5	Principles and Practices in Child Development Programs	3
CHLD 61	Language Arts and Art Media for Young Children	3
CHLD 64	Health, Safety, and Nutrition of Children	3
Computer Information Systems		
CISB 11	Computer Information Systems	3.5
CISB 15	Microcomputer Applications	3.5
CISB 31	Microsoft Word	3
CISW 15	Web Site Development	3.5
CISW 17	HTML, CSS, and JavaScript Programming	3
Consumer Science and Design Technologies		
CUL 101	Professional Cooking Foundations	3
CUL 102	Professional Cooking I	3
CUL 104	Garde Manger	3
CUL 105	Baking and Pastry I	3
CUL 107	World Cuisines	3
FASH 10	Clothing Construction I	3
FCS 41	Life Management	3
FCS 80	Personal Financial Planning	3
HRM 51	Introduction to Hospitality	3
HRM 52	Food Safety and Sanitation	2
HRM 56	Hospitality Supervision	3
HRM 57	Hospitality Cost Control	3
HRM 61	Menu Planning	3
HRM 62	Event Planning and Catering	3
HRM 64	Hospitality Financial Accounting	3
HRM 66	Hospitality Law	3
HRM 70	Introduction to Lodging	3
HRM 91	Hospitality Work Experience	1-4
ID 10	Introduction to Interior Design	2

ID 10L	Introduction to Interior Design Laboratory	1
Continuing Education		
Adult Basic Education		
BSHS ALG1	High School Algebra 1	0
BSHS BIO	High School Biology	0
BSHS USH	High School U.S. History	0
BSHS WHS	High School World History	0
Humanities and Social Sciences Division		
Art History		
LATN 1	Elementary Latin	4
LATN 2	Continuing Elementary Latin	4
Sign Language		
SIGN 101	American Sign Language 1	4
SIGN 102	American Sign Language 2	4
SIGN 103	American Sign Language 3	4
SIGN 104	American Sign Language 4	4
SIGN 105	American Sign Language 5	4
Kinesiology, Athletics and Dance Division		
Kinesiology		
KIN 19	Introduction to Care/Prevention of Activity/Sports -Related Injuries	3
Natural Sciences Division		
Agricultural Sciences		
AGAG 1	Food Production, Land Use, and Politics - A Global Perspective	3
AGOR 1	Horticultural Science	3
AGOR 13	Landscape Design	3
AGOR 71	Construction Fundamentals	3
ASCI 1	Animal Science	3
ASCI 16	Horse Production and Management	4
Biological Sciences		
BIOL 1	General Biology	4
Physics and Engineering		
ENGR 1	Introduction to Engineering	2
ENGR 18	Introduction to Engineering Graphics	3
Technology and Health Division		
Aeronautics, Transportation		
AERO 100	Primary Pilot Ground School	4
AERO 102	Aviation Weather	3
AERO 104	Federal Aviation Regulations	3
AERO 150	Commercial Pilot Ground School	3
AERO 252	Instrument Ground School	3
Air Conditioning, Building Automation, and Welding		
AIRC 10	Technical Mathematics in Air Conditioning and Refrigeration	2
AIRC 11	Welding for Air Conditioning and Refrigeration	2
AIRC 20	Refrigeration Fundamentals	4
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4
AIRC 95	Work Experience in Air Conditioning and Refrigeration	1-4
WELD 40	Introduction to Welding	2
WELD 50	Oxyacetylene Welding	2
WELD 51	Basic Electric Arc Welding	2
WELD 53A	Welding Metallurgy	3
WELD 60	Print Reading and Computations for Welders	3
WELD 70A	Beginning Arc Welding	3
WELD 70B	Intermediate Arc Welding	3
WELD 70C	Certification for Welders	3
WELD 80	Construction Fabrication and Welding	3
WELD 81	Pipe and Tube Welding	3

WELD 90A	Gas Tungsten Arc Welding	3
WELD 90B	Semiautomatic Arc Welding Process	3
WELD 91	Automotive Welding, Cutting and Modification	1
Architecture and Engineering Design Technology		
ARCH 101	Design I - Elements of Design	4
ARCH 102	Design II - Architectural Design	4
ARCH 121	CADD and Digital Design Media Level I	4
ARCH 122	Architectural Presentations	4
ARCH 141	Design Drawing and Communication	4
ARCH 146	Architectural Drawings and Fabrications	3
ARCH 147	Architectural CAD and BIM	3
ECT 17	Legal Aspects of Construction	3
ECT 67	Reading Construction Drawings	3
ECT 70	Elements of Construction Management	3
ECT 71	Construction Estimating	3
IDE 120	Introduction to CAD	3
IDE 130	Introduction to Shop Processes	3
IDE 220	Advanced CAD	3
IDE 230	Introduction to Mechanical Principles	3
MFG 110	Introduction to CAD	4
MFG 120	CAD for Manufacturing	4
MFG 130	Manufacturing Processes and Materials	3
MFG 140	Print Reading and Shop Practice	3
MFG 150	Manual Machining I	3
MFG 155	Manual Machining II	2
MFG 160	Introduction to Mechanical Principles	3
MFG 180	Introduction to MasterCAM	3
MFG 210	Advanced CAD	3
MFG 220	Computer Aided Manufacturing II	3
MFG 250	Introduction to CNC Programming	3
MFG 260	CNC Operation	3
Electronics & Computer Technology		
CNET 50	Personal Computer (PC) Servicing	4
CNET 52	PC Operating Systems	4
CNET 54	PC Troubleshooting	4
CNET 56	Computer Networks	4
CNET 58	Server Systems	4
CNET 60	A+ Certification Preparation	2
CNET 62	Network+ Certification Preparation	2
CNET 64	Server+ Certification Preparation	2
CNET 66	Security+ Certification Preparation	2
ELEC 10	Introduction to Mechatronics	2
ELEC 11	Technical Applications in Microcomputers	3
ELEC 12	Computer Simulation and Troubleshooting	2
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 53	Communications Systems	4
ELEC 54A	Industrial Electronics	4
ELEC 54B	Industrial Electronic Systems	3
ELEC 55	Microwave Communications	4
ELEC 56	Digital Electronics	4
ELEC 61	Electronic Assembly and Fabrication	3
ELEC 62	Advanced Surface Mount Assembly and Rework	2
ELEC 74	Microcontroller Systems	4
ELEC 76	FCC General Radiotelephone Operator License Preparation	2
TECH 60	Customer Relations for the Technician	2

Mental Health		
AD 1	Alcohol and Drug Dependency	3
Nursing ¹		
NURS 1A	The Nursing Process I	5
NURS 1B	The Nursing Process II	5
NURS 2	Pharmacology	2
NURS 3	Medical-Surgical Nursing: Locomotion/Sensory/Integument/Oncology/Immunology	3.5
NURS 4	Maternity Nursing	3
NURS 5	Psychiatric Nursing	3
NURS 6	Pediatric Nursing	3
NURS 7	Medical-Surgical Nursing: Nutrition/Elimination/ Surgical Asepsis	7
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5
NURS 9	Leadership in Nursing	1
NURS 10	Medical-Surgical Nursing: Integration/Regulation	4
NURS 11	Preceptorship in Nursing	2
Public Safety		
ADJU 1	The Administration of Justice System	3
ADJU 2	Principles and Procedures of the Justice System	3
ADJU 3	Concepts of Criminal Law	3
ADJU 4	Legal Aspects of Evidence	3
ADJU 5	Community Relations	3
ADJU 6	Police Patrol Tactics and Strategy	3
ADJU 9	Introduction to Homeland Security	3
ADJU 10	Introduction to Correctional Sciences	3
ADJU 13	Concepts of Traffic Services	3
ADJU 20	Principles of Investigation	3
ADJU 38	Narcotics Investigation	3
ADJU 50	Introduction to Forensics for Criminal Justice	3
ADJU 59	Gangs and Corrections	3
ADJU 68	Administration of Justice Report Writing	3
ADJU 74	Vice Control	3
FIRE 1	Fire Protection Organization	3
FIRE 2	Fire Prevention Technology	3
FIRE 3	Fire Protection Equipment and Systems	3
FIRE 4	Building Construction for Fire Protection	3
FIRE 5	Fire Behavior and Combustion	3
FIRE 6	Hazardous Materials/ICS	3
FIRE 7	Fire Fighting Tactics and Strategy	3
FIRE 8	Fire Company Organization and Management	3
FIRE 9	Fire Hydraulics	3
FIRE 10	Arson and Fire Investigation	3
FIRE 11	Fire Apparatus and Equipment	3
Radiologic Technology		
RAD 50	Introduction to Radiologic Science and Health Care	3
RAD 61A	Theory of Radiologic Technology	4
RAD 61B	Radiographic Procedures I	3
RAD 61C	Radiographic Procedures I Laboratory	1.5
RAD 91	Patient Care in Radiologic Sciences	3
Respiratory Therapy		
MEDI 90	Medical Terminology	3
RESD 102	Theory and Principles of Respiratory Therapy	2

¹ Individuals who present relevant military education and experience equal but not limited to: Basic Medical Technician Corpsman (Navy HM or Air Force BMTCP), Army Health Care Specialist (68W Army Medic), or Air Force Independent Duty Medical Technician (IMDT 4N0X1C) may be eligible for advanced placement in the nursing program. Check admission procedures (Military Personnel Placement) on the Nursing website (<https://www.mtsac.edu/nursing/>) for more information.

Pursuant to Section 55050 of Title 5 of the California Code of Regulations, students at Mt. San Antonio College may apply for Credit by Examination and such unit credit may be granted subject to the following rules and regulations:

Rules and Regulations

- a. Credit by Examination will be granted only for those courses which have been so designated by the departments.
- b. Any grade received for Credit by Examination will be entered on the student's permanent record with a notation of "Credit by Comprehensive Exam."
- c. A student may petition for Credit by Examination provided:
 - i. The student has been registered at Mt. San Antonio College.
 - ii. The student has not already received credit nor is currently enrolled beyond six weeks in the same course or in a more advanced course (except for Advanced Placement Course Credit).
 - iii. The student has at least a 2.0 grade point average. This includes transfer/new students.
- d. The student may obtain the petition for Credit by Examination from the Division Office.
- e. The department will establish written guidelines by which the eligibility of a student to take such an examination is determined.
- f. The Department will assign a grade depending on the results of the examination and submit the form "Petition for Credit by Examination" to Admissions and Records.
- g. The student may not use Credit by Examination to satisfy the residency requirement for the degree.

A list of courses for Credit by Examination is available at each Division Office, the Instruction Office, and the Counseling Center.

Advanced Placement Credit for Mt. SAC General Education Requirements for the Associate Degree

Students who have a qualifying Advanced Placement (AP) test score (3 or above) may petition to utilize the results of their AP examinations to meet Mt SAC general education requirements in the areas identified in the Credit by Examination tab above.

Advanced Placement Examinations

AP Examination	Score Needed/GE/Equivalency	Mt.SAC GE Area	GE Units	Equivalent Mt.SAC Course	Degree Units
Art History	3	C1 or C2	3	AHIS 4 & AHIS 5	6
Biology	3	B2	3	BIOL 1	6
Calculus AB ¹	3/4 ¹	Math Competency	N/A	MATH 180	3
Calculus BC	3/3/4	Math Competency	N/A	MATH 180 or MATH 181	6
Chemistry	3	B1	3	CHEM 40	6
Chinese Language and Culture	3	C2	3	CHIN 1 & CHIN 2	6
Comparative Government and Politics	3	D2	3	None	3
Computer Science A	3	N/A	N/A	CSCI 145	3
Computer Science AB	3	N/A	N/A	None	6
Computer Science Principles	3	N/A	N/A	CSCI 110	6
English Language and Composition	3	A2	3	ENGL 1A	6
English Literature and Composition	3	A2 & C2	6	ENGL 1A & ENGL 1B	6
Environmental Science	3	B1	3	None	4
European History	3	C2 or D2	3	None	6
French Language and Culture	3	C2	3	FRCH 1 & FRCH 2	6
French Literature	3	C2	3	FRCH 3	6
German Language and Culture	3	C2	3	GERM 1 & GERM 2	6
Human Geography	3	D2	3	GEOG 2	3
Italian Language and Culture	3	C2	3	ITAL 1 & ITAL 2	6
Japanese Language and Culture	3	C2	3	JAPN 1 & JAPN 2	6
Latin	3	C2		None	3

Latin: Literature	3	C2	3	None	6
Latin: Vergil	3	C2	3	None	3
Macroeconomics	3/4	D2	3	BUSC 1A	3
Microeconomics	3/4	D2	3	BUSC 1B	3
Music Theory	3	C1	3	MUS 7	6
Physics 1	3	B1		See note ²	4
Physics 2	3	B1		None	4
Physics B	3	B1	3	None	6
Physics C: Electricity and Magnetism	3	B1	3	None	4
Physics C: Mechanics	3	B1	3	See note ³	4
Psychology	3	D2	3	PSYC 1A	3
Spanish Language and Culture	3	C2	3	SPAN 1 & SPAN 2	6
Spanish Literature and Culture	3	C2	3	SPAN 3	6
Statistics	3	Math Competency	N/A	MATH 110	3
Studio Art - 2D	3	General education and course equivalency credit based on portfolio review			3
Studio Art - 3D	3	General education and course equivalency credit based on portfolio review			3
Studio Art - Drawing	3	General education and course equivalency credit based on portfolio review			3
United States Government and Politics	3	D1	3	POLI 1	3
United States History	3	C2 or D1 or D2	3	HIST 1	6
World History Modern	3	C2 or D2	3	None	6

¹ A score of 3 on the Calculus AB Advanced Placement Exam will earn a student three (3) degree applicable units, Math Competency and Eligibility for MATH 180. A score of 4 on the Calculus AB Advanced Placement exam will earn a student three (3) degree applicable units, Math Competency, and MATH 180 equivalence.

² A score of 4 or higher on the AP Physics 1 will allow a student to meet the PHYS 2AG prerequisite requirement for PHYS 4A. Student will not earn equivalency for PHYS 2AG or units.

³ A score of 3 or higher on the AP Physics C: Mechanics will allow a student to meet PHYS 2AG prerequisite requirement for PHYS 2AG. Student will not earn equivalency for PHYS 2AG or units.

International Baccalaureate Credit for Mt. SAC General Education Requirements for the Associate Degree

Students completing all or portions of the International Baccalaureate (IB) program at their high school may petition to utilize the results of their IB examinations to meet Mt. SAC general education requirements in the areas identified in the table. Only IB Higher Level (HL) certificate examinations with scores of 5, 6, or 7 will be honored.

Students who have both a qualifying Advanced Placement (AP) test score (3 or above) and a qualifying IB certificate exam score (5 or above) in the same examination area, or who have completed a college level course for credit, will only have the first completion counted for credit.

IB Higher Level Exam	Score Needed for Equivalency	Mt.SAC GE Area	Units of GE	Equivalent Mt.SAC Course	Degree Units
IB Biology	5	B2	3	BIOL 1	6
IB Chemistry	5	B1	3	None	6
IB Economics	5	D2	3	BUSC 1A	6

IB Geography	5	D2	3	GEOG 2	6
IB History (any region)	5	C2 or D2	3	None	6
IB Language A1 (English)	4	C2	3	None	6
IB Language A2	4	C2	3	None	6
IB Language A2 (Classical Languages)	4 ¹	C2	3	LATN 1	6
IB Mathematics	4 ²	Math Competency	N/A	MATH 180	6
IB Physics	5	B1	3	None	6
IB Psychology	5	D2	3	PSYC 1A	3
IB Theatre Arts	4 ³	C1	3	THTR 9	6

¹ A minimum score of 4 is needed for General Education Humanities and degree units. A score of 5 is needed for LATN 1 credit.

² A minimum score of 4 is needed for Math Competency and degree units. A score of 5 is needed for MATH 180 credit.

³ A minimum score of 4 is needed for General Education Arts and degree units. A score of 5 is needed for THTR 9 credit.

College Level Examination Program (CLEP)

Students may receive credit for College Level Examination Program. Students are limited to 6 units of credit for an examination score of fifty or above in a General Examination of the College Level Examination Program of the College Entrance Examination Board. To determine "subject" credit, the course must be evaluated by a representative from the respective academic department in which the course subject resides. Students must submit a request for variance form to the department representative who will verify the acceptance as a substitution for a general education or major degree requirement.

CLEP Examination	Score Needed	Mt. Sac GE Area	Degree Units
American Government	50	D2	3
American Literature	50	C2	3
Analyzing and Interpreting Literature	50	C2	3
Biology	50	B2	3
Calculus	50	Math Competency	3
Chemistry	50	B1	3
College Algebra	50	Math Competency	3
College Algebra - Trigonometry	50	Math Competency	3
College Composition	50	Not Applicable	0
College Composition - Modular	50	Not Applicable	0
College Mathematics	50	Not Applicable	0
English Composition (no essay)	50	Not Applicable	0
English Composition (with essay)	50	Not Applicable	0
Financial Accounting	50	Not Applicable	0
French Level I	50	Not Applicable	0
French Level II	59	C2	3
Freshman College Composition	50	Not Applicable	0
German Level I	50	Not Applicable	0
German Level II	60	C2	3
History, United States I	50	D2	3
History, United States II	50	D2	3
Human Growth and Development	50	D2	3
Humanities	50	C2	3
Information Systems and Computer Apps	50	Not Applicable	0
Introduction to Educational Psychology	50	Not Applicable	0
Introduction to Business Law	59	Not Applicable	0
Introduction to Psychology	50	D2	3
Introduction to Sociology	50	D2	3
Natural Sciences	50	B1 or B2	3

Pre-Calculus	50	Math Competency	3
Principles of Accounting	50	Not Applicable	0
Principles of Management	50	Not Applicable	0
Principles of Marketing	50	Not Applicable	0
Principles of Macroeconomics	50	D2	3
Principles of Microeconomics	50	D2	3
Social Sciences and History	50	Not Applicable	0
Spanish Level I	50	Not Applicable	0
Spanish Level II	63	C2	3
Spanish with Writing I	50	Not Applicable	0
Spanish with Writing II	63	C2	3
Western Civilization I	50	D2	3
Western Civilization II	50	D2	3



2022-23
CATALOG

STUDENT SERVICES
and **STUDENT LIFE**

STUDENT SERVICES

Student Services Departments and Programs

We are so pleased to have you as a student at Mt. SAC! In Student Services, our vision is, "Your Success, Our Passion." We are here to serve and support you in your educational journey.

This catalog is a resource to help you to be successful as a student at Mt. SAC. There is a lot of information about services, programs, activities, and policies and procedures.

Every student at Mt. SAC needs to have an educational plan, called a MAP – Mountie Academic Plan. Counselors work with you to develop your MAP which maps out all the courses and requirements needed for you to reach our goals.

What if I'm unsure about my major or my educational goal? We are also here to help you with this! We encourage you to meet with counselors and support staff, and to enroll in Counseling classes.

What if I don't have enough money to apply for my fees and books? Most students qualify for a fee waiver and federal grants. Don't get discouraged! We have friendly staff who can help you to complete all the requirements to qualify for fee waivers, grants, and scholarships.

A wide range of student activities are also available for students: Associated Students government, over 60 student clubs and organizations, and student leadership development activities. Students are encouraged to participate in campus life by engaging in student services and becoming involved in campus activities.

As a Mt. SAC student, we encourage to seek out assistance in our many Student Services and Academic Support Centers (tutoring centers). Mt. SAC has been distinguished as having more support services for student than any other community college in California.

Best wishes in the 2022-2023 academic year!

~Dr. Audrey Yamagata-Noji, Vice President, Student Services

Entry/Transitional Services

Students are provided with process-oriented support services ranging from entering the college, completing processes, requirements and forms, qualifying for benefits, and providing information to students.

Admissions and Records

Building 9B, (909) 274-4415

Admissions (<http://www.mtsac.edu/admissions/>)

Admissions and Records is usually the first office prospective students visit and the last office students visit before transferring or graduating. Some of the services provided:

- Admission: All students must submit an application for admission in order to attend Mt. San Antonio College. The admission application generates a Permit to Register and establishes a historical student record for each student. Transcripts from other colleges must be submitted for prerequisite eligibility checks.
- Course Registration: All registration is conducted online. Registration instructions can be found in the current Schedule of Classes or online.
- Admissions and Records is the official custodian of student records. This office maintains student demographic information such as name, address and Mt. SAC student identification number, student academic history, issues I-20's for International Students, processes Petitions for Exceptional Action, transcript and enrollment verification

requests, graduation and certificate petitions, and distributes diplomas and certificates.

- Admissions and Records provides computers for student use located in the Student Services Building. These computers provide access to the student portal for students to print unofficial transcripts, final grades, and copies of the Permit to Register. All services are available online. To use this service, students must have their Mt. SAC Student username.

Assessment Center

Building 9B, (909) 274-4265

Assessment Center (<http://www.mtsac.edu/assessment/>)

The Assessment Center provides assessment services to assure that all students are placed appropriately in Mt. SAC courses. All Mt. SAC students are required to participate in assessment for course placement. The assessment and placement process has been established to enable all students the opportunity to be successful in their coursework. Please complete the Assessment Questionnaire (AQ) at www.mtsac.edu/aq. Upon completion, you will be given your course placement or will be advised on your next step in the assessment process. For further information, contact the Assessment Center at (909) 274-4265 or visit Assessment online (<http://www.mtsac.edu/assessment/>).

Financial Aid & Scholarships

Building 9B, (909) 274-4450

Financial Aid & Scholarships (<http://www.mtsac.edu/financialaid/>)

The Financial Aid Office provides information and assists students in applying for financial assistance in the form of grants, loans, scholarships, enrollment fee waivers, and work study opportunities. The Financial Aid office helps students complete the Free Application for Federal Student Aid (FAFSA), as well as for the California DREAM Act, and the California College Promise Grant (CCPG) applications. Moreover, our Scholarships program provides students with information about scholarships available within Mt. SAC, as well as external opportunities available throughout the year.

High School Outreach

Building 9A, (909) 274-5906

High School Outreach (<http://www.mtsac.edu/hso/>)

High School Outreach (HSO) provides services designed to support and guide graduating high school seniors through their college transition to Mt. SAC. High School Outreach works with the local in-district high schools by providing a variety of informational and support services such as, informational college presentations, enrollment related workshops, college fair participation, registration assistance, large scale events, campus tours, and more.

Promise+Plus Program

Building 9A, (909) 274-5688

Promise+Plus Program (<https://www.mtsac.edu/promise/>)

The California Promise program, commonly known at Mt. SAC as the Promise+Plus Program, is a combination of financial and support services to help first-time college students that participate in a Mt. SAC Summer Program, be successful in their first two years of college. Open to California Residents/AB540 eligible, first-time college students.

The goal of the program is to guide students through their academic and personal development to achieve their associate degree and/or transfer to a four-year college or university. Eligible students receive comprehensive support services and benefits such as early registration, counseling and advising, workshops, funding for books and groceries,

school supplies, and more. To remain eligible, students must maintain a minimum 2.0 GPA each term, enroll in English or math, attend Promise-approved workshops, and meet with a counselor.

General Support Services

Services that are provided to all students, no pre-qualification necessary, assistance with persistence and guidance to reach educational goals, participation in the life of the college, and interventions to address specific student needs from mental to physical health.

Career Center

Building 9B - 2nd Floor, (909) 274-4510

Career Center (<https://www.mtsac.edu/careerservices/>)

The Mt. San Antonio College Career Center supports current students and alumni in all stages of the career development process. Our staff of professionals leverage their experiences and knowledge associated with the workforce to empower students to discern, discover, and pursue meaningful careers in direct correlation with their educational background. In accordance with preparation, we implement career readiness through innovative and tailored programs, services and strategic partnerships.

The Career Center provides a variety of activities, events and resources to help students solidify career goals, sharpen job acquisition skills, and acquire part- and full-time employment.

Career Services include:

- Employment & Internship Referrals
- Career Fairs & Employment Panels
- Online Employment Portal (Mountie Career Source)
- Workforce Development Conferences
- Career Acquisition Skills Workshops
- Practice Interview Sessions (Zoom/In-Person)
- Resume & Cover Letter Review/Development
- Undecided Workshops

Transfer Center

Student Services Center, Building 9B [2nd floor] (909) 274-6388

Transfer Center (<https://www.mtsac.edu/transfer/>)

The Transfer Center provides comprehensive services, resources, activities, and events to prepare students for successful admission and transition to four-year colleges and universities. It prepares students for the next step in their educational journey.

Transfer services include:

- Advising
- Workshops
- University tours and transfer fairs
- Representative appointments and information tables
- Annual Transfer Awareness Week and a Transfer Conference, culminating in a Transfer Achievement Celebrations

Counseling Services

Building 9B, (909) 274-4380

Counseling (<http://www.mtsac.edu/counseling/>)

The Mt. SAC Counseling Department delivers essential academic, career, and personal counseling services to our diverse student population.

We help students reach their educational and career goals by assisting students with the effective use of campus resources, students services, and educational opportunities. All students are encouraged to meet with a counselor at least once each semester to discuss their education and career goals. We conduct new student orientations, MAP workshops, probation workshops, offer individual counseling appointments to create educational plans. The Counseling department also offers a variety of courses providing a more in-depth study of topics related to student success and career planning. Students will find these courses under the heading COUNSELING in the schedule of classes. We are here to help you succeed!

Student Health Services

Building 67B and 9E, Room 2300 (909) 274-4400

Health Center (<http://www.mtsac.edu/healthcenter/>)

The Student Health Center helps keep students physically and emotionally healthy so they can perform at their best. Professionals available include physicians, nurse practitioners, chiropractors, counselors, nurses, health education, and clerical support staff. The licensed professionals evaluate and treat minor, temporary physical and emotional conditions that require short term.

Student Life Office

Building 9C, (909) 274-4525

Student Life (<https://www.mtsac.edu/studentlife/>)

The Student Life Office is dedicated to promote student engagement, responsibility, inclusion, and advocacy. The Student Life Office supports co-curricular involvement, enhances civic engagement, nurtures appreciation of diversity, and ensures due process. Information regarding L.E.A.D. (Leadership Education And Development Program), Fall Leadership Conference, volunteer opportunities, student clubs, and Associated Students leadership is available in the Student Life Office. This office also oversees lost and found; and assists in contacting students in emergency situations.

Students who are involved in co-curricular activities are encouraged to complete the Activities Transcript (<https://www.mtsac.edu/studentlife/activities/transcript.html>), which complements their academic transcript and verifies the student's involvement in service and leadership activities outside of the classroom.

The Student Life Office oversees both the Non-Academic and Academic Student Misconduct process, educational outreach for Standards of Conduct, and has joint responsibility for Title IX case resolution involving students. Students are also assisted in understanding their due process rights and grievance procedures.

Student Life Center

Building 9C, (909) 274-5959

Student Life Center (<https://www.mtsac.edu/studentlife/studentlifecenter.html>)

The Student Life Center offers recreation space where students can use game equipment (board games, foosball, and table tennis). The SLC also offers a connection space where students can study and utilize resources (white boards and test supplies). It also serves as a creative space for RSCOs and Associated Student government's functions and activities.

Associated Students (A.S.) Government

Building 9C, (909) 274-5959

Associated Students (<http://www.mtsac.edu/as/>)

Associated Students serves as the representative voice for students.

A.S. Vision: Empower every student to grow and advocate for their community!

A.S. Mission: A.S. strives to enrich student success through leadership development and personal growth opportunities. We connect, motivate, and empower our students and community while fostering and promoting advocacy for the student body.

A.S. provides programs and services to meet five priority areas:

- a. Co-curricular engagement
- b. Leadership development
- c. Retention and transfer
- d. Recognition of service
- e. Civic engagement & advocacy

A.S. and subsidiary body includes but is not limited to the Executive Board, Senate, Student Court, and Inter-Club Council. Students are encouraged to join A.S. by taking on a leadership position within one of the three branches, joining a council, or joining a campus wide committee.

A.S. Senate and Executive Board meetings are held every Tuesday from 3:00 p.m. - 5:30 p.m. A.S. Student Court meetings are held every first and third Wednesday from 1:00 p.m. - 2:00 p.m. Inter-Club Council meetings are held every first and third Monday from 2:30 p.m. - 3:30 p.m.

Student Activities Fee

What is the Student Activities Fee? - The \$11 Student Activities Fee provides access to scholarships, leadership opportunities, activities, discounted tickets, funding for student events, and many other co-curricular programs and services for students.

Some of the benefits students receive throughout the semester by paying the Student Activities Fee are:

- Eligibility to apply for A.S. scholarships
- Purchase discounted tickets (available at the SAC BookRac)
- Apply for Leadership Conferences
- Vote during Mt. SAC A.S. Elections
- Hold an A.S. Officer position
- Serve as an officer in a Recognized Student Club or Organization (RSCO) and
- Free admission and free spirit items at all A.S. events

Student Representation Fee

The \$2 Student Representation Fee, mandated by Assembly Bill (AB) 1504, provides support for student body organizations who may be stating their positions and viewpoints before city, county, district, state, and federal governments.

Recognized Student Clubs and Organizations (RSCOs)

Building 9C, (909) 274-4525

Clubs (<http://www.mtsac.edu/clubs/>)

More than 60 RSCOs provide opportunities to make friends, enhance learning, build leadership skills, and have fun. The Inter-Club Council

(ICC) is comprised of one representative from each RSCO and meets to discuss activities and formulate procedures to better serve the campus community. ICC hosts an event at the beginning of each semester for students to learn more about co-curricular campus involvement opportunities. A current listing of RSCOs is available online here. (<http://www.mtsac.edu/clubs/>)

Specialized Programs

Students pre-qualify for services specifically designed to address their academic and educational needs; services are designed specifically for particular groups of students; funding source frequently from grants and other categorical funding.

Accessibility Resource Centers for Students (ACCESS Center formerly known as DSPS)

Building 9B - 1st Floor, (909) 274-4290

ACCESS (<http://www.mtsac.edu/access/>)

If you have a medical condition or disability that impacts your education, or think you might have one, join Accessibility Resource Centers for Students ("ACCESS" formerly known as DSPS). This office is committed to providing quality programs and services for students who have educational barriers because of a disability. Our mission is to promote equal access on campus. Registration status with ACCESS and any information you provide us will be held in the strictest confidence, and shared with only those whom you give us permission.

Based on individual disability-related needs, services are directly related to the educational barrier that disability or medical condition causes. Examples of some of the services are:

- Accessible Technology Center: Student Success Center (9E), an adaptive computer lab with accessible software and hardware solutions, study center
- Academic strategies classes to increase student success
- Counseling: Disability-related, academic, career, transfer, and personal counseling
- The Center (for deaf and hard of hearing): Sign language interpreters and real time captioners, study center, internships for SIGN students
- Classroom accommodations: Educational advising, priority registration, note taking services, accommodated classroom testing, equipment loans, alternate media, adaptive classroom furniture
- Transportation on campus: Tram service upon approval
- Puzzle Project: Specialized programming for students on the Autism Spectrum
- Assessments: Learning disabilities, cognitive dysfunction, communication disorders, accessible technologies

ACES (Student Support Services)

Building 9E - 3rd Floor, (909) 274-4411

ACES (<http://www.mtsac.edu/aces/>)

The goal of ACES is to increase the college retention and graduation rates of the participants and facilitate the process of transition from one level of higher education to the next. ACES provides intensive academic, personal, and career counseling to help first-generation, and/or low income, foster youth or disabled students reach their post-secondary goals.

ARISE Program

Building 16E, (909) 274-6622

ARISE (<http://www.mtsac.edu/arise/>)

Arise Program, a federal grant program, provides support for Asian American and Pacific Islander (AAPI) and other students. The goal of the program is to assist Asian American and Pacific Islander students to successfully attain their educational goals and recognize their valuable contributions to the campus community as AAPI students and student leaders. Program activities include: tutoring, educational advisement and counseling services, workshops, student leadership training, and basic skills development.

Center for Black Culture & Student Success Umoja Aspire Program

Umoja Aspire Program

Building 6 Room 140, (909) 274-6396

Aspire (<http://www.mtsac.edu/aspire/>)

Umoja Aspire Program is a dynamic program designed to provide essential educational support and services to increase the academic success, retention, degree completion, and transfer rates of African American and other students enrolled at Mt. San Antonio College. We accomplish this through monthly workshops, mentoring, and learning communities.

Basic Needs Resources

Building 9G, (909) 274-6170

Basic Needs (<http://www.mtsac.edu/basic-needs/>)

This program provides support for students experiencing basic needs insecurities with access to the Mountie Fresh Food Pantry, assistance with CalFresh benefits, coordination and housing referrals for homeless and/or housing insecure students, and one-on-one support with case workers so that they can pursue their educational goals at Mt. San Antonio College.

Bridge Program

Building 9E - 2nd Floor, (909) 274-5392

Bridge (<http://www.mtsac.edu/bridge/>)

The Bridge Program offers several learning communities designed to increase your academic and personal success. Students in the learning communities are enrolled in "linked" or "clustered" classes. Various learning communities are offered, including: Summer Bridge, Math Bridge, and English Bridge. The Bridge Program is perfect for students who are the first in their family to attend college, want to improve academic and social skills, want to learn more about career and transfer options, or need additional support during their first year at Mt. SAC.

CalWORKs

Building 9B - 1st Floor, (909) 274-4755

CalWORKs (<http://www.mtsac.edu/calworks/>)

The California Work Opportunities and Responsibility to Kids (CalWORKs) Program at **Mt. San Antonio College** is designed to support student-parents who receive cash aid for themselves and their children through Temporary Assistance to Needy Families (TANF), including self-initiated participants (SIPs) and GAIN referrals with access to educational programs by providing comprehensive services, including individualized academic counseling, advocacy and support, case management, and community resource referrals. The program assists student-parents in entering the workforce at the highest level possible, and in developing a personal career ladder leading to increased self-sufficiency and individual growth. CalWORKs students receive assistance with books and supplies,

transportation, childcare and other services designed to help them complete their educational goals.

CARE (Cooperative Agencies Resources for Education)

Building 9B - 1st Floor, (909) 274-4500

CARE (http://www.mtsac.edu/eops/care_new/care_new.html)

Cooperative Agencies Resources for Education (CARE) provides additional support services for EOPS students who are single head-of-households with minor dependents and receiving CalWORKs/TANF/Tribal TANF. Assistance for Needy Families (TANF)/California Work Opportunity and Responsibility to Kids (CalWORKs) cash aid benefits for themselves or their children.

DHH Center (Deaf and Hard of Hearing Services)

Building 9D, (909) 274-6393 (Voice)/(909) 859-6634 (Videophone)

DHH (<http://www.mtsac.edu/dhhcenter/>)

While the DHH Center is part of ACCESS services, this cultural and academic center provides a space for Deaf and Hard-of-Hearing students to receive the support needed to be successful at Mt. SAC. The Center has a variety of services for students including Deaf mentoring, workshops, field trips, experiential learning opportunities, interpreting, CART transcription, and note taking services. We are proud to be the only California community college with a dedicated Deaf and Hard-of-Hearing Center.

DREAM Program

Building 16E, (909) 274-5596

DREAM (<http://www.mtsac.edu/dream/>)

The DREAM Program provides support services to DREAMers/Undocumented students at Mt. San Antonio College (Mt. SAC). Our purpose is to provide a safe space where DREAM students can come together to receive the support they need to succeed in college. The program aims to increase the personal growth and development of DREAMers through academic, career, and personal counseling, which is provided by our DREAM counseling team that possesses extensive background and knowledge about how to guide and support undocumented students. Peer mentoring, workshops, tutoring, and program-specific services are available to support academic success and encourage engagement outside the classroom experience. The DREAM Program also provides assistance in applying for the California Dream Act/Financial Aid and scholarship opportunities. Through our partnerships, we have a referral process to assist students with immigration legal services (including DACA renewal), health services, and medical services as well as other services relative to this student population. By using a holistic approach, the DREAM Program strives to help students navigate the higher educational system and beyond.

El Centro or El Centro Program

Building 9E - 2nd Floor, (909) 274-5392

El Centro (<http://catalog.mtsac.edu/student-resources/student-services-student-life/www.mtsac.edu/elcentro/>)

El Centro, the Latinx Chicanx Student Program provides educational, cultural, and social programming that affirms and celebrates Chicanx and Latinx identity and values. The goal of El Centro is to unite all cultural backgrounds, Latinx and Chicanx; to support, educate, and assist students in completing their educational goals while providing cultural enrichment and solidarity between Mt. SAC's students and surrounding communities.

Extended Opportunity Programs & Services (EOPS)

Building 9B - 1st Floor, (909) 274-4500

Extended Opportunity Programs & Services (<http://www.mtsac.edu/eops/>)

EOPS also known as Extended Opportunity Programs and Services. EOPS was established on September 4, 1969, Senate Bill 164 was signed into law to help historically socio/economically disadvantaged students in community colleges throughout California. Our program goes “over and above” other college services by offering counseling, tutoring, financial assistance, and other support services designed to help students meet their personal and/or educational goals. Which includes but not limit to obtaining job skills, occupational certificates, or associate degrees, and/or transferring to a four-year institution.

International Student Program

Building 9F, (909) 274-4705

International Student Center (<http://www.mtsac.edu/international/student-center.html>)

The International Student Program is a place where F-1 visa students can make counseling appointments and speak with their academic advisor. F-1 visa students can connect with one another and the international community. The International Student Program hosts a variety of on and off campus excursions, workshops, tutoring services, and a computer lab where students can study. Our friendly staff can answer questions about our fun and educational program offerings, F-1 student admissions and regulations, how to get involved on and off campus, and much more.

REACH Program

Building 16E, (909) 274-6556

REACH (<http://www.mtsac.edu/reach/>)

REACH is an educational program designed to assist current and former Foster youth. REACH provides assistance and support to our Foster Youth students in their transition into college, while attending Mt. SAC and as they transfer to a University. We are committed to partnering with Foster Youth students, and walk with them side by side in pursuing their educational endeavors. Some REACH services offered are mentoring and support, housing resources information, priority registration, workshops and field trips, Chafee grant, textbook loans, and much more!

Rising Scholars Program

Building 9E - 3rd Floor, (909) 274-4411

RISING SCHOLARS (<https://www.mtsac.edu/rising-scholars/>)

Rising Scholars provides resources and services to students who have experienced incarceration or are system impacted. Rising Scholars helps increase students' sense of belonging so they can accomplish their educational and personal goals.

TRIO Program

Building 9E - 3rd Floor, (909) 274-4411

TRIO (<https://www.mtsac.edu/trio/>)

Programs (TRIO) are outreach and student services programs in the United States designed to identify and provide services for individuals from disadvantaged backgrounds. They are administered, funded, and implemented by the United States Department of Education. TRIO includes eight programs targeted to serve and assist low-income individuals, first-generation college students, and individuals with disabilities.

- ACES (<https://www.mtsac.edu/aces/>) (Student Support Services)
The goal of ACES is to increase the college retention and graduation rates of the participants and facilitate the process of transition from one level of higher education to the next.
- Upward Bound (<https://www.mtsac.edu/upwardbound/>)
Upward Bound prepares eligible high school students with preparation for post-secondary education. The program provides academic enrichment opportunities, financial aid assistance, higher education preparation, and exposure to career opportunities.

Veterans Resource Center (VRC)

Building 9E - 1st Floor, (909) 274-4520

Veterans (<http://www.mtsac.edu/Veterans/>)

Building 9E, (909) 274-4520

The VRC project established an innovative, collaborative effort to ease the transition for our student Veterans as they navigate our community college system. Today Mt. SAC continues to demonstrate both its motivation to meet the needs of Student Veterans and an ability to marshal resources to meet those needs through the VRC. The Veterans Resource Center provides wrap-around support services, including wellness and transitional assistance, academic and transfer counseling, and a space that promotes camaraderie amongst veterans, active-duty military, their families, and the campus community.

Other Departments, Programs, or Services for Students

Cashier's Office

Building 4, Lower Level, (909) 274-4960

Cashier's Office (<https://www.mtsac.edu/cashier/>)

The Cashier's Office is responsible for the collection of credit registration fees and other campus fees including parking permits, parking permit replacements, parking citation fees, enrollment verification, production cards, test fees, and field trip fees. The Cashier's Office also processes third party authorization vouchers for fee payment. The office also processes refunds for credit classes, parking permits, and production cards. Students can also be assisted with questions regarding BankMobile (service processor for refunds and other disbursements).

For information regarding fee payment options and payment policies please visit the Cashier's Office website, reference schedule of classes, or contact the Cashier's Office.

Child Care Services

Building 70, (909) 274-4960

Child Care Services (<http://www.mtsac.edu/cdc/>)

The Mt. SAC Child Development Center offers childcare to students while attending class. We provide high quality full and part day early childhood education services to your children. Our nationally accredited program serves children ages three months through five years. After school care for kindergarteners is available as well. Parents and children must meet eligibility requirements, and children must attend for a minimum of 3 hours per day, at least twice a week. For requirement specifications, and pricing information, contact the center directly.

Campus Safety Escort Service

Building 23, (909) 274-4233

Public Safety (<http://www.mtsac.edu/safety/>)

Mt. San Antonio College offers a Security Escort Service from 6:30 p.m. to 10:15 p.m., Monday - Thursday. Trained personnel will escort students safely to their car. Escorts are stationed at various locations on campus and can be identified by their yellow jackets and I.D. badges. Please refer to the campus map below to identify Escort locations. Students may also request a Security Escort by calling (909) 274-4555.

Escort Location Map

Campus escort locations are indicated on the map below with a white star.

SacBookRac

Building 9A, (909) 274-4475

SacBookRac (<https://www.mtsac.edu/about/getting-around/bookstore.html>)

The Sac Book Rac is the campus Bookstore that serves all your academic needs from textbooks to supplies. Textbooks are offered in various formats such as New, Used, Rental, Digital and e-books. Visit our website and find all required Textbooks for your courses. You can also find see a variety of Mt SAC merchandise and clothing that is available for purchase. Sac Book Rac also offers Student Photo ID Services.

Financial Aid

Student Services Center, (909) 274-4450

Financial Aid website (<http://www.mtsac.edu/financialaid/>)

Financial aid is available for students to assist with the costs associated with attending college. Although the primary responsibility for meeting college costs rests with the student and his or her family, it is recognized that many families have limited resources and are unable to meet the cost of a college education. Most financial aid programs were established to provide assistance for students with documented financial need.

The College provides financial assistance in the form of grants, enrollment fee waivers, loans, scholarships, and part-time employment for students who meet financial aid program eligibility requirements. Student financial aid awards are contingent upon continued funding from Federal and State government agencies. Students eligible for financial aid typically receive a "package" of aid from one or more financial aid programs offered.

The Financial Aid Office, located on the 2nd Floor of the Student Services Center building (9B), administers aid programs for eligible applicants. Eligibility criteria for financial aid programs are subject to frequent change. Students may apply for aid by filing a Free Application for Federal Student Aid (FAFSA) form or the California Dream Act application.

Eligibility to apply through the FAFSA

Students who are a U.S. citizen or eligible non-citizen are eligible to apply through the FAFSA; they can do so online at FAFSA. (<http://www.fafsa.gov>) To be considered for financial aid, students must complete the FAFSA each academic year. This application is available beginning in October for the following academic year. If a student is interested in a State of California Grant, the FAFSA and Cal Grant GPA verification form must be completed. The Cal Grant program deadline is March 2nd of each year. For students who miss this deadline, there is a second opportunity for community college students to apply for Cal Grants. The second deadline is September 2nd. Additional information

and eligibility requirements are available at the California Student Aid Commission. (<https://mygrantinfo.csac.ca.gov/logon.asp>)

The FAFSA is the application for the following Federal and State programs:

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- Federal Work-Study Program (FWS)
- Federal William D. Ford Direct Loan Program
- California College Promise Grant (formerly BOG fee waiver)
- State Cal Grants
- Need-based scholarships
- Chafee Grant (for Foster youth)

The information reported on the FAFSA may be verified by the Financial Aid Office using parent and/or student federal income tax information. Other documents may also be requested such as a copy of the Social Security card, Alien Registration card (if applicable) or other types of documents needed to verify or resolve conflicting data.

Recipients of aid from Federal and State funded programs must be students enrolled in eligible programs of study for the purpose of obtaining a degree, an approved Title IV certificate, or transfer. In addition to financial need, other eligibility requirements for most Federal and State programs include:

- a. Having a high school diploma or equivalent such as a GED.
- b. Being a U.S. citizen or eligible non-citizen.
- c. Maintaining satisfactory progress in accordance with the standards.
- d. Not be in default on a federal loan or owe a grant overpayment.
- e. Be registered with the selective service, if required.

Eligibility to apply through the California Dream Act Application (AB 540)

For students who meet the AB 540 nonresident tuition exemption, they are eligible to apply for state financial aid, and can do so online at California Dream Act application website. (<https://dream.csac.ca.gov>) To be considered for financial aid, students must complete the California Dream Act application (CA Dream Act) each academic year. This application is available beginning in October for the following academic year. If a student is interested in a State of California Grant, the CA Dream Act and Cal Grant GPA verification form must be completed. The Cal Grant program deadline is March 2nd of each year. For students who miss this deadline, there is a second opportunity for community college students to apply for Cal Grants. The second deadline is September 2nd. Additional information and eligibility requirements are available at California Aid Commission (<https://mygrantinfo.csac.ca.gov/logon.asp>).

The CA Dream Act is the application for the following State programs:

- California College Promise Grant (formerly BOG fee waiver)
- State Cal Grants
- Need-based scholarships

The information reported on the CA Dream Act may be verified by the Financial Aid Office using parent and/or student federal income tax information. Other documents may also be requested to verify or resolve conflicting data.

Recipients of aid from State funded programs must be students enrolled in eligible programs of study for the purpose of obtaining a degree,

certificate, or transfer. In addition to financial need, other eligibility requirements for State programs include:

1. Having a high school diploma or equivalent such as a GED.
2. Being an AB 540 resident.
3. Maintaining satisfactory progress in accordance with the standards.
4. Not owe a grant overpayment.
5. Be registered with the selective service, if required.

Required Attendance

Students who receive federal financial aid and do not attend any classes will be required to repay all of the funds they have received. Students who withdraw from all classes prior to completing more than 60% of the semester are subject to return of Title IV funds requirements, will have financial aid eligibility recalculated based on the percentage of the semester completed, and will be required to repay any unearned financial aid received. At Mt. SAC a student's withdrawal date is determined as follows:

- a. the date the student officially notified the Admissions and Records Office of his or her intent to withdraw, or
- b. the midpoint of the semester for a student who leaves without notifying the college, or
- c. the student's last date of attendance at a documented academically-related activity, or
- d. the date posted by the instructor indicating last day of attendance.

California College Promise Grant (formerly BOG fee waiver)

The California College Promise Grant (formerly BOG fee waiver) program is available to qualified California residents. This grant functions as a fee waiver where the enrollment fee is waived, and the student is responsible for paying the additional fees assessed. There are three methods to qualify. (1) Temporary Assistance for Needy Families (TANF), Supplemental Security Income (SSI), or General Relief recipient, or (2) Household size/family income, or (3) Financial need as determined by filing the Free Application for Federal Student Aid (FAFSA)/ or the CA Dream Act Application. In addition to the three methods, there are special classifications that qualify for this grant subject to certification and/or documentation. Refer to the California College Promise Grant application for a list of these classifications. To apply, go to CCCApply (<https://home.cccapply.org/money/california-college-promise-grant/>).

Required Academic Progress for California College Promise Grant (formerly BOG fee waiver)

- **Academic — Sustain a GPA of 2.0 or higher**

If your cumulative GPA falls below 2.0 for two consecutive primary terms (fall/spring semesters, or fall/winter/spring quarters), you may lose your fee waiver eligibility.

- **Progress — Complete more than 50% of your coursework**

If the cumulative number of units you complete is not more than 50% in two consecutive primary terms (fall/spring semesters, or fall/winter/spring quarters), you may lose your fee waiver eligibility.

- **Combination of Academic and Progress Standards**

Any combination of two consecutive terms of cumulative GPA below 2.0, and/or cumulative unit completion of not more than 50% may result in loss of fee waiver eligibility.

For further information regarding notification and appeal, please go to resources on the Mt. SAC Financial Aid web page (http://www.mtsac.edu/financialaid/resources/policies/board_of_governors_fee_waiver_loss.html)

In addition, the college administers a variety of scholarship programs. Information about the College Scholarship Program can be obtained online on the Scholarships webpage at (Scholarships (<http://www.mtsac.edu/scholarships/>)).



2022-23
CATALOG

**LIBRARY and
LEARNING RESOURCES**



LIBRARY AND LEARNING RESOURCES

Academic Support and Achievement Center (ASAC)

Building 6, South Entrance, Lower Level, Room 101

Learning Technology Center, (909) 274-4300

ASAC (<http://mtsac.edu/asac/>)

The Academic Support and Achievement Center (ASAC) provides a one-stop shop for academic support. Trained and qualified tutors, peer mentors, lab instructors, and instructional support specialists are available for English, Math, reading, the sciences, and more. Workshops, study groups, and Supplemental Instruction (SI) are offered to support academic goals. A testing center and the ASAC Computer Lab are also available. The ASAC Computer Lab computers and audio visual materials are available to all current registered Mt. SAC students with valid Mt. SAC photo ID. Students can use the Learning Lab for research, word processing, multimedia assignments, online course work, and to supplement classroom instruction.

Achieving in College, Ensuring Success (ACES) Program

Building 9E, (909) 274-4411

ACES Program (<http://www.mtsac.edu/aces/>)

The goal of ACES is to increase the college retention and graduation rates of the participants and facilitate the process of transition from one level of higher education to the next. ACES provides intensive academic, personal, and career counseling to help first-generation, and/or low-income, foster youth, or disabled students reach their post-secondary goals.

Distance Learning Program

Building 6, (909) 274-5659

Distance Learning Program (<http://www.mtsac.edu/distancelearning/>)

Distance Learning means taking classes that are conducted partially or entirely off-campus "at a distance." Students and professors communicate with each other using a variety of technologies. Distance Learning (DL) courses have the same content and academic rigor as regular courses; the only difference is the delivery method. Students should expect to spend as much time, sometimes more depending on the subject matter, reading, writing, and studying for DL courses as they would in regular courses. In addition, students who manage their time well, log into DL courses regularly, submit completed work on time, and meet course expectations would do well in any course, but especially in DL courses. Communicating with the professor in a timely manner when there are questions or problems is also critical to student success.

Extended Opportunity Programs & Services (EOPS)

Building 9B, (909) 274-4500

Extended Opportunity Programs & Services (<http://www.mtsac.edu/eops/>)

Extended Opportunity Programs and Services (EOPS) provides educational and financial support services to eligible students who have historically experienced economic and educational disadvantages. Our program goes "over and above" other college services by offering priority registration, counseling, tutoring, financial assistance, and other support

services designed to help students meet their personal and educational goals.

Language Learning Center (LLC)

Building 77, Room 1005, (909) 274-4580

Language Learning Center (<http://www.mtsac.edu/llc/>)

The Language Learning Center (LLC) offers computer, web, and other media resources for students learning English as another language (ESL and AMLA) as well as those studying sign language (ASL) and world languages. Registration is open and free to anyone in the community.

Library

Building 6, North Entrance, Upper Level,

Learning Technology Center, (909) 274-4260

Library (<http://mtsac.edu/library/>)

The Library offers students, faculty, and staff a place to develop information and technology literacy, cultivate information inquiry skills, engage in quiet study, and meet to collaborate with fellow students. Students who consult with Library faculty in the library or online receive individualized instruction that will assist them in developing their research topics, select relevant databases, construct effective searches, and find and evaluate their search results. Students who attend library workshops or enroll in credit library courses will further develop information literacy and research skills, improve their ability to evaluate and integrate a variety of materials into their papers and presentations, and learn effective search techniques.

The Library provides access to online databases to support student research and has a collection of over 90,000 print and media materials including print books, eBooks, closed-captioned DVDs, adapted ESL titles and career titles. Students can use course reserves textbooks, reserve group study rooms online, print from the library computers, and scan.

Math Activities Resource Center (MARC)

Building 61 - Room 1318, (909) 274-5014

MARC Center (<http://www.mtsac.edu/marc/>)

The MARC offers free tutoring to Mt. SAC students currently enrolled in MATH 50 through MATH 71. Resources for checkout include videos, calculators, textbooks and solutions manuals.

Science, Technology, Engineering, and Mathematics (STEM) Center

Building 61 - Room 3318, (909) 274-4224

STEM Center (<http://www.mtsac.edu/stem/>)

The STEM Center offers free support services to students enrolled in science, mathematics, and engineering courses. Services include peer coaching, tutoring, faculty office hours, and counseling. Seminars and workshops on strategies for success in STEM courses, life management skills for success in STEM courses, and preparation for transfer in STEM majors are presented. The STEM Center serves as a hub for activity related to STEM courses and career.

Speech and Sign Success Center (SSSC)

Building 26B, Room 1551, (909) 274-6297

Speech and Sign Success Center (SSSC) (<http://mtsac.edu/sssc/>)

Sign Language and Speech students can access specially designed digital video recording rooms that include flat screen monitors for self guided practice and skill development. For Sign students, the center has the video relay system (VRS) with special headsets for interpreters in

training, as well as finger practice software. For Speech students, the center provides video libraries of speech examples and tools to create and manage visual aids. For both subject areas, individualized tutoring services are available. Students must be enrolled in a Speech or Sign class, and bring their student I.D. with them to access the center. Drop-in sessions are welcomed, but appointments are highly encouraged.

Tech Ed Resource Center (TERC)

Building 18C - 1105, (909) 274-6118 or (909) 274-6122

TERC Center (<http://www.mtsac.edu/tech-health/terc/>)

The Tech Ed Resource Center (TERC) offers specialty tutoring in Aviation, Paralegal studies, CIS courses, Electronics, as well as basic math, English, and study methods to all CTE students. Students can check out laptops, books, and specialized equipment for their major (microscopes and electronics equipment, etc.). Students are encouraged to drop in and work with tutors or study independently. Two counselors are available during the Fall and Spring semesters; appointments are not required for TERC services.

Transfer Math Activities Resource Center (T-MARC)

Building 61 - Room 1314, (909) 274-5389

T-MARC Center (<http://www.mtsac.edu/marc/>)

The T-MARC offers free math tutoring to Mt. SAC students currently enrolled in MATH 100 and above. A variety of resources for in-lab and take-home use are available.

The Writing Center

Building 26B - Room 1561A, (909) 274-5325

Writing Center (<http://www.mtsac.edu/writingcenter/>)

The Writing Center offers free services to all students. The Center provides one-on-one tutoring in writing for any course at the College in both face-to-face and online formats. CRLA-certified tutors and at least one qualified English instructor are present at all times. Non-native English speaking students can also make appointments with ESL-trained tutors. In addition, the Writing Center offers workshops to help with common writing issues, such as grammar, thesis statements, essay planning and organization as well as documentation, and college research. Directed Learning Activities to hone writing and grammar skills are also offered. The Center's computer lab is open to students who use tutoring services to write and print papers, conduct research, and develop skills of grammar and rhetoric using self-directed software.

WIN Program

Building 45, Room 1430, (909) 274-4239

WIN Program (<http://mtsac.edu/continuing/noncredit/abe/win.html>)

The WIN Program is a tutorial center and study hall where student-athletes have the opportunity to access tutoring in all subject areas either individually or in a group. The program is specifically designed to achieve success in their courses, prepare students to transfer to a four-year university, and assist them in maintaining academic eligibility.

Work Experience Education

Student Qualification

- Enrolled in a Career and Technical Education (CTE) program related to Work Experience course
- In good academic standing

- Have completed 1/3 of major/program required courses or completed SAM code C course or co-currently enrolled in SAM code C course as well as meet all prerequisites required by the program
- Have the approval of the assigned work experience professor
- Pursue a planned program of work experience education based on written, measurable learning objectives which are directly related to the student's educational program and which, in the opinion of the professor, include new or expanded responsibilities or learning opportunities beyond those experienced during previous employment. Repetition of experiences in an ongoing job does not guarantee continued eligibility for the program. Student may repeat Work Experience up to 16 units. New learning objectives are required for each enrollment
- Meet the following condition if self-employed:

Identify a person who is approved by the professor to serve as a designated employer representative. This representative shall agree in writing, to accept the following employer responsibilities:

- Assist the student in identifying new or expanded on-the-job learning objectives
- Assist in the evaluation of the student's identified on-the-job learning objectives
- Validate hour worked

Credits

For the satisfactory completion of work experiences education, the College will grant credit to a student in an amount not to exceed four (4) units per semester, with a maximum total of sixteen (16) units during the student's enrollment at the College. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester of supervised work is required for each one unit of credit.

The student must be, as verified by the supervising professor, enrolled in an occupational program directly related to the work experience assignment.

The student enrolled in the work in the work experience education program shall assume and comply with the following responsibilities:

- Unless otherwise determined, develop measurable learning objectives approved by the professor and work site supervisor
- If under the age of 18, obtain the written permission of their parents
- Faithfully discharge the duties of the on-the-job assignment
- Notify the professor of any work site problems or change in status of duties
- Try at all times to represent themselves and the College positively while at the work site
- If, prior to enrolling in work experience education, the student is already employed full time by the work site where the work experience will take place, the student must write a report concerning a learning objective that extended beyond the duties of the regular job
- Complete required assignments given by work experience professor



**2022-23
CATALOG**

**DEGREES and
CERTIFICATES**



CERTIFICATES & DEGREES DEFINED

What is a Degree?

Mt. San Antonio College offers both Associate in Science (A.S.) and Associate in Arts (A.A.) degrees. In general, the Associate in Science degrees are two-year occupational degrees that prepare students for a variety of career and technical fields. The Associate in Arts degrees, while not intended specifically for transfer, are two-year degrees in Liberal Arts and Sciences that provide for broad exploration of a specific area of emphasis. In many cases and with appropriate academic advising, students obtaining the Associate in Arts degree will find that they have a solid foundation for further postsecondary study should they wish to transfer at a later date. The Associate in Arts for Transfer and Associate in Science for Transfer degrees are designed to provide students with a seamless transition for transfer with junior standing somewhere in the CSU system.

Mt. San Antonio College currently offers 101 Associate and Transfer Degrees. These programs of study appeal to a diversity of interests reflecting industry needs and career trends to provide students with the skills and knowledge needed to earn a degree, transfer to a four-year college/university or prepare for employment.

What is a Certificate?

Mt. San Antonio College offers two different types of certificates for credit programs of study:

- **Skills Certificates** are certificates of less than 16 units in various occupational areas. Although the awarding of Skills Certificates is not noted on a student's official transcript, the student may apply for and receive a documentation certificate from the college that may be of value in documenting knowledge and skills to potential employers. In many cases, entry-level Skills Certificates may be part of a series of increasing levels of preparation in an occupational area, and courses used to complete them may form a core of requirements that are augmented as students pursue higher levels of proficiency toward a Certificate of Achievement.
- **Certificates of Achievement** include all certificates of 16 or more units awarded for completion of an approved program of study meeting requirements of the California Community College Chancellor's Office in terms of total unit values and other criteria. Certificates of 8 or more units meeting the requirements of the California Community College Chancellor's Office may also qualify as Certificates of Achievement. The possession of such a certificate is favorably recognized by business and industry and is frequently a requirement for professional advancement. The awarding of all Certificates of Achievement is noted on a student's official transcript.

Note: The unit requirement for Skills Certificates is below the number required for some forms of financial aid eligibility. Students should consult with the Financial Aid Office to determine whether a particular program of study qualifies for financial aid.

Students who desire help in planning for a vocation or profession, or to prepare for transfer to a four-year institution, should seek the advice of a counselor.

Requirements for all certificates include the following:

- At least 1/2 of the credits earned toward the certificate must be completed at Mt. San Antonio College
- A grade of "C" or better must be earned in each course to be applied to the certificate

Mt. San Antonio College also awards Certificates of Competency and Occupational Training Certificates of Completion for certain non-credit programs of study. Information on these certificates may be found in the Adult and Continuing Education section of this catalog.

Requirements for an Associate Degree

Application for Graduation

The Application for Graduation is the student's notification to Admissions and Records that the student has completed all requirements and would like to receive a degree. The Application for Graduation form is available in the Admissions and Records office or online (Application for Graduation (<http://www.mtsac.edu/records/documents/Application-for-Graduation-A-R-Grad-Petition-12-16-2014.pdf>)). Students should meet with a Counselor to discuss their Education Plan prior to submitting the Application for Graduation.

All students intending to receive a degree must file an Application for Graduation with the Admissions and Records office and have on file all required documents and official transcripts. The deadline dates for submitting the Application for Graduation are as follows:

Fall: deadline to apply for fall graduation is the end of the ninth week.

Winter: deadline to apply for winter graduation is the end of the ninth week of the fall semester.

Spring: deadline to apply for spring graduation is the end of the ninth week.

Summer: deadline to apply for summer graduation is the end of the ninth week of the spring semester.

Students should check the Schedule of Classes in the Key Dates section for specific deadline dates for any given term. Applications received after the deadline will be processed with the next graduation cycle. Students may apply for graduation one semester prior to completing all required coursework. Once the degree has been conferred, the degree will be posted to the student's academic record and will appear on the transcript. Students will also receive their diplomas in the mail thereafter. If a student is denied graduation, he or she will be informed in writing.

Multiple Degrees

The Associate in Science degree shall be awarded to those graduates who majored in one of the occupational programs at Mt. San Antonio College. Students may be awarded multiple Associate in Science, Associate in Arts, Associate in Arts for Transfer, and/or Associate in Science for Transfer degrees if they have met the requirements within the 60 units of earned credit. Returning students seeking additional degrees must meet or complete the current general education requirements in effect at the time of re-entry.

Residency Requirement

The Residency Requirement for Mt. San Antonio College can be met with a minimum of 12 units completed in residence at Mt. SAC.

General Education Philosophy Statement

General education is the distinguishing feature of higher education. It is a broadly-based core of humanistic knowledge and abilities, the acquisition of which is the distinctive characteristic of the educated person. General education courses emphasize the ability to reason, to examine issues from different perspectives, to challenge authority, and to communicate ideas logically and confidently. They instill open-mindedness, respect for differences among people, and knowledge of self. By exposing students to different fields of study, general education courses provide an understanding of the human condition and of human accomplishments and encourage a lifelong interest in learning. Together with other Mt. San Antonio College degree requirements, the general education component of the associate degree prepares students to:

- transfer to and function successfully in a baccalaureate degree-granting institution;
- enter the work force as a competent, productive citizen;
- live a richer, more rewarding life.

General education courses are not primarily skills-based, nor are they limited to, or more appropriate for, majors in a specialized field of study. Courses that fulfill general education requirements must:

- a. Require post-secondary level skills in reading, writing, quantitative reasoning, and critical thinking.
- b. Improve students' abilities to:
 - communicate oral and written ideas effectively;
 - define problems, design solutions, critically analyze results;
 - use available media to access and retrieve reliable information for data gathering and research;
 - work effectively, both cooperatively and independently;
 - develop and question personal and societal values, make informed choices, and accept responsibility for their decisions;
 - function as active, responsible, ethical citizens;
 - acquire the curiosity and skills essential for lifelong learning.
- c. Impart understanding, knowledge, and appreciation of:
 - our shared scientific, technological, historical, and artistic heritage, including the contributions of women, ethnic minorities, and non-western cultures;
 - the earth's ecosystem, including the processes that formed it and the strategies that are necessary for its maintenance;
 - human social, political, and economic institutions and behavior, including their interrelationships;
 - the psychological, social, and physiological dimensions of men and women as individuals and as members of society.

Courses that fulfill general education requirements must fall into one of the content categories listed below:

- a. Communication and Critical Thinking
- b. Science and Math
- c. Arts and Humanities
- d. Social Sciences
- e. Lifelong Understanding and Self-Development

Criteria for inclusion in each of the above categories are itemized below:

a. Communication and Critical Thinking

These courses emphasize both the content and form of communication. They teach students the relationship of language

to logic, as well as how to analyze, criticize, and advocate ideas; to reason deductively and inductively; and to reach sound conclusions. Courses fulfilling this requirement:

- provide understanding of the psychological and social significance of communication;
- illustrate how communication operates in various situations;
- focus on communication from the rhetorical perspective: reasoning, advocacy, organization, accuracy; the discovery, critical evaluation, and reporting of information; reading, listening, speaking, and writing effectively;
- provide active participation and practice in written and oral communication.

b. Science and Mathematics

These courses impart knowledge about living and non-living systems, and mathematical concepts and quantitative reasoning with applications. Courses fulfilling this requirement:

- promote understanding and appreciation of the methodologies and tools of science;
- emphasize the influence of scientific knowledge on the development of civilization;
- impart appreciation and understanding of basic concepts, not just skills;
- offer specific inquiry into mathematical concepts, quantitative reasoning and application. (See Mt. SAC degree competency requirements.)

c. Humanities

These courses cultivate intellect, imagination, sensibility and sensitivity. They encourage students to respond subjectively as well as objectively and to develop a sense of the integrity of emotional and intellectual responses. Courses fulfilling this requirement:

- study great work of the human imagination;
- increase awareness and appreciation of the traditional humanistic disciplines such as art, dance, drama, literature, and music;
- impart an understanding of the interrelationship between creative art, the humanities, and the self;
- provide exposure to both Western and non-Western cultures;
- may include a foreign language course that contains a cultural component as opposed to a course that focuses solely on skills acquisition.

d. Social Sciences

These courses explore, at the micro and macro-level, the social, political, and economic institutions that underpin society. Courses fulfilling these requirements:

- promote understanding and appreciation of social, political, and economic institutions;
- probe the relationship between these institutions and human behavior;
- examine these institutions in both their historical and contemporary context;
- include the role of, and impact on, non-white ethnic minorities and women;
- include both Western and non-Western settings.

e. Lifelong Understanding and Self-Development

These courses facilitate an understanding of human beings as integrated physiological, social and psychological organisms. Courses fulfilling this requirement:

- provide selective consideration of human behavior, sexuality, nutrition, health, stress, implications of death and dying, and the relationship of people to the social and physical environment.

Institutional Level Outcomes (ILOs)

Institutional Level Outcomes (ILOs) are statements about the knowledge, skills, abilities, and attitudes that students are expected to develop as a result of their overall experiences with any aspect of the college, including courses, programs, departments, and services. All college personnel directly or indirectly impact the student experience including faculty, administrators, and staff. The College adopted four ILOs:

- **Communication:** Students effectively communicate with and respond to varied audiences in written, spoken or signed, and artistic forms.
- **Critical Thinking:** Students apply creative, computational, and analytical skills to identify and solve problems, analyze information, synthesize and evaluate ideas, and transform existing ideas into new forms.
- **Information and Technology Literacy:** Students will use resources and technologies to locate, evaluate, synthesize, and communicate information in various formats.
- **Personal, Social, Civic, and Environmental Responsibility:** Students demonstrate awareness and respect for personal, social, civic, and environmental responsibilities.

Program Level Outcomes (PLOs) and Student Learning Outcomes (SLOs) identify what students will know, think, or do as a result of completing programs and courses. Administrative Unit Objectives (AUOs) and Student Service Outcomes (SSOs) identify what students will know, think, or do as a result of interactions with operational and support services. General Education courses are assessed through the discipline-specific SLOs and the comprehensive ILOs. Outcomes mapping demonstrates the connections among the different levels of outcomes.

Program and Course Student Learning Outcomes (SLOs)

Program and course student learning outcomes are statements that define the knowledge, skills, and perspectives acquired by students who satisfy program and course requirements. It is through the assessment of SLOs that the curriculum will be evaluated for improvements. SLOs will be assessed by faculty who teach courses and oversee programs. The SLOs can be found at SLO by Certificate/Degree/Discipline (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>).

Adapted from CSU Executive Order 595 and Title 5 Section 40405.1

Adult & Continuing Education

Adult education courses are designed to support students towards a career or college pathway, as well as to provide developmental, educational, and lifelong learning opportunities. Courses and programs are defined categorically under the California Education Code, Section 84711, whereby state funding is authorized for specific categories. Categories currently provided by Mt. SAC noncredit include: Basic Skills (including tutoring), English as a Second Language (ESL and VESL), Citizenship, Education for Older Adults, Adults with Disabilities, Secondary Education, Short-term Vocational, and additional courses defined as adult education curricula.

A.A. and A.S. Degree Requirements

- **Unit Requirement:** Sixty (60) degree-appropriate units. A letter grade of "C" or better or "P" is required for each course required for graduation.
- **General Education Requirements:** At least 24 units are required which shall include courses in each of the General Education areas, A through E (see lists below). All courses must be completed with a grade of "C" or better or "P".
- **Physical Well-Being Requirement:** Complete at least one of the physical education activity courses with the following prefixes: DNCE, KINA, KINF, KINI, KINL, KINS, KINX with a grade of "C" or better or "P".
- **Reading Competency:** This requirement is met by attaining eligibility for READ 100. Eligibility for READ 100 can be acquired by completing one of the following with a grade of "C" or better.

1. READ 90 Reading College Texts

or

AMLA 91 American Language Advanced Reading

or

2. By obtaining eligibility for READ 100 on the Assessment Questionnaire (AQ)

- **Math Competency:** This requirement is met by completing one of the following with a grade of "C" or better.
- MATH 71 Intermediate Algebra
or
MATH 71B Intermediate Algebra - Second Half
or
MATH 71X Practical Intermediate Algebra
or
- Completing a more advanced college level mathematics course.
or
- Obtaining a satisfactory score on the Intermediate Algebra Competency Examination.
- **GPA Requirement:** A Mt. San Antonio College "degree" total grade point average, and "all college" total grade point average of 2.0.
- **Residency Requirement:** The residency requirement for Mt. San Antonio College can be met with a minimum of 12 units completed in residence at Mt. SAC.

Additional Requirements for the Associate in Science Degree

- Students must complete all required courses in an approved occupational major with a minimum grade of "C" or "P" in all courses.

Additional Requirements for the Associate in Arts Degree

- Students must complete a pattern of 18 or more units from the courses identified within a specific area of emphasis with a minimum grade of "C" or "P" in all courses.

Note: All courses used for the associate degree majors may be double counted toward the Mt. San Antonio College General Education and major requirements.

General Education Requirements for 2022-23

Area A: Communication in the English Language

Course Prefix	Course Name	Units
Choose one course from the following		3
AMLA 1A	College Composition for Non-Native English Speakers	
ENGL 1A	Freshman Composition	
ENGL 1AH	Freshman Composition - Honors	

ENGL 1AM	College Composition for Non-Native English Speakers	
Choose one course from the following:		3
SPCH 1A	Public Speaking	
SPCH 1AH	Public Speaking - Honors	
SPCH 2	Survey of Communication Studies	
SPCH 8	Professional and Organizational Speaking	
SPCH 8H	Professional and Organizational Speaking - Honors	

Area B: The Physical Universe and Life

Course Prefix	Course Name	Units
Choose one course from the Physical Sciences or Life Sciences:		3
Physical Sciences		
ASTR 5	Introduction to Astronomy	
ASTR 5H	Introduction to Astronomy - Honors	
ASTR 5L	Astronomical Observing Laboratory	
ASTR 7	Geology of the Solar System	
ASTR 8	Introduction to Stars, Galaxies, and the Universe	
CHEM 9	Chemistry of Everyday Life	
CHEM 10	Chemistry for Allied Health Majors	
CHEM 20	Introductory Organic and Biochemistry	
CHEM 40	Introduction to General Chemistry	
CHEM 50	General Chemistry I	
CHEM 50H	General Chemistry I - Honors	
CHEM 51	General Chemistry II	
CHEM 51H	General Chemistry II - Honors	
CHEM 55	Chemistry for Engineers	
GEOG 1	Physical Geography	
GEOG 1H	Physical Geography - Honors	
GEOG 1L	Physical Geography Laboratory	
GEOG 1LH	Physical Geography Laboratory - Honors	
GEOL 1	Physical Geology	
GEOL 2	Historical Geology	
GEOL 7	Geology of California	
GEOL 8	Earth Science	
GEOL 8H	Earth Science - Honors	
GEOL 8L	Earth Science Laboratory	
GEOL 9	Environmental Geology	
GEOL 9L	Environmental Geology Laboratory	
GEOL 10	Natural Disasters	
GEOL 24	Geologic Field Studies: Central California	
GEOL 25	Geologic Field Studies: Southern California	
GEOL 30	Global Climate Change	
METO 3	Weather and the Atmospheric Environment	
METO 3L	Weather and Atmospheric Environment Laboratory	
OCEA 10	Introduction to Oceanography	
OCEA 10H	Introduction to Oceanography - Honors	
OCEA 10L	Introduction to Oceanography Laboratory	
PHSC 3	Energy Science	
PHSC 9	Physical Science	
PHYS 1	Physics	
PHYS 2AG	General Physics	
PHYS 2BG	General Physics	
PHYS 4A	Engineering Physics	
PHYS 4B	Engineering Physics	

PHYS 4C	Engineering Physics	
PHYS 6A	General Physics with Calculus	
PHYS 6B	General Physics with Calculus	
Life Sciences		
AGOR 1	Horticultural Science	
ANAT 10A	Introductory Human Anatomy	
ANAT 10B	Introductory Human Physiology	
ANAT 35	Human Anatomy	
ANAT 36	Human Physiology	
ANTH 1	Biological Anthropology	
ANTH 1H	Biological Anthropology - Honors	
ANTH 1L	Biological Anthropology Laboratory	
BIOL 1	General Biology	
BIOL 2	Plant and Animal Biology	
BIOL 3	Ecology and Field Biology	
BIOL 4	Biology for Majors	
BIOL 4H	Biology for Majors - Honors	
BIOL 6	Humans and the Environment	
BIOL 6L	Humans and the Environment Laboratory	
BIOL 8	Cell and Molecular Biology	
BIOL 17	Neurobiology and Behavior	
BIOL 20	Marine Biology	
BIOL 21	Marine Biology Laboratory	
BIOL 25	Conservation Biology	
BIOL 34	Fundamentals of Genetics	
BIOL 34L	Fundamentals of Genetics Laboratory	
MICR 1	Principles of Microbiology	
MICR 22	Microbiology	
PSYC 1B	Biological Psychology	
ZOOL 3	Fundamentals of Zoology	

Area C: Arts and Humanities

Course Prefix	Course Name	Units
Choose two courses, with at least one from the Arts and one from Humanities:		6
AHIS 1	Introduction to the Visual Arts and Art History	
AHIS 3	History of Women and Gender in Art ¹	
AHIS 3H	History of Women and Gender in Art - Honors ¹	
AHIS 4	History of Western Art: Prehistoric Through Gothic	
AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors	
AHIS 5	History of Western Art: Renaissance Through Modern	
AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	
AHIS 6	History of Modern Art	
AHIS 6H	History of Modern Art - Honors	
AHIS 7	Global Contemporary Visual Culture	
AHIS 8	History of Medieval Art and Architecture	
AHIS 9	History of Asian Art and Architecture	
AHIS 10	A History of Greek and Roman Art and Architecture	
AHIS 11	History of African, Oceanic, and Native American Art	
AHIS 11H	History of African, Oceanic, and Native American Art - Honors	
AHIS 12	History of Precolumbian Art and Architecture	

AHIS 12H	History of Precolumbian Art and Architecture - Honors
AHIS 13	World Art and Visual Culture ¹
AHIS 14	Rome: The Ancient City
AHIS 15	Culture and Art of Pompeii
ARCH 250	World Architecture: Prehistory to the Middle Ages
ARCH 251	World Architecture: Renaissance through the Contemporary Era
ARTB 1	Introduction to the Visual Arts and Art History
ARTB 14	Basic Studio Arts
ARTD 15A	Drawing: Beginning
ARTD 20	Design: Two-Dimensional
ARTD 25A	Beginning Painting I
ARTD 46A	Printmaking: Introduction to Monotype
ARTD 47A	Printmaking: Photo and Alternative Processes
ARTG 20	Art, Artists, and Society
ARTS 22	Design: Three-Dimensional
ARTS 30A	Ceramics: Beginning I
ARTS 40A	Sculpture: Beginning
DN-T 20	History and Appreciation of Dance
FASH 9	History of Fashion
ID 14	History of Furniture and Decorative Arts
MUS 12	History of Jazz
MUS 14A	World Music
MUS 14B	American Folk Music
MUS 15	Rock Music History and Appreciation
MUS 15H	Rock Music History and Appreciation - Honors
MUS 100	Introduction to Western Classical Music
MUS 100H	Introduction to Western Classical Music - Honors
MUS 101	Women in Music
MUS 103	Music and Culture of Hip Hop
MUS 103H	Music and Culture of Hip-Hop - Honors
MUS 105	Western Music History I: Antiquity to 1750
MUS 106	Western Music History II: 1750 to Present
MUS 110	Music Fundamentals
PHOT 15	History of Photography
SPCH 4	Performance of Literature
THTR 9	Introduction to Theater Arts
THTR 10	History of Theater Arts
THTR 11	Principles of Acting I
Humanities	
ARAB 1	Elementary Arabic
ARAB 2	Continuing Elementary Arabic
CHIN 1	Elementary Chinese
CHIN 2	Continuing Elementary Chinese
CHIN 3	Intermediate Chinese
CHIN 4	Continuing Intermediate Chinese
ENGL 1B	English - Introduction to Literary Types
ENGL 1BH	English - Introduction to Literary Types - Honors
FRCH 1	Elementary French
FRCH 2	Continuing Elementary French
FRCH 3	Intermediate French
FRCH 4	Continuing Intermediate French
FRCH 60	French Culture Through Cinema
GERM 1	Elementary German
GERM 2	Continuing Elementary German
GERM 3	Intermediate German

GERM 60	German Culture through Cinema
HIST 1	History of the United States ¹
HIST 3	World History: Prehistoric to Early Modern ¹
HIST 3H	World History: Prehistoric to Early Modern - Honors ¹
HIST 4	World History: Early Modern to the Present ¹
HIST 4H	World History: Early Modern to the Present - Honors ¹
HIST 7	History of the United States to 1877 ¹
HIST 7H	History of the United States to 1877 - Honors ¹
HIST 8	History of the United States from 1865 ¹
HIST 8H	History of the United States from 1865 - Honors ¹
HIST 9	Asian American and Pacific Islander History ¹
HIST 10	History of Premodern Asia ¹
HIST 10H	History of Premodern Asia - Honors ¹
HIST 11	History of Modern Asia ¹
HIST 11H	History of Modern Asia - Honors ¹
HIST 16	The Wild West - A History, 1800-1890 ¹
HIST 18	History of Latin America ¹
HIST 19	History of Mexico ¹
HIST 30	History of the African American 1619-1877 ¹
HIST 31	History of the African American ¹
HIST 35	History of Africa ¹
HIST 36	Women in American History ¹
HIST 39	California History ¹
HIST 40	History of the Mexican American ¹
HIST 44	History of Native Americans ¹
HUMA 1	Humanities and the Human Experience
HUMA 1H	Humanities and the Human Experience - Honors
ITAL 1	Elementary Italian
ITAL 2	Continuing Elementary Italian
ITAL 3	Intermediate Italian
ITAL 4	Continuing Intermediate Italian
ITAL 60	Italian Culture Through Cinema
ITAL 61	Italian Culture through Food
JAPN 1	Elementary Japanese
JAPN 2	Continuing Elementary Japanese
JAPN 3	Intermediate Japanese
JAPN 4	Continuing Intermediate Japanese
JAPN 5	Advanced Japanese
JAPN 62	Japanese Culture Through Anime and Manga
KORE 4	Continuing Intermediate Korean
LATN 1	Elementary Latin
LATN 1H	Elementary Latin - Honors
LATN 2	Continuing Elementary Latin
LATN 2H	Continuing Elementary Latin - Honors
LING 2	Languages, Gender, and Power
LING 3	Languages, Cultures, and Writing in East Asia
LIT 1	Early American Literature
LIT 2	Modern American Literature
LIT 3	Multicultural American Literature
LIT 6A	Survey of English Literature
LIT 6B	Survey of English Literature
LIT 10	Survey of Shakespeare
LIT 11A	World Literature to 1650
LIT 11B	World Literature from 1650
LIT 14	Introduction to Modern Poetry

LIT 15	Introduction to Cinema
LIT 20	African American Literature
LIT 25	Contemporary Mexican American Literature
LIT 36	Introduction to Mythology
LIT 40	Children's Literature
LIT 46	The Bible As Literature: Old Testament
LIT 47	The Bible As Literature: New Testament
PHIL 5	Introduction to Philosophy
PHIL 5H	Introduction to Philosophy - Honors
PHIL 12	Introduction to Ethics
PHIL 12H	Introduction to Ethics - Honors
PHIL 15	Major World Religions
PHIL 15H	Major World Religions - Honors
PHIL 20A	Introduction to Ancient Philosophy
PHIL 20AH	Introduction to Ancient Philosophy - Honors
PHIL 20B	Introduction to Modern Philosophy
PHIL 20BH	Introduction to Modern Philosophy - Honors
POLI 5	Political Theory I - Ancient to Contemporary ¹
POLI 7	Political Theory II - Early Modern to Contemporary ¹
PUBH 20	History of Western Medicine
SIGN 101	American Sign Language 1
SIGN 101H	American Sign Language 1 - Honors
SIGN 102	American Sign Language 2
SIGN 103	American Sign Language 3
SIGN 104	American Sign Language 4
SIGN 202	American Deaf Culture
SPAN 1	Elementary Spanish
SPAN 1S	Spanish for the Spanish Speaking
SPAN 2	Continuing Elementary Spanish
SPAN 2S	Continuing Spanish for the Spanish Speaking
SPAN 3	Intermediate Spanish
SPAN 4	Continuing Intermediate Spanish

Correction: Replaced with MUS 110A with 110. 8/23/2022

¹ Courses may not be double counted to satisfy more than one area, even if a course is listed in more than one area.

Area D: Social, Political, and Economic Institutions

Course Prefix	Course Name	Units
Choose one course from the following		3
AABS 35	African American/Black Politics	
HIST 1	History of the United States ¹	
HIST 7	History of the United States to 1877 ¹	
HIST 7H	History of the United States to 1877 - Honors ¹	
HIST 8	History of the United States from 1865 ¹	
HIST 8H	History of the United States from 1865 - Honors ¹	
HIST 30	History of the African American 1619-1877 ¹	
HIST 31	History of the African American ¹	
HIST 36	Women in American History ¹	
HIST 40	History of the Mexican American ¹	
HIST 44	History of Native Americans ¹	
LCAS 25	Latino Politics in the United States	
POLI 1	Introduction to American Government and Politics	
POLI 1H	Introduction to American Government and Politics - Honors	

POLI 25	Latino Politics in the United States
POLI 35	African American/Black Politics
Elective Courses	
Choose one course from the following	
AGAG 1	Food Production, Land Use, and Politics - A Global Perspective
AHIS 3	History of Women and Gender in Art ¹
AHIS 3H	History of Women and Gender in Art - Honors ¹
AHIS 9	History of Asian Art and Architecture
AHIS 11	History of African, Oceanic, and Native American Art
AHIS 11H	History of African, Oceanic, and Native American Art - Honors
AHIS 12	History of Precolumbian Art and Architecture
AHIS 12H	History of Precolumbian Art and Architecture - Honors
AHIS 13	World Art and Visual Culture ¹
AHIS 14	Rome: The Ancient City
AHIS 15	Culture and Art of Pompeii
ANTH 4	Archaeology
ANTH 5	Cultural Anthropology
ANTH 5H	Cultural Anthropology - Honors
ANTH 6	Language and Culture: An Introduction to Linguistic Anthropology
ANTH 15	Peoples and Cultures of Latin America and the Caribbean
ANTH 16	Peoples and Cultures of South Asia
ANTH 17	Peoples and Cultures of the Middle East
ANTH 30	The Native American
ANTH 50	Introduction to Science, Technology, and Society
BUSC 1A	Principles of Economics - Macroeconomics
BUSC 1AH	Principles of Economics - Macroeconomics - Honors
BUSC 1B	Principles of Economics - Microeconomics
BUSC 1BH	Principles of Economics - Microeconomics - Honors
BUSL 100	American Law and Democracy
CHLD 1	Child, Family, School and Community
CHLD 10	Child Growth and Lifespan Development ¹
CHLD 10H	Child Growth and Lifespan Development - Honors ¹
CHLD 11	Child and Adolescent Development ¹
FASH 14	Dress, Culture, and Identity
GEOG 2	Human Geography
GEOG 2H	Human Geography - Honors
GEOG 5	World Regional Geography
GEOG 8	Urban Geography
GEOG 30	Geography of California
HIST 1	History of the United States ¹
HIST 3	World History: Prehistoric to Early Modern
HIST 3H	World History: Prehistoric to Early Modern - Honors ¹
HIST 4	World History: Early Modern to the Present ¹
HIST 4H	World History: Early Modern to the Present - Honors ¹
HIST 7	History of the United States to 1877 ¹
HIST 7H	History of the United States to 1877 - Honors ¹
HIST 8	History of the United States from 1865 ¹

HIST 8H	History of the United States from 1865 - Honors ¹
HIST 9	Asian American and Pacific Islander History ¹
HIST 10	History of Premodern Asia ¹
HIST 10H	History of Premodern Asia - Honors ¹
HIST 11	History of Modern Asia ¹
HIST 11H	History of Modern Asia - Honors ¹
HIST 16	The Wild West - A History, 1800-1890 ¹
HIST 18	History of Latin America ¹
HIST 19	History of Mexico ¹
HIST 30	History of the African American 1619-1877 ¹
HIST 31	History of the African American ¹
HIST 35	History of Africa ¹
HIST 36	Women in American History ¹
HIST 39	California History ¹
HIST 40	History of the Mexican American ¹
HIST 44	History of Native Americans
JOUR 100	Introduction to Mass Communications
JOUR 107	Race, Culture, Gender, and Mass Media Images
NF 28	Cultural and Ethnic Foods ¹
POLI 2	Comparative Politics
POLI 5	Political Theory I - Ancient to Contemporary ¹
POLI 7	Political Theory II - Early Modern to Contemporary ¹
POLI 9	International Relations ¹
POLI 10	Environmental Politics
PSYC 1A	Introduction to Psychology
PSYC 1AH	Introduction to Psychology - Honors
PSYC 14	Developmental Psychology ¹
PSYC 14H	Developmental Psychology - Honors ¹
PSYC 15	Introduction to Child Psychology ¹
PSYC 19	Abnormal Psychology
PSYC 20	Introduction to Social Psychology
PSYC 25	The Psychology of Women ¹
R-TV 01	Introduction to Electronic Media
SOC 1	Introduction to Sociology
SOC 1H	Introduction to Sociology - Honors
SOC 2	Contemporary Social Problems
SOC 2H	Contemporary Social Problems - Honors
SOC 4	Introduction to Gerontology
SOC 5	Introduction to Criminology
SOC 5H	Introduction to Criminology - Honors
SOC 12	Introduction to Research Methods in the Social Sciences
SOC 14	Marriage and the Family
SOC 14H	Marriage and the Family - Honors
SOC 15	Child Development ¹
SOC 20	Introduction to Race and Ethnicity
SOC 20H	Introduction to Race and Ethnicity - Honors
SOC 40	Introduction to Sex and Gender Roles
SOC 110	Introduction to Social Justice
SOC 130	Introduction to LGBTQ Studies
SPCH 7	Intercultural Communication
SPCH 7H	Intercultural Communication - Honors
SPCH 26	Interpersonal Communication ¹
SPCH 26H	Interpersonal Communication - Honors ¹

SPCH 30	Introduction to Communication Theory
SPCH 30H	Introduction to Communication Theory - Honors

¹ Courses may not be double counted to satisfy more than one area, even if a course is listed in more than one area.

Area E: Lifelong Understanding and Self-Development

Course Prefix	Course Name	Units
Choose one course from the following		3
AD 3	Addiction: Prevention, Intervention, and Recovery	
BIOL 5	Contemporary Health Issues	
BIOL 13	Human Reproduction, Development and Aging	
BIOL 15	Human Sexuality	
BIOL 15H	Human Sexuality - Honors	
CHLD 10	Child Growth and Lifespan Development ¹	
CHLD 10H	Child Growth and Lifespan Development - Honors ¹	
CHLD 11	Child and Adolescent Development ¹	
COUN 2	College Success Strategies	
COUN 5	Career and Life Planning	
FCS 41	Life Management	
KIN 34	Fitness for Living	
LEAD 55	Exploring Leadership	
NF 10	Nutrition for Health and Wellness	
NF 12	Sports Nutrition	
NF 25	Introduction to Nutrition Science	
NF 25H	Introduction to Nutrition Science - Honors	
NF 28	Cultural and Ethnic Foods ¹	
PSYC 14	Developmental Psychology ¹	
PSYC 14H	Developmental Psychology - Honors ¹	
PSYC 15	Introduction to Child Psychology ¹	
PSYC 25	The Psychology of Women ¹	
PSYC 26	Psychology of Sexuality	
PSYC 33	Psychology for Effective Living	
PUBH 24	Introduction to Public Health	
SOC 15	Child Development ¹	
SPCH 26	Interpersonal Communication ¹	
SPCH 26H	Interpersonal Communication - Honors ¹	
STDY 100	University-level Practices for Academic Success	

¹ Courses may not be double counted to satisfy more than one area, even if a course is listed in more than one area.

Certificates

A

Accounting (Certificate N0459)	60
Accounting – Bookkeeping (Certificate E0504)	60
Accounting – Computerized (Certificate N0460)	60
Accounting – Financial Planning (Certificate N0461)	60
Accounting – Managerial (Certificate N0462)	61
Accounting – Payroll (Certificate E0505)	61
Accounting – Tax Preparation (Certificate E0433)	61
Addictions Counseling (Certificate T0658)	62
Administration of Justice (Certificate T0406)	63
Administrative Assistant – Level I (Certificate E0516)	63
Administrative Assistant – Level II (Certificate N0463)	64
Administrative Assistant – Level III (Certificate N0464)	64
Air Conditioning and Refrigeration (Certificate T0909)	64
Aircraft Powerplant Maintenance Technology – Day (Certificate T0982)	65
Aircraft Powerplant Maintenance Technology – Evening (Certificate T0952)	66
Airframe Maintenance Technology – Day (Certificate T0991)	66
Airframe Maintenance Technology – Evening (Certificate T0981)	67
American Language Advanced Proficiency in English for English Language Learners (Certificate M0859)	68
American Language Communication for English Language Learners (Certificate M0860)	68
American Language Foundational English for English Language Learners (Certificate M0858)	68
Android Programming (Certificate M0817)	69
Animal Science Fundamentals (Certificate N0871)	69
Animation – Junior Animator Level I (Certificate E0414)	69
Animation – Junior Animator Level II (Certificate N0465)	69
Architectural Design Concentration Level I (Certificate N0466)	70
Architectural Design Concentration Level II (Certificate N0467)	70
Architectural Design Concentration Level III (Certificate T0386)	71
Architectural Technology Concentration Level I (Certificate N0468)	71
Architectural Technology Concentration Level II (Certificate T0389)	72
Architecture Foundational Skills (Certificate E0387)	72
Artificial Intelligence in Business (Certificate M0671)	72
Athletic Trainer Aide I (Certificate E0802)	72
Award for California State University (CSU) Completion (Certificate T0866)	73
Award for IGETC Completion (Certificated T0867)	73

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Baking and Pastry (Certificate N0455)	73
Big Data Analytics (Certificate M0452)	73
Building Automation (Certificate T0309)	74
Business: Human Resource Management – Level I (Certificate E0531) ..	74
Business: Human Resource Management – Level II (Certificate N0469)	74
Business: Human Resource Management – Level III (Certificate N0470)	75
Business: International – Level I (Certificate E0527)	75
Business: International – Level II (Certificate N0471)	75
Business: International – Level III (Certificate N0472)	76
Business: Management – Level I (Certificate E0525)	77
Business: Management – Level II (Certificate N0473)	77
Business: Management – Level III (Certificate N0646)	77
Business: Retail Management – Level I (Certificate E0500)	78
Business: Retail Management – Level II (Certificate N0474)	78
Business: Retail Management – Level III (Certificate T0521)	78
Business: Small Business Management – Level I (Certificate E0529)	80
Business: Small Business Management – Level II (Certificate N0475)	80
Business: Small Business Management - Level III (Certificate N0647)	80

C

CAD Technician (Certificate E0426)	81
Child Development – Early Childhood Teacher (Certificate T0865)	81
Child Development – Early Intervention and Inclusion (Certificate T0458)	82
Child Development – Infant/Toddler Care Teacher (Certificate N0864) ...	82
Child Development – Level I (Certificate M0663)	83
Child Development - Level II (Certificate N0656)	83
Child Development – Level III (Certificate N0655)	83
Child Development – Program Administration (T0863)	84
Child Development – School-Age Child (Certificate N0862)	85
CIS Cloud Computing for Amazon Web Services (Certificate M0672)	85
CIS Professional Certificate in C++ Programming (Certificate E0714)	86
CIS Professional in Excel and Access (Certificate M0690)	86
CIS Professional in Information and Operating Systems Security (Certificate M0814)	87
CIS Professional in Java Programming (Certificate M0689)	87
CIS Professional in LINUX (Certificate M0816)	87
CIS Professional in Network Security (Certificate M0688)	88
CIS Professional in Networking (Certificate M0809)	88
CIS Professional in Object-Oriented Design & Programming (Certificate M0813)	88
CIS Professional in Python Programming (Certificate M0675)	89
CIS Professional in SQL (Certificate M0811)	89
CIS Professional in Telecommunications (Certificate M0810)	89
CIS Professional in Web Programming (Certificate M0812)	90
CIS Professional Certificate in Windows Operating System Administration (Certificate E0720)	90
CNC Technician (Certificate E0431)	90
Coaching (Certificate E0804)	91
Computed Tomography (Certificate N0687)	91
Computer and Networking Technology – Level I (Certificate N0478)	93
Computer and Networking Technology – Level II (Certificate T0726)	93
Computer Networking Technology Fundamentals (Certificate M0682)	94
Computer Networking Technology Industry Certification (M0849)	94
Consumer Relations (Certificate M0479)	94
Culinary Advanced (Certificate T0457)	95
Culinary Arts (Certificate E0373)	95

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Dance Teacher (Certificate N0649)	95
Digital Systems Technology (Certificate T0438)	96
Domestic Violence Certification (Certificate O0366)	96

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eDiscovery and Litigation Support (Certificate E0441)	97
Electronic Assembly and Fabrication (Certificate E0929)	97
Electronics and Computer – Engineering Technology (Certificate T0906)	97
Electronics Communications (Certificate T0904)	98
Electronics: Industrial Systems (Certificate T0908)	98
Electronics Technology (Certificate N0480)	99
Electronics Technology – Level 1 (Certificate M0679)	99
Electronics Technology – Level 2 (Certificate N0680)	98
Engineering and Construction Technology Level I (Certificate E0423) ...	100
Engineering and Construction Technology Level II (Certificate N0481)	100
Engineering Fundamentals (Certificate N0846)	100
Engineering with Emphasis in Chemical and Material Engineering Applications – Level - 1 (Certificate T0830)	101
Engineering with Emphasis in Chemical and Material Engineering Applications – Level - 2 (Certificate T0831)	101
Engineering with Emphasis in Civil Engineering Applications Level - 1 (Certificate T0833)	102
Engineering with Emphasis in Civil Engineering Applications – Level - 2 (Certificate T0834)	103

Engineering with Emphasis in Electrical Engineering Applications – Level - 1 (Certificate T0836)	103
Engineering with Emphasis in Electrical Engineering Applications – Level - 2 (Certificate T0837)	104
Engineering with Emphasis in Mechanical Engineering Applications – Level - 1 (Certificate T0839)	104
Engineering with Emphasis in Mechanical Engineering Application – Level -2 (Certificate T0840)	105
Engineering with Emphasis in Software Engineering Application – Level - 1 (Certificate T0842)	106
Engineering with Emphasis in Software Engineering Application – Level – 2 (Certificate T0843).....	106
Exhibition Concept, Design and Production (CertificateN0659)	107

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FAA Aircraft Dispatcher (Certificate E0408)	107
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Fashion Design – Level I (Certificate N0482).....	108
Fashion Design – Level II (Certificate N0483)	108
Fashion Historical Costuming (Certificate M0674	109
Fashion Merchandising – Level I (Certificate N0484)	109
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Fitness Specialist/ Personal Trainer (Certificate E0808).....	111
Forensics Competition Management (Certificate N0848)	111

G

Geographic Information Systems (GIS) (Certificate N0850).....	111
Geotech (Certificate T0677).....	112
Graphic Design - Level I (Certificate N0487)	112
Graphic Design - Level 2 – Generalist (Certificate T0683)	112
Graphic Design - Level 2 – Marketing (Certificate T0684)	113
Graphic Design - Level 2 – Motion Graphics (Certificate T0685)	113
Graphic Design - Level 2 – Web Design (Certificate T0686)	113

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Horse Ranch Management – Level I (Certificate M0869)	114
Horse Ranch Management – Level II (Certificate N0488)	114
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Hospitality: Event Planning and Catering (Certificate E0379)	115
Hospitality: Food Services (Certificate E1390)	115
Hospitality: Hospitality Management – Level I (Certificate E1332)	115
Hospitality: Hospitality Management – Level II (Certificate N0490).....	116
Hospitality: Restaurant Management – Level I (Certificate E1333)	116
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Industrial Design Engineering – Level I (Certificate N0651).....	117
Industrial Design Engineering – Level II (Certificate N0620).....	118
Industrial Design Engineering – Level III (Certificate T0328)	118
Interior Design – Level I (Certificate E0364)	118
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Interior Design – Level III (Certificate T0305)	119
Interior Design Kitchen and Bath Specialization (Certificate T0306).....	120
Interior Landscaping (Certificate N0621)	121
Introduction to Computer Information Technology (Certificate M0818)	121
iOS Programming (Certificate M0664)	121

J

Junior Game Designer – Introduction (Certificate E0439)	122
Junior Game Designer – Foundation (Certificate N0622).....	122

L

Landscape and Park Maintenance (Certificate N0623).....	122
Landscape Construction (Certificate N0624)	123
Landscape Design – Level I (Certificate N0625).....	123
Landscape Design – Level II (Certificate T0396)	123
Landscape Irrigation (Certificate N0627)	124
Livestock Production Management (Certificate M0870)	124
LVN 30-Unit Option – Career Mobility Track (Certificate E1202)	124

M

Mammography (Certificate E0398)	126
Manufacturing Foundation (Certificate E0421).....	128
Manufacturing Technology (Certificate T0918)	128
Marketing Management (Certificate N0626)	128
MasterCAM (Certificate E0927)	129
Mental Health Technology – Psychiatric Technician (Certificate T1279)	179
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Nursery Management (Certificate N0628).....	131
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Park Management (Certificate N0629)	133
Pet Science (Certificate N0630)	133
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Photography – Level II (Certificate T0349).....	134
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Programming in C++ (Certificate N0634)	136
Public Works/Landscape Management (Certificate M0635).....	137

R

Radio Broadcasting: Behind-the-Scenes (Certificate N0636).....	137
Radio Broadcasting: On-Air (Certificate N0637)	137
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Supply Chain Management (Certificate M0645).....	139
Surveying Technology (Certificate N0868).....	140

T

Technical Sales (Certificate N0856)	140
Technical Theater (Certificate T0446).....	140
Television Crew (Certificate N0640)	141
Theater Performance (Certificate N0855).....	141
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Welder – Gas Tungsten Arc Welding (Certificate T0932)	143
Welder – Licensed (Certificate N0643)	143
Welding (Certificate E0919)	143
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Accounting (Certificate N0459)

Business Division

The Accounting Certificate provides basic accounting skills combined with in-depth training in a variety of accounting concepts, preparing the student for entry-level positions and/or professional advancement in a wide selection of accounting jobs. These jobs include general accounting, cost accounting, payroll, inventory management, asset management, accounts receivable, accounts payable, budgets and forecast, forecast, financial analysis, etc.

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
BUSA 8	Principles of Accounting - Managerial	5
BUSA 52	Intermediate Accounting I	3
BUSA 52B	Intermediate Accounting II	3
BUSA 75	QuickBooks for Accounting	3
BUSA 76	Excel for Accounting	3
BUSM 20	Principles of Business	3
Required Electives		
Choose one course from the following:		3-4
BUSA 21	Cost Accounting	
BUSA 58	Federal Income Tax Law	
BUSA 71	Personal Financial Planning	
Total Units		28-29

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Analyze and record transactions using a journal and a ledger, of varying degrees of difficulty including adjusting, and closing entries.
- Interpret accounting statements.
- Explain the role of the managerial accountant and describe the uses of managerial accounting information.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Accounting - Bookkeeping (Certificate E0504)

Business Division

The Accounting - Bookkeeping Certificate provides basic accounting skills and knowledge, preparing the student for entry-level positions as an accounting clerk in areas such as bookkeeping, accounts receivable, accounts payable, inventory tracing/reporting, bank reconciliation, expense reporting, and account analysis.

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
or BUSA 72	Bookkeeping - Accounting	
BUSA 75	QuickBooks for Accounting	3
BUSA 76	Excel for Accounting	3
Total Units		11

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Explain the concept of double-entry accounting within the categories of asset, liability, owner's equity, revenue and expense account.
- Use computerized accounting software to process accounting transactions.
- Analyze business transactions, and journalize and post transactions to ledger accounts.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Accounting - Computerized (Certificate N0460)

Business Division

The Accounting - Computerized Certificate provides basic accounting skills and knowledge combined with additional training in computer applications common to the accounting industry. This certificate program prepares the student for an entry-level position as an accounting clerk that requires computer skills in areas such as utilization of accounting software, accounts receivable, accounts payable, inventory tracing/reporting, bank reconciliation, expense reporting, and account analysis.

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
or BUSA 72	Bookkeeping - Accounting	
BUSA 75	QuickBooks for Accounting	3
BUSA 76	Excel for Accounting	3
CISB 15	Microcomputer Applications	3.5
Choose a minimum of 6 units from the following:		6-7
CISB 11	Computer Information Systems	
CISB 21	Microsoft Excel	
CISB 31	Microsoft Word	
CISB 51	Microsoft PowerPoint	
CISD 11 & 11L	Database Management - Microsoft Access and Database Management - Microsoft Access Laboratory	
Total Units		20.5-21.5

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Process collections from customers and update accounts receivable.
- Prepare financial statements.
- Solve managerial accounting problems with Excel software.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Accounting - Financial Planning (Certificate N0461)

Business Division

The Accounting - Financial Planning Certificate provides basic accounting skills and knowledge combined with specialized training in financial planning, preparing the student for entry-level positions and/or professional advancement in their current accounting jobs. Students completing this certificate will be able to assist companies within the areas of budget analysis, tax reporting, financial and investment planning and analysis.

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
BUSA 8	Principles of Accounting - Managerial	5
BUSA 58	Federal Income Tax Law	4
BUSA 71	Personal Financial Planning	3
BUSA 76	Excel for Accounting	3
Total Units		20

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Utilize accounting information including financial statements to perform financial statement analysis.
- Develop a personal definition of financial success.
- Know how to evaluate their own personal spending patterns and create my own personal budgets.

Review [Student Learning Outcomes \(SLOs\)](http://www.mtsac.edu/instruction/outcomes/sloinfo.html) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Accounting - Managerial (Certificate N0462)

Business Division

The Accounting - Managerial Certificate provides basic accounting skills and knowledge combined with specialized training in managerial accounting, preparing the student for entry-level positions in accounting and/or professional advancement in their current accounting jobs. Students completing this certificate will be able to perform duties in the areas of cost analysis, variance analysis, budget preparation, expense reporting, account analysis, and preparation of various internal reports to assist management in their decision making.

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
BUSA 8	Principles of Accounting - Managerial	5
BUSA 21	Cost Accounting	4
BUSA 76	Excel for Accounting	3
Required Electives		
Choose one course from the following:		3-4
BUSA 52	Intermediate Accounting I	
BUSA 52B	Intermediate Accounting II	
BUSA 58	Federal Income Tax Law	
Total Units		20-21

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Explain the role of the managerial accountant and describe the uses of managerial accounting information.
- Distinguish between product and period costs and explain which of these costs are shown on the balance sheet and which costs are shown on the income statement.
- Describe a job order cost accounting system and explain how manufacturing costs flow through the inventory accounts of the balance sheet and move onto the income statement.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Accounting - Payroll (Certificate E0505)

Business Division

The Accounting - Payroll Certificate provides basic accounting skills and knowledge combined with specialized training in payroll, preparing the student for entry-level clerical positions within the payroll segment of accounting. Common duties performed include payroll tax reporting, payroll accounting systems maintenance, and posting payroll transactions to journals/ledgers.

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
or BUSA 72	Bookkeeping - Accounting	
BUSA 70	Payroll and Tax Accounting	3
BUSA 75	QuickBooks for Accounting	3
BUSA 76	Excel for Accounting	3
Total Units		14

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- identify payroll records required by the employer in preparation for filing tax forms for Social Security, federal and state income tax, state disability benefits, and federal and state unemployment
- calculate wages and withholding amounts in payroll problems
- assemble payroll record keeping requirements for employers under current state and federal laws

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Accounting - Tax Preparation (Skills Certificate E0433)

Business Division

This certificate is designed for individuals desiring to enter the tax preparation field with a minimum of 3 course requirements. Upon successful completion of this certificate, students will possess the knowledge and practical experience necessary to prepare individual income taxes effectively. Additionally, students will earn the qualifying education required by the California Tax Education Council to become a California Registered Tax Preparer.

Required Courses

Course Prefix	Course Name	Units
BUSA 58	Federal Income Tax Law	4
BUSA 59	Volunteer Income Tax Assistance I	1
BUSA 60	Volunteer Income Tax Assistance II	1
Total Units		6

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Addiction Counseling (Certificate T0658)

Technology and Health Division

Certificate T0658

In this program the student integrates theory and practical experience in developing skills necessary to work with persons with addiction disorders, their families, and employers. The curriculum is designed to meet the credentialing requirements of the California Association of Alcohol/Drug Educators and the California Consortium of Addiction Programs and Professionals. Students who complete this option qualify for employment in a variety of addiction treatment settings.

Required Courses

Course Prefix	Course Name	Units
AD 1	Alcohol and Drug Dependency	3
AD 2	Physiological Effects of Alcohol and Drugs	3
AD 3	Addiction: Prevention, Intervention, and Recovery	3
AD 4	Issues in Domestic Violence	3
AD 6	Co-Occurring Disorders	3
AD 8	Group Process and Leadership	3
AD 9	Family Counseling	3
AD 10	Case Management and Documentation	3
AD 11	Techniques of Interviewing and Counseling	3
AD 15A	Introduction to Laws and Ethics for Addictions Counselors	1
AD 15B	Law and Ethics for Addictions Counselors	1
Variable Unit Course. Complete 4 units in 2 or 2 semesters		4
AD 82	Work Experience in Addiction Counseling	

Required Electives

Choose two from the following:		6
CHLD 10	Child Growth and Lifespan Development	
or CHLD 10H	Child Growth and Lifespan Development - Honors	
NF 10	Nutrition for Health and Wellness	
NF 25	Introduction to Nutrition Science	
or NF 25H	Introduction to Nutrition Science - Honors	
PSYC 1A	Introduction to Psychology	
or PSYC 1AH	Introduction to Psychology - Honors	
PSYC 1B	Biological Psychology	
PSYC 14	Developmental Psychology	
or PSYC 14H	Developmental Psychology - Honors	
PSYC 15	Introduction to Child Psychology	
PSYC 17	Introduction to Human Services	
PSYC 19	Abnormal Psychology	
PSYC 20	Introduction to Social Psychology	
PSYC 25	The Psychology of Women	
PSYC 26	Psychology of Sexuality	

PSYC 33	Psychology for Effective Living	
SOC 1	Introduction to Sociology	
or SOC 1H	Introduction to Sociology - Honors	
SOC 2	Contemporary Social Problems	
or SOC 2H	Contemporary Social Problems - Honors	
SOC 4	Introduction to Gerontology	
SOC 5	Introduction to Criminology	
or SOC 5H	Introduction to Criminology - Honors	
SOC 7	Sociology of Religion	
SOC 14	Marriage and the Family	
or SOC 14H	Marriage and the Family - Honors	
SOC 15	Child Development	
SOC 20	Introduction to Race and Ethnicity	
or SOC 20H	Introduction to Race and Ethnicity - Honors	
SOC 36	Asian American Communities	
SOC 40	Introduction to Sex and Gender Roles	
or SOC 40H	Introduction to Sex and Gender Roles - Honors	
Total Units		39

Addiction Counseling Website (<https://www.mtsac.edu/mental-health/addictions-counseling/>)

Selection Procedure

All classes are open to all students who meet admission requirements and course prerequisites.

Working Environment

May be exposed to infectious and contagious disease, without prior notification
 Regularly exposed to the risk of blood borne diseases
 Exposed to hazardous agents, body fluids and wastes
 Exposed to odorous chemicals and specimens
 Subject to hazards of flammable, explosive gases
 Subject to burns and cuts
 Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
 Handle emergency or crisis situations
 Subject to many interruptions
 Requires decisions/actions related to end of life issues
 Exposed to products containing latex

Selection Procedure

All classes are open to all students who meet admission requirements and course prerequisites.

Special Instructions

Restricted Electives must be taken prior to enrollment in Field Experience and can be taken in conjunction with core and skills courses.

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts

- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle emergency or crisis situations
- Subject to many interruptions
- Requires decisions/actions related to end of life issues
- Exposed to products containing latex

English Language Skills

Although proficiency in English is not a criterion for admission, students are encouraged to be able to speak, write and read English to complete classes successfully and to ensure safety for themselves and others.

The Alcohol and Drug Counseling program is accredited by the California Association for Alcohol/Drug Educators and the California Consortium of Addiction Programs and Professionals.

Contact:

California Association for Alcohol/Drug Educators
5230 Clark Avenue, Suite 3
Lakewood, CA 90712
(707) 722-2331
www.caade.org (<http://www.caade.org/>)

California Consortium of Addiction Programs and Professionals
5861 Cherry Avenue, Suite 301
Long Beach, CA 90805
<https://ccapp.us/>

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be technically competent to safely practice as an entry-level alcohol & drug counselor.
- Demonstrate an understanding of ethical & legal requirements for alcohol & drug counselors.
- Demonstrate the ability to develop and achieve entry-level professional goals.
- Demonstrate the ability to develop and achieve entry-level professional goals.
- Demonstrate competency in basic counseling skills commensurate with an entry level practitioner in the addictions counseling field.
- Demonstrate the ability to assess, intervene, and refer clients with co-occurring mental health and substance abuse disorder to appropriate resources.
- Students completing the certificate/associates degree program will demonstrate the ability to prepare and develop professional treatment plans and other clinical documentation.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Administration of Justice (Certificate T0406)

Technology and Health Division Certificate T0406

The Certificate in Administration of Justice program is intended to prepare students for entry-level employment following graduation.

The courses emphasize the modern role of law enforcement and corrections within the criminal justice systems. Written and oral communication skills are a consistent focus. Entry-level employment opportunities available after completion of this program may include law enforcement as peace officers, corrections officers, custodial officers, non-sworn security and investigations, other non-sworn positions in law enforcement, and public service.

Required Courses

Course Prefix	Course Name	Units
ADJU 1	The Administration of Justice System	3
ADJU 2	Principles and Procedures of the Justice System	3
ADJU 3	Concepts of Criminal Law	3
ADJU 4	Legal Aspects of Evidence	3
ADJU 5	Community Relations	3
ADJU 68	Administration of Justice Report Writing	3
Choose four from the following:		12
ADJU 6	Police Patrol Tactics and Strategy	
ADJU 9	Introduction to Homeland Security	
ADJU 10	Introduction to Correctional Sciences	
ADJU 13	Concepts of Traffic Services	
ADJU 20	Principles of Investigation	
ADJU 38	Narcotics Investigation	
ADJU 50	Introduction to Forensics for Criminal Justice	
ADJU 59	Gangs and Corrections	
ADJU 74	Vice Control	
Total Units		30

Administration of Justice Website (<http://www.mtsac.edu/justice/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate the principals involved in documenting the investigation of criminal activity.
- Identify and apply legal precedents in field work.
- Demonstrate familiarity with the social factors related to police interaction with communities.
- Demonstrate understanding of how criminal codes are used and how statutory law is practically applied.
- Demonstrate the ability to use technology and other resources to research social and legal aspects of the criminal justice system.
- Demonstrate the ability to present information in diverse circumstances, with various cultures and communities, involving public and media issues.
- Understand professional skills related to court testimony, interview, interrogation, and law enforcement nomenclature.

Review Student Learning Outcomes (SLOs) for this program.

Administrative Assistant - Level I (Certificate E0516)

Business Division Certificate E0516

The Level I Certificate prepares students for entry-level clerical positions where keyboarding and basic office skills are the primary functions.

Required Courses

Course Prefix	Course Name	Units
CISB 10	Office Skills	3
CISB 15	Microcomputer Applications	3.5
CISB 31	Microsoft Word	3
Total Units		9.5

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Touch type effectively.
- Effectively use formulas and functions in worksheets.
- Use Microsoft Word to create professional looking reports.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Administrative Assistant - Level II (Certificate N0463)

Business Division Certificate N0463

The Level II Certificate prepares students for clerical positions where, in addition to general office skills, written communication and advanced word processing skills are needed.

Required Courses

Course Prefix	Course Name	Units
Completion of the Administrative Assistant - Level I coursework		9.5
PLUS		
Completion of the Administrative Assistant - Level II coursework		9
Total Units		18.5

Course Prefix	Course Name	Units
Administrative Assistant - Level I Coursework		
CISB 10	Office Skills	3
CISB 15	Microcomputer Applications	3.5
CISB 31	Microsoft Word	3
Total Units		9.5

Course Prefix	Course Name	Units
Administrative Assistant - Level II Coursework		
BUSO 25	Business Communications	3
CISB 21	Microsoft Excel	3
CISB 51	Microsoft PowerPoint	3
Total Units		9

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Touch type effectively.
- Effectively use formulas and functions in worksheets.
- Use Microsoft Word to create professional looking reports.
- Be proficient in the use of a word processing software application.

- Demonstrate the ability to keyboard at the rate of at least 40 words per minute on a 5-minute timed writing with 5 errors or less.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Administrative Assistant - Level III (Certificate N0464)

Business Division

Certificate N0464

The Level III Certificate prepares students for administrative assistant positions where a variety of skills are needed.

Required Courses

Course Prefix	Course Name	Units
Completion of the Administrative Assistant - Level I coursework		9.5
PLUS		
Completion of the Administrative Assistant - Level II coursework		9
PLUS		
Completion of the Administrative Assistant - Level III coursework		7-8.5
Total Units		25.5-27

Course Prefix	Course Name	Units
Administrative Assistant - Level I Coursework		
CISB 10	Office Skills	3
CISB 15	Microcomputer Applications	3.5
CISB 31	Microsoft Word	3
Total Units		9.5

Course Prefix	Course Name	Units
Administrative Assistant - Level II Coursework		
BUSO 25	Business Communications	3
CISB 21	Microsoft Excel	3
CISB 51	Microsoft PowerPoint	3
Total Units		9

Course Prefix	Course Name	Units
Administrative Assistant - Level III Coursework		
BUSO 26	Oral Communications for Business	3
CISB 16	Macintosh Applications	2
Choose one course or any lecture-lab combination from the following:		2-3.5
CISD 11 & 11L	Database Management - Microsoft Access and Database Management - Microsoft Access Laboratory	
CISN 21	Windows Operating System	
CISS 11	Practical Computer Security	
CISW 15	Web Site Development	
Total Units		7-8.5

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Level Outcomes

Upon successful completion of this program, a students will be able to:

- Touch type effectively.
- Effectively use formulas and functions in worksheets.
- Use Microsoft Word to create professional looking reports.

- Design and create visual presentations utilizing desktop presentation software (i.e. Power Point).
- Demonstrate ability to effectively produce a variety of professional-looking business publications (at least five) i.e. newsletter, flyer, brochure, letterhead, business card, event program, etc.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Air Conditioning and Refrigeration (Certificate T0909)

Technology and Health Division Certificate T0909

This program is designed to prepare the student for employment in the broad field of air conditioning, heating, and refrigeration. It leads to occupations in design, manufacturing, operation, sales, distribution, installation, maintenance, and repair. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
AIRC 10	Technical Mathematics in Air Conditioning and Refrigeration	2
AIRC 11	Welding for Air Conditioning and Refrigeration	2
AIRC 12	Air Conditioning Codes and Standards	3
AIRC 20	Refrigeration Fundamentals	4
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5
AIRC 26	Gas Heating Fundamentals	2
AIRC 30	Heat Load Calculations and Design	4
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4
AIRC 32A	Air Properties and Measurement	1.5
AIRC 34	Commercial Systems	4
Total Units		31.5

Air Conditioning and Refrigeration Website (<http://www.mtsac.edu/airconditioning/>)

Program Learning Outcome

Upon successful completion of this program, a student will be able to:

- Properly handle refrigerants based on Section 608 of the clean air act.
- Evaluate, troubleshoot, and modify the electrical, mechanical and air side operation of an air conditioning or refrigeration system.
- Perform a residential heat load calculation, select the equipment, and size the ductwork based on ACCA's Manual J8 and Manual D.
- Select equipment and components for commercial refrigeration systems.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Aircraft Powerplant Maintenance Technology - Day (Certificate T0982)

Technology and Health Division Certificate T0982

This program prepares students to enter employment as certified powerplant technicians in the aircraft maintenance industry. Training is given in the overhaul of various powerplants and their components. Completion of this program leads to an Associate in Science Degree or a Certificate. Excellent opportunities for employment exist in this area of training. Certain administrative, quality control, and flight personnel careers require the applicant to hold a valid A & P Certificate.

This program offers a day (full-time) or evening (full-time) program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 65A and AIRM 65B are equivalent to evening program courses AIRM 95A, AIRM 95B, AIRM 96A, AIRM 96B, AIRM 97A, AIRM 97B, AIRM 98A, and AIRM 98B. Day program courses AIRM 66A and AIRM 66B are equivalent to evening program courses AIRM 90A, AIRM 90B, AIRM 91A, AIRM 91B, AIRM 92A, AIRM 92B, AIRM 93A, and AIRM 93B. Successful completion of this program enables students to take the FAA examination in General and Powerplant. Passing the General Exam plus the Airframe and/or Powerplant Exam provides certification as an Aircraft Maintenance Technician which is required for employment in this field. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
AIRM 65A	Aircraft Powerplant Theory	13
AIRM 65B	Aircraft Powerplant Systems	13
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3
AIRM 71	Aviation Maintenance Science	6
AIRM 72	Aircraft Materials and Processes	2
Total Units		40

Recommended Electives

Course Prefix	Course Name	Units
AIRM 74	Aircraft Maintenance Technology - Work Experience	2
AIRM 80	Laboratory Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4

The Aircraft Powerplant Maintenance Technology program is accredited by the Federal Aviation Administration (FAA).

Contact:

Federal Aviation Administration (FAA)
800 Independence Avenue, SW
Washington, DC 20591
1(800) 835-5322
www.faa.gov (<http://www.faa.gov/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Connect learned theory with real-world problems and develop a logical solution to the problem.
- Locate, interpret, and apply technical data from industry manuals and apply that technical data to a maintenance situation.
- Determine several possible solutions for dealing with a given situation and then decide which solution(s) are ethical and which are not.
- Demonstrate proper use of aircraft repair equipment.
- Apply knowledge of aeronautics, aircraft maintenance, and aviation regulations.
- Inspect an aircraft/aircraft component and determine if the unit conforms to industry established standards.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Aircraft Powerplant Maintenance Technology- Evening (Certificate T0952)

Technology and Health Division Certificate T0952

This program prepares students to enter employment as certified powerplant technicians in the aircraft maintenance industry. Training is given in the overhaul of various powerplants and their components. Completion of this program leads to an Associate in Science Degree or a Certificate. Excellent opportunities for employment exist in this area of training. Certain administrative, quality control, and flight personnel careers require the applicant to hold a valid A & P Certificate.

This program offers a day (full-time) or evening (full-time) program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 65A and AIRM 65B are equivalent to evening program courses AIRM 95A, AIRM 95B, AIRM 96A, AIRM 96B, AIRM 97A, AIRM 97B, AIRM 98A, and AIRM 98B. Day program courses AIRM 66A and AIRM 66B are equivalent to evening program

courses AIRM 90A, AIRM 90B, AIRM 91A, AIRM 91B, AIRM 92A, AIRM 92B, AIRM 93A, and AIRM 93B.

Successful completion of this program enables students to take the FAA examination in General and Powerplant. Passing the General Exam plus the Airframe and/or Powerplant Exam provides certification as an Aircraft Maintenance Technician which is required for employment in this field. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3
AIRM 71	Aviation Maintenance Science	6
AIRM 72	Aircraft Materials and Processes	2
AIRM 95A	Aircraft Powerplant Theory	3
AIRM 95B	Aircraft Powerplant Inspection and Maintenance	3
AIRM 96A	Aircraft Turbine Engines	3
AIRM 96B	Aircraft Propellers	3
AIRM 97A	Aircraft Powerplant Instrumentation	3
AIRM 97B	Aircraft Powerplant Fuel Systems	3

AIRM 98A	Aircraft Powerplant Ignition Systems	3
AIRM 98B	Aircraft Powerplant Lubricating Systems	3
Total Units		38

Recommended Electives

Course Prefix	Course Name	Units
AIRM 74	Aircraft Maintenance Technology - Work Experience	2
AIRM 80	Laboratory Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4

The Aircraft Powerplant Maintenance Technology program is accredited by the Federal Aviation Administration (FAA).

Contact:

Federal Aviation Administration (FAA)
800 Independence Avenue, SW
Washington, DC 20591
1(800) 835-5322
www.faa.gov (<http://www.faa.gov/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Connect learned theory with real-world problems and develop a logical solution to the problem.
- Locate, interpret, and apply technical data from industry manuals and apply that technical data to a maintenance situation.
- Determine several possible solutions for dealing with a given situation and then decide which solution(s) are ethical and which are not.
- Demonstrate proper use of aircraft repair equipment.
- Apply knowledge of aeronautics, aircraft maintenance, and aviation regulations.
- Inspect an aircraft/aircraft component and determine if the unit conforms to industry established standards.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Airframe Maintenance Technology - Day (Certificate T0991)

Technology and Health Division Certificate T0991

This program prepares students to enter employment as certified airframe technicians in the aircraft maintenance industry. Training is given in the overhaul of various airframes and their components. Completion of this program leads to an Associate in Science Degree or a Certificate. Excellent opportunities for employment exist in this area of training. Certain administrative, quality control, and flight personnel careers require the applicant to hold a valid A & P Certificate.

This program offers a day (full-time) or evening (full-time) program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 65A and AIRM 65B are equivalent to evening program courses AIRM 95A, AIRM 95B, AIRM 96A, AIRM 96B, AIRM 97A, AIRM 97B, AIRM 98A, and AIRM 98B. Day program courses AIRM 66A and AIRM 66B are equivalent to evening program courses AIRM 90A, AIRM 90B, AIRM 91A, AIRM 91B,

AIRM 92A, AIRM 92B, AIRM 93A, and AIRM 93B. Successful completion of this program enables students to take the FAA examination in Airframe and General. Passing the General Exam plus the Airframe and/or Powerplant Exam provides certification as an Aircraft Maintenance Technician which is required for employment in this field. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
AIRM 66A	Aircraft Airframe Maintenance Structures	13
AIRM 66B	Aircraft Airframe Maintenance Systems	13
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3
AIRM 71	Aviation Maintenance Science	6
AIRM 72	Aircraft Materials and Processes	2
Total Units		40

Recommended Electives

Course Prefix	Course Name	Units
AIRM 74	Aircraft Maintenance Technology - Work Experience	2
AIRM 80	Laboratory Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4

Aircraft Maintenance Website (<http://www.mtsac.edu/aircraft-maintenance/>)

The Airframe Maintenance Technology program is accredited by the Federal Aviation Administration (FAA).

Contact:

Federal Aviation Administration (FAA)
800 Independence Avenue, SW
Washington, DC 20591
1(800) 835-5322

www.faa.gov (<http://www.faa.gov>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Connect learned theory with real-world problems and develop a logical solution to the problem.
- Locate, interpret, and apply technical data from industry manuals and apply that technical data to a maintenance situation.
- Determine several possible solutions for dealing with a given situation and then decide which solution(s) are ethical and which are not.
- Demonstrate proper use of aircraft repair equipment.
- Apply knowledge of aeronautics, aircraft maintenance, and aviation regulations.
- Inspect an aircraft/aircraft component and determine if the unit conforms to industry established standards.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Airframe Maintenance Technology - Evening (Certificate T0981)

Technology and Health Division Certificate T0981

This program prepares students to enter employment as certified airframe technicians in the aircraft maintenance industry. Training is given in the overhaul of various airframes and their components. Completion of this program leads to an Associate in Science Degree or a Certificate. Excellent opportunities for employment exist in this area of training. Certain administrative, quality control, and flight personnel careers require the applicant to hold a valid A & P Certificate.

This program offers a day (full-time) or evening (full-time) program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 65A and AIRM 65B are equivalent to evening program courses AIRM 95A, AIRM 95B, AIRM 96A, AIRM 96B, AIRM 97A, AIRM 97B, AIRM 98A and AIRM 98B. Day program courses AIRM 66A and AIRM 66B are equivalent to evening program courses AIRM 90A, AIRM 90B, AIRM 91A, AIRM 91B, AIRM 92A, AIRM 92B, AIRM 93A and AIRM 93B. Successful completion of this program enables students to take the FAA examination in Airframe and General. Passing the General Exam plus the Airframe and/or Powerplant Exam provides certification as an Aircraft Maintenance Technician which is required for employment in this field. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3
AIRM 71	Aviation Maintenance Science	6
AIRM 72	Aircraft Materials and Processes	2
AIRM 90A	Airframe Theory	3
AIRM 90B	Airframe Wood, Fabric, and Paint	3
AIRM 91A	Airframe Aluminum Repair and Plastics	3
AIRM 91B	Airframe Composites, Rigging, and Inspection	3
AIRM 92A	Airframe Hydraulics and Pneumatics	3
AIRM 92B	Airframe Fuel and Environmental Systems	3
AIRM 93A	Airframe Warning and Fire Systems	3
AIRM 93B	Aircraft Communication, Navigation, Radar, and Autopilot Systems	3
Total Units		38

Recommended Electives

Course Prefix	Course Name	Units
AIRM 74	Aircraft Maintenance Technology - Work Experience	2
AIRM 80	Laboratory Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4

Aircraft Maintenance Website (<http://www.mtsac.edu/aircraft-maintenance/>)

The Airframe Maintenance Technology program is accredited by the Federal Aviation Administration (FAA).

Contact:

Federal Aviation Administration (FAA)
800 Independence Avenue, SW
Washington, DC 20591
1(800) 835-5322
www.faa.gov (<http://www.faa.gov>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Connect learned theory with real-world problems and develop a logical solution to the problem.
- Locate, interpret, and apply technical data from industry manuals and apply that technical data to a maintenance situation.
- Determine several possible solutions for dealing with a given situation and then decide which solution(s) are ethical and which are not.
- Demonstrate proper use of aircraft repair equipment.
- Apply knowledge of aeronautics, aircraft maintenance, and aviation regulations.
- Inspect an aircraft/aircraft component and determine if the unit conforms to industry established standards.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

American Language Advanced Proficiency in English for English Language Learners (Certificate M0859)

Humanities and Social Sciences Division

The American Language Advanced Proficiency in English for English Language Learners certificate provides students with evidence of advanced proficiency in English as a Second Language writing, reading, speaking, and listening skills, which students will demonstrate with completion of a series of courses that are designed for an active, student-centered classroom experience based on relevant themes.

- Students must be English Language Learners who complete the college application process, including the Assessment Questionnaire and the Guided Self-Placement process as needed.
- Students must be prepared to study in an English only environment.

This certificate aims to improve students' English language proficiency for successfully navigating the workplace, the community, and/or their coursework at Mt. San Antonio College. This certificate serves as an advanced proficiency certificate in the series of increasing-level certificates for English Language Learners— following the American Language Foundations for English Language Learners and American Language Communication for English Language Learners Certificates of Achievement.

This certificate aims to aid the student in the community, the workplace, and/or in the application to UC/CSUs that require evidence of advanced English proficiency.

Required Courses

Course Prefix	Course Name	Units
AMLA 90	Accelerated Writing for English Language Learners	5
AMLA 91	American Language Advanced Reading for English Language Learners	4
LIBR 1A	Introduction to Library Research	1
Select one course from the following:		2-3
AMLA 93	American Language Colloquial English for English Language Learners	
AMLA 98	American Culture for English Language Learners	
Total Units		12-13

American Language Communication for English Language Learners (Certificate M0860)

Humanities and Social Sciences Division

The American Language Communication for English Language Learners certificate provides students with evidence of proficiency in speaking and listening fluency in English as a Second Language. Through a series of courses that are designed to maximize student communication skills, students will build speaking and listening skills as they develop critical thinking and communication abilities for successfully navigating the workplace, the community, and/or their coursework at Mt. San Antonio College.

- Students must be English Language Learners who complete college application process, including the Assessment Questionnaire and the Guided Self-Placement process as needed.
- Student must be prepared to study in an English-only environment.

This certificate aims to aid the student in academic and professional interviews that require evidence of English language fluency.

Required Courses

Course Prefix	Course Name	Units
AMLA 72	American English Pronunciation	2
AMLA 82	American Language Interpersonal Communication	2
AMLA 92	American Language Formal Speaking	2
AMLA 93	American Language Colloquial English for English Language Learners	2
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
Select one course from the following:		2-3
AMLA 83	Idiomatic English	
AMLA 87	AMLA Grammar Foundations for English Language Learners	
AMLA 97	AMLA Advanced Grammar for English Language Learners	
AMLA 98	American Culture for English Language Learners	
Total Units		14-15

American Language Foundational English for English Language Learners (Certificate M0858)

Humanities and Social Sciences Division

The American Language Foundational English for English Language Learners certificate provides students with evidence of intermediate English as a Second Language writing, reading, speaking, listening, and college readiness skills, which students will demonstrate with completion of a series of courses that are designed for an active, student-centered classroom experience based on relevant themes.

- Students must be English Language Learners who complete the college application process, including the Assessment Questionnaire and the Guided Self-Placement process as needed.
- Students must be prepared to study in an English-only environment.

This certificate aims to improve students' English language proficiency for successfully navigating the workplace, the community, and/or their coursework at Mt. San Antonio College. This certificate serves as a foundational certificate in a series increasing-level certificates for English Language Learners—the American Language Advanced Proficiency and American Language Communication for English Language Learners Certificates of Achievement.

Required Courses

Course Prefix	Course Name	Units
AML 72	American English Pronunciation	2
AML 80	Intermediate to Advanced Writing and Reading	5
AML 81	American Language Intermediate Reading	4
AML 87	AML Grammar Foundations for English Language Learners	2
COUN 1	Introduction to College	1
Total Units		14

Android Programming (Certificate M0817)

Business Division

Certificate M0817

This curriculum is designed for returning CIS professionals with several years experience or current students who have completed several CIS courses. The Android Programming certificate will give students skills that are necessary to obtain jobs in the area of mobile programming, that is used more and more in industry. Students will learn different software packages for developing Android applications as well as general programming skills.

Required Courses

Course Prefix	Course Name	Units
CISP 10	Principles of Object-Oriented Design	2.5
CISP 21	Programming in Java	3
CISP 21L	Programming in Java Laboratory	0.5
CISP 52	Mobile Device Programming	3
CISP 52L	Mobile Device Programming Laboratory	0.5
CISP 54	Programming for Android Devices	3

CISP 54L	Android Programming Laboratory	0.5
Total Units		13

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Animal Science Fundamentals (Certificate N0871)

Natural Sciences Division

Certificate N0871

This certificate program is designed for students to acquire basic knowledge in the fundamentals of Animal Science. This can be utilized to gain entry level employment on farms, ranches and in agricultural sales and services. It is also the first step in the pathway to a career in becoming an educator in Agricultural Sciences. All courses are applicable for degree requirements.

Required Courses

Course Prefix	Course Name	Units
ASCI 1	Animal Science	3
ASCI 2	Animal Nutrition	3
ASCI 51	Animal Handling and Restraint	3
ASCI 94	Animal Breeding	3
ASCI 96	Animal Sanitation and Disease Control	3
ASCI 97	Artificial Insemination of Livestock	3
Select one course from the following:		3
AGAG 1	Food Production, Land Use, and Politics - A Global Perspective	
ASCI 14	Swine Production	
ASCI 17	Sheep Production	
ASCI 30	Beef Production	
Total Units		21

Animal Sciences Website (<http://www.mtsac.edu/animal/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- be able to explain the historical and current economic importance of the livestock and pet animal industries.

Review [Student Learning Outcomes \(SLOs\)](http://www.mtsac.edu/instruction/outcomes/sloinfo.html) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Animation - Junior Animator Level I (Certificate E0414)

Arts Division

Certificate E0414

Level I of a multi-level certificate program provides skills based on the principles of storytelling and animation using both traditional and 3D media. Students prepare for a junior level creative career in the animation industry by mastering the core skills of drawing, storyboarding, digital art, 2D and 3D animation, 3D modeling, and motion graphics.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
ANIM 100	Digital Paint and Ink	3
ANIM 101A	Drawing - Gesture and Figure	3
ANIM 108	Principles of Animation	3
ANIM 115	Storyboarding	3
ANIM 116	Character Development	1.5
Total Units		13.5

Animation & Gaming Website (<http://mtsac.edu/animation/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- successfully create a story board animatic representative of their chosen entertainment field.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Animation - Junior Animator Level II (Certificate N0465)

Arts Division

Level II of a multi-certificate program that provides skills based on the principles of storytelling and animation using both traditional and 3D media. Students prepare for a junior level creative career in the animation industry by mastering the core skills of drawing, storyboarding, digital art, 2D and 3D animation, 3D modeling, and motion graphics.

Required Courses

Course Prefix	Course Name	Units
Completion of the Animation - Tradigital - Level I coursework		13.5
PLUS		
Completion of the Animation - Tradigital - Level II coursework		15
Total Units		28.5

Course Prefix	Course Name	Units
Animation - Junior Animator - Level I Coursework		
ANIM 100	Digital Paint and Ink	3
ANIM 101A	Drawing - Gesture and Figure	3
ANIM 108	Principles of Animation	3
ANIM 115	Storyboarding	3
ANIM 116	Character Development	1.5
Total Units		13.5

Course Prefix	Course Name	Units
Animation - Junior Animator - Level II Coursework		
ANIM 130	Introduction to 3D Modeling	3
ANIM 140	Introduction to 3D Animation	3
ANIM 148	Demo Reel (Choose two courses from the following:)	3
Choose two courses from the following:		6
ANIM 132	Intermediate 3D Modeling	
ANIM 146	Intermediate 3D Animation	
ANIM 172	Motion Graphics, Compositing and Visual Effects	

ANIM 175	Digital Animation
Total Units	15

Recommended Electives

Course Prefix	Course Name	Units
ANIM 110	Animal Drawing	3
ANIM 137A	Work Experience in New Digital Media	1-3
ARTD 16	Drawing: Perspective	3
ARTD 17A	Drawing: Life	3

Animation & Gaming Website (<http://mtsac.edu/animation/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Students will successfully create a portfolio representative of their skills necessary for their chosen animation career

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Architectural Design Concentration Level I (Certificate N0466)

Technology and Health Division

This multi-level certificate program prepares students to enter the field of architecture and related areas. The student is provided with an option of direct employment in the field or preparation for transfer to the professional school of architecture. The Level I certificate provides a broad overview of the fundamental skills essential to the field, suitable for entry-level employment as an office assistant.

Required Courses

Course Prefix	Course Name	Units
ARCH 101	Design I - Elements of Design	4
ARCH 102	Design II - Architectural Design	4
ARCH 121	CADD and Digital Design Media Level I	4
ARCH 122	Architectural Presentations	4
Total Units		16

Specific Information

Students receiving financial aid need to declare the level III certificate as their goal to meet Financial Aid requirements.

Architecture Website (<http://www.mtsac.edu/architecture/>)

Program Learning Outcomes

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Architectural Design Concentration Level-II (Certificate N0467)

Technology and Health Division

Certificate N0467

This Level II Design Concentration Certificate focuses upon studio design, drawing, and presentation skills, including model-making, sketching and computer applications. The student will prepare a portfolio of creative design assignments. The Level II Design Concentration

Certificate prepares students for employment as a design assistant or presentation specialist.

Required Courses

Course Prefix	Course Name	Units
Completion of the Architectural Design Concentration - Level I coursework		16
PLUS		
Completion of the Architectural Design Concentration - Level II coursework		7
Total Units		23

Course Prefix	Course Name	Units
Architectural Technology - Level I Coursework		
ARCH 101	Design I - Elements of Design	4
ARCH 102	Design II - Architectural Design	4
ARCH 121	CADD and Digital Design Media Level I	4
ARCH 122	Architectural Presentations	4
Total Units		16

Course Prefix	Course Name	Units
Architectural Design Concentration - Level II Coursework		
ARCH 201	Design III - Environmental Design	4
ARCH 221	Architectural Rendering and Illustration	3
Total Units		7

Architecture Website (<http://www.mtsac.edu/architecture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be employed or actively seeking employment in the field or a related field.
- Be technically competent.
- Incorporate basic principles of layout and typography in architectural presentations.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Architectural Design Concentration Level-III (Certificate T0386)

Technology and Health Division
Certificate T0386

The Level III Design Concentration Certificate provides additional expertise in portfolio development and professional practice. The Level III Design Concentration Certificate prepares students for employment as an intermediate design assistant or presentation specialist.

Required Courses

Course Prefix	Course Name	Units
Completion of the Architectural Design Concentration - Level I coursework		16
PLUS		
Completion of the Architectural Design Concentration - Level II coursework		7
PLUS		

Completion of the Architectural Design Concentration - Level III coursework	7

Total Units	30

Course Prefix	Course Name	Units
Architectural Design Concentration - Level I Coursework		
ARCH 101	Design I - Elements of Design	4
ARCH 102	Design II - Architectural Design	4
ARCH 121	CADD and Digital Design Media Level I	4
ARCH 122	Architectural Presentations	4
Total Units		16

Course Prefix	Course Name	Units
Architectural Design Concentration - Level II Coursework		
ARCH 201	Design III - Environmental Design	4
ARCH 221	Architectural Rendering and Illustration	3
Total Units		7

Course Prefix	Course Name	Units
Architectural Design Concentration - Level III Courses		
ARCH 202	Design IV - Sustainable Design Advanced Project	4
ARCH 222	Advanced Digital Media, Generative, and Algorithmic Design and Illustration	3
Total Units		7

Architecture Website (<http://www.mtsac.edu/architecture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be employed or actively seeking employment in the field or a related field.
- Be technically competent.
- Present and evaluate the pros and cons of particular design alternative solution.
- Synthesize preliminary design alternatives into one well-presented final architectural design solution.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Architectural Technology Concentration Level-I (Certificate N0468)

Technology and Health Division

This Level I Technology Concentration Certificate focuses upon the preparation of architectural construction documents, with emphasis on computer-aided design and drawing (CADD) applications. Regulatory requirements and an overview of construction practices are also included. The student will prepare a portfolio of CADD documentation, including 2-D and 3-D projections.

Required Courses

Course Prefix	Course Name	Units
Completion of the Architecture Foundational Skills Certificate coursework		12
PLUS		

Completion of the Architectural Technology Concentration - Level I coursework 10

Total Units 22

Course Prefix	Course Name	Units

Architecture Foundational Skills Certificate Coursework

ARCH 101	Design I - Elements of Design	4
ARCH 121	CADD and Digital Design Media Level I	4
ARCH 141	Design Drawing and Communication	4

Total Units 12

Course Prefix	Course Name	Units

Architectural Technology Concentration - Level I Coursework

ARCH 142	Architectural Materials and Specifications	4
ARCH 147	Architectural CAD and BIM	3
ECT 70	Elements of Construction Management	3

Total Units 10

Architecture Website (<http://www.mtsac.edu/architecture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be employed or actively seeking employment in the field or a related field.
- Be technically competent.
- Successfully execute orthographic and 3D drawing projections.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Architectural Technology Concentration Level-II (Certificate T0389)

Technology and Health Division

The Level II Technology Concentration Certificate provides additional expertise in advanced CADD applications and professional practice. The Level II Technology Concentration Certificate prepares students for employment as an intermediate CADD operator or production specialist.

Required Courses

Course Prefix	Course Name	Units

Completion of the Architecture Foundational Skills Certificate coursework 12

PLUS

Completion of the Architectural Technology Concentration - Level I coursework 10

PLUS

Completion of the Architectural Technology Concentration - Level II coursework 9

Total Units 31

Course Prefix	Course Name	Units

Architecture Foundational Skills Certificate Coursework

ARCH 101	Design I - Elements of Design	4
ARCH 121	CADD and Digital Design Media Level I	4

ARCH 141	Design Drawing and Communication	4

Total Units 12

Course Prefix	Course Name	Units

Architectural Technology Concentration - Level I Coursework

ARCH 142	Architectural Materials and Specifications	4
ARCH 147	Architectural CAD and BIM	3
ECT 70	Elements of Construction Management	3

Total Units 10

Course Prefix	Course Name	Units

Architectural Technology Concentration - Level II Courses

ARCH 146	Architectural Drawings and Fabrications	3
ECT 26	Civil Engineering Technology and CADD	3
ECT 71	Construction Estimating	3

Total Units 9

Architecture Website (<http://www.mtsac.edu/architecture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be employed or actively seeking employment in the field or a related field.
- Be technically competent.
- Successfully execute orthographic and 3D drawing projections.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Architecture Foundational Skills (Certificate E0387)

Technology and Health Division

This multi-level certificate program prepares students to enter the field of architecture and related areas. The student is provided with an option of direct employment in the field or preparation for transfer to a professional school of architecture. The Architecture Foundational Skills certificate provides a basic overview of the fundamental skills essential to the field, suitable for entry-level employment as an office assistant.

Required Courses

Course Prefix	Course Name	Units

ARCH 101	Design I - Elements of Design	4

ARCH 121	CADD and Digital Design Media Level I	4

ARCH 141	Design Drawing and Communication	4

Total Units 12

Program Learning Outcomes

Review Student Learning Outcomes (SLOs) for this program.

Artificial Intelligence in Business (Certificate M0671)

Business Division

The curriculum is designed for returning CIS, business, marketing, and data analytics professionals with industry experience or students who

have completed CIS courses. A CIS certificate in Artificial Intelligence in Business will provide students with the knowledge and skills to obtain jobs in the areas of data science, data analysis, data mining, text mining, business intelligence, machine learning, deep learning, natural language processing, and artificial intelligence research. Students will learn how to make business decisions using different machine learning algorithms and deep learning prediction models of different complexities. Students will learn how to use natural language processing to better understand customer intent through sentiment analysis and gather market intelligence.

Required courses

Course Prefix	Course Name	Units
CISB 60	Machine Learning in Business	3.5
CISB 62	Deep Learning in Business	3.5
CISB 63	Natural Language Processing in Business	3.5
Total Units		10.5

Athletic Trainer Aide I (Certificate E0802)

Certificate E0802

The Athletic Trainer Aide I Certificate provides minimal experience necessary to assist High School Athletic Trainers and Athletic Health Care Providers in the community. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
KIN 3	First Aid and CPR	3
or KIN 5	Advanced First Aid/CPR/Emergency Response	
KIN 19	Introduction to Care/Prevention of Activity/Sports-Related Injuries	3
KIN 34	Fitness for Living	3
KIN 92	Work Experience - Athletic Training	2-3
Total Units		11-12

Kinesiology, Athletics, and Dance Website (<http://www.mtsac.edu/kinesiology/>)

Program Learning Objectives

Upon successful completion of this program, a student will be able to:

- Identify daily tasks of operating an athletic training room, pre and post practice, and pre and post competition.
- Create athletic injury documentation in hard copy format and on computerized injury tracking systems.
- Recognize injuries and conditions to be treated that require protection of the health care provider, the patient, and the health care facility.
- Apply the HOPS (History, Observation, Palpation, and Special Tests) procedure during injury evaluation, under the supervision of a certified athletic trainer.
- Provide acute and sub-acute care for athletic injuries and condition, including, but not limited to modalities, manual therapy, and therapeutic exercise.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Award for California State University (CSU) Completion (Certificate T0866)

This Award for CSU Completion certificate is designed to certify a student to transfer from Mt. SAC to California State University (CSU) without the need, after transfer, to take additional lower-division general education courses to satisfy university general education requirements. CSU is not an admission requirement for transfer to CSU, nor is it the only way to fulfill the lower-division general education requirements prior to transfer.

A minimum of grade of "C-" is required Area A-1: Oral Communication, A-2: Written Communication, A-3: Critical Thinking, and B-4: Mathematics/Quantitative Reasoning.

Please note: a grade of C or higher is required in areas A2 and B4 to earn an Associate Degree for Transfer (AA-T and AS-T). C- is not acceptable.

CSU link (<https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fcatalog.mtsac.edu%2Fprograms%2Ftransferring-to-4-year-institutions%2F%23thecaliforniastateuniversitytext&data=05%7C01%7Cipinedo3%40mtsac.edu%7C623d2fedfd4948c6c2ac08daadf651a0%7Ccc4d4bf20a9e4240aede7d1d688f93%7CTWfPbGZsb3d8eyJWljoimC4wLjAwMDAiLCJQljoiv2luMzliLCJBtIl6lk1haWwiLC%7C3000%7C%7C%7C&sdata=prQKZemJMU%2Be9uwA5g4DRI0t2I2ECzrmMb1nPboa8E8%3D&reserved=0>)

Award for IGETC Completion (Certificate T0867)

The Award for IGETC Completion is a certificate of achievement designed to certify a transfer student to a campus in either the University of California (UC) system or California State University (CSU) without the need, after transfer, to take additional lower-division general education courses to satisfy university general education requirements. It should be noted that completion of the IGETC is not an admission requirement for transfer to UC or CSU, nor is it the only way to full-fill the lower-division general education requirements of UC or CSU prior to transfer. Education requirements prior to transfer. A minimum of grade of "C" is required for all courses. (A grade of "C-" is not acceptable.)

IGETC link (<https://catalog.mtsac.edu/programs/transferring-to-4-year-institutions/#theuniversityofcaliforniatext>)

Baking and Pastry (Certificate N0455)

Business Division Certificate N0455

The Baking and Pastry certificate prepares students for career opportunities in bakeries, restaurants, catering, hotels, and other food service businesses. Students gain practical training in the use of commercial equipment and acquire the skills necessary to be successful in the field of baking such as: production baking, candy making, specialty cakes, plated desserts and artisan breads, portion control, and food safety management certification.

Required Courses

Course Prefix	Course Name	Units
CUL 105	Baking and Pastry I	3
CUL 106	Baking and Pastry II	3
CUL 116	World Baking	3
CUL 117	Artisan Bread	3
CUL 118	Specialty Cakes	3
HRM 52	Food Safety and Sanitation	2
Total Units		17

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Big Data Analytics (Certificate M0452)

Business Division

The curriculum is designed for returning CIS, business, marketing, and data analytics professionals with industry experience or students who have completed CIS courses. A CIS certificate in Big Data Analytics will provide students with the knowledge and skills to obtain jobs in the areas of data science, data analysis, Big Data, and data mining. Students will learn how to make business decisions based upon the analysis of large amounts of data. Students will learn about processing, integrating, modeling, mining, and analytics related to Big Data. Students will use frameworks, tools, services, and programming languages to analyze data.

Required Courses

Course Prefix	Course Name	Units
CISD 41	Introduction to Data Science	3.5
CISD 42	Big Data Integration and Processing	3.5
CISD 43	Big Data Modeling and Analysis	3.5
Total Units		10.5

CIS Program Website (<https://www.mtsac.edu/cis/>)

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Building Automation (Certificate T0309)

Technology and Health Division

Certificate T0309

This program is designed to prepare the student for a career in the fields of Building Automation, Energy Management, and Green Building Technologies. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
AIRC 20	Refrigeration Fundamentals	4
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4
AIRC 34	Commercial Systems	4
AIRC 61	Building Automation Fundamentals	4
AIRC 65	Building Automation Networks and Programming	4

AIRC 67	Energy Management	4
CNET 56	Computer Networks	4
Total Units		33

Building Automation Website (<http://www.mtsac.edu/buildingautomation/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Identify the startup and operational sequence of a chiller plant.
- Understand the purpose and function of chiller plant economizers.
- Demonstrate the use and application of controlled devices.
- Develop programming strategies for a chiller plant.
- Evaluate the energy usage of a multi-story commercial building.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Business: Human Resource Management - Level I (Certificate E0531)

Business Division

Certificate E0531

This introductory certificate exposes students to the business world and the role of human resources. Students become familiar with various approaches to business organization and the strategic nature of human resources. This certificate may aid the student's search for an entry-level job in the business world.

Required Courses

Course Prefix	Course Name	Units
BUSM 20	Principles of Business	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
Total Units		9

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- List and explain the foundations upon which business is built and the economic challenges facing the United States.
- Apply management concepts and functions.
- Explain theory and practical application of Equal Employment Opportunity current employment laws.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Human Resource Management - Level II (Certificate N0469)

Business Division Certificate N0469

This certificate builds upon the Level I Certificate to provide students with specific knowledge of human resource management functions. HR law, compensations systems, and an understanding of human motivation provide the student with a solid foundation from which to build a career in human resources.

Required Courses

Course Prefix	Course Name	Units
Completion of the Business: Human Resource Management - Level I coursework		9

PLUS

Completion of the Business: Human Resource Management - Level II coursework	9

Total Units	18

Course Prefix	Course Name	Units
Business: Human Resource Management - Level I Coursework		
BUSM 20	Principles of Business	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3

Total Units	9

Course Prefix	Course Name	Units
Business: Human Resource Management - Level II Coursework		
ANTH 5	Cultural Anthropology	3
BUSM 60	Human Relations in Business	3
BUSO 25	Business Communications	3

Total Units	9

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)
Guided Pathways of Study Suggested Course Sequence
(<https://www.mtsac.edu/guided-pathways/pathway-results.html?pthwyvar=N0469&desc=Business%3A+Human+Resource+Management%2C+Certificate+Level+II++N0469>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Define organizational culture, socialization, and mentoring.
- Compose an appropriate, effective letter presenting good news, bad news, sales, or persuasive content.
- Analyze social perception.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Human Resource Management - Level III (N0470)

Business Division Certificate N0470

Students completing the Level III Certificate will have knowledge and practical experience in business communications and computer use. Successful completion of this certificate prepares students to handle the increasing diversity and complexity of modern human resource management. Completing the advanced certificate will help those working in the human resource field to prepare for professional certification by the Human Resource Certification Institute.

Required Courses

Course Prefix	Course Name	Units
Completion of the Business: Human Resource Management - Level I coursework		9

PLUS

Completion of the Business: Human Resource Management - Level II coursework	9

PLUS

Completion of the Business: Human Resource Management - Level III coursework	6.5

Total Units	24.5

Course Prefix	Course Name	Units
Business: Human Resource Management - Level I Coursework		
BUSM 20	Principles of Business	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
Total Units	9	

Course Prefix	Course Name	Units
Business: Human Resource Management - Level II Coursework		
ANTH 5	Cultural Anthropology	3
BUSM 60	Human Relations in Business	3
BUSO 25	Business Communications	3
Total Units	9	

Course Prefix	Course Name	Units
Business: Human Resource Management - Level III Coursework		
BUSA 70	Payroll and Tax Accounting	3
CISB 15	Microcomputer Applications	3.5
Total Units	6.5	

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Identify payroll records required by the employer in preparation for filing tax forms for Social Security, federal and state income tax, state disability benefits, and federal and state unemployment.
- Calculate wages and withholding amounts in payroll problems.
- Assemble payroll record keeping requirements for employers under current state and federal laws.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: International - Level I (Certificate E0527)

Business Division

Certificate E0527

This specialized business certificate is intended to prepare the student to work in the unique and dynamic environment of international business. This program also prepares the student as a business management generalist for companies conducting international trade. This program will afford career opportunities for entry-level employment in international sales and marketing.

Required Courses

Course Prefix	Course Name	Units
BUSM 20	Principles of Business	3
BUSM 51	Principles of International Business	3
BUSS 36	Principles of Marketing	3
Total Units		9

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Guided Pathways of Study Suggested Course Sequence

(<https://www.mtsac.edu/guided-pathways/pathway-results.html?pthwyvar=E0527&desc=Business%3A+International%2C+Certificate+Level+I++E0527>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Identify how governments influence trade.
- List and explain the foundations upon which business is built and the economic challenges facing the United States.
- Have developed a working knowledge of marketing terminology.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: International - Level II (Certificate N0471)

Business Division

Certificate N0471

In the Business: International - Level II Certificate students will learn methods and approaches to managing the complexities of doing business in an international environment. Students acquire both theoretical knowledge and practical skills related to managing and marketing within the global arena. Students active in the workforce will acquire new skills that are highly desirable in a fast-paced dynamic global environment, with an emphasis on the small business perspective.

Required Courses

Course Prefix	Course Name	Units
	Completion of the Business: International - Level I coursework	9
	PLUS	

Completion of the Business: International - Level II coursework	10
Total Units	19

Course Prefix	Course Name	Units
Business: International - Level I Coursework		
BUSM 20	Principles of Business	3
BUSM 51	Principles of International Business	3
BUSS 36	Principles of Marketing	3
Total Units		9

Course Prefix	Course Name	Units
Business: International - Level II Coursework		
BUSM 61	Business Organization and Management	3
BUSM 66	Small Business Management	3
Choose one from the following:		4
CHIN 1	Elementary Chinese	
FRCH 1	Elementary French	
GERM 1	Elementary German	
ITAL 1	Elementary Italian	
JAPN 1	Elementary Japanese	
SPAN 1	Elementary Spanish	
Total Units		10

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply management concepts and functions.
- Describe business planning for small business.
- Discuss the legal forms of business ownership.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: International - Level III (Certificate N0472)

Business Division

Certificate N0472

Upon completion of the Business: International Level III Certificate, students will have acquired the specific skills needed to successfully complete international business transactions. Students will gain a practical, hands-on perspective of how to compete in a global system of conflicting laws, regulations, and requirements.

Required Courses

Course Prefix	Course Name	Units
	Completion of the Business: International - Level I coursework	9
	PLUS	
	Completion of the Business: International - Level II coursework	10
	PLUS	
	Completion of the Business: International - Level III coursework	9
Total Units		28

Course Prefix	Course Name	Units
Business: International - Level I Coursework		
BUSM 20	Principles of Business	3
BUSM 51	Principles of International Business	3
BUSS 36	Principles of Marketing	3
Total Units		9

Course Prefix	Course Name	Units
Business: International - Level II Coursework		
BUSM 61	Business Organization and Management	3
BUSM 66	Small Business Management	3
Choose one from the following:		4
CHIN 1	Elementary Chinese	
FRCH 1	Elementary French	
GERM 1	Elementary German	
ITAL 1	Elementary Italian	
JAPN 1	Elementary Japanese	
KORE 1	Elementary Korean	
SPAN 1	Elementary Spanish	
SPAN 1S	Spanish for the Spanish Speaking	
Total Units		10

Course Prefix	Course Name	Units
Business: International - Level III Coursework		
BUSM 50	World Culture: A Business Perspective	3
BUSM 52	Principles of Exporting and Importing	3
BUSM 53	Supply Chain Management	3
Total Units		9

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Explain how a small business can prepare to conduct export operations.
- Define key international trade documentation requirements.
- Describe types of international trade transportation intermediaries.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Management - Level I (Certificate E0525)

Business Division Certificate E0525

The Business Management - Level I Certificate is designed to introduce the student to the role of management in business. Management is the efficient use of human and capital resources to accomplish organizational objectives. Students will be exposed to the terms, trends, organizational structure, and opportunities inherent in business management. Upon completion of the Business: Management - Level I Certificate students may qualify for an entry-level management position in California's diverse economy.

Required Courses

Course Prefix	Course Name	Units
BUSM 20	Principles of Business	3
BUSM 61	Business Organization and Management	3
BUSS 36	Principles of Marketing	3
Total Units		9

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- List and explain the foundations upon which business is built and the economic challenges facing the United States.
- Apply management concepts and functions.
- Have developed a working knowledge of marketing terminology.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Management - Level II (Certificate N0473)

Business Division Certificate N0473

This certificate builds upon the Level I Certificate to provide students with proven business tools that will enhance their management careers. Students will be exposed to projects and business simulations that will lead to measurable successes. Business presentations, business planning, team building, conflict resolution, and computer use are core skills developed in this certificate.

Required Courses

Course Prefix	Course Name	Units
Completion of the Business: Management - Level I coursework		9
PLUS		
Completion of the Business: Management - Level II coursework		9.5
Total Units		18.5

Course Prefix	Course Name	Units
Business: Management - Level I Coursework		
BUSM 20	Principles of Business	3
BUSM 61	Business Organization and Management	3
BUSS 36	Principles of Marketing	3
Total Units		9

Course Prefix	Course Name	Units
Business: Management - Level II Coursework		
BUSM 60	Human Relations in Business	3
BUSM 62	Human Resource Management	3
CISB 15	Microcomputer Applications	3.5
Total Units		9.5

Special Information

Students receiving financial aid need to declare the Level II or Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Define organizational culture, socialization, and mentoring.
- Analyze social perception.
- Explain theory and practical application of Equal Employment Opportunity current employment laws.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Management - Level III (Certificate N0646)

Business Division Certificate N0646

Upon completion of the Business: Management - Level III Certificate, students will have built a foundation of management strategies and practices which will enable them to prosper in an ever-changing business environment. Students will have a strategic perspective of production, marketing, accounting, international business and human resources. Completion of the Business: Management - Level III Certificate will lead to new opportunities and provide students with a solid foundation upon which to build a management career.

Required Courses

Course Prefix	Course Name	Units
Completion of the Business: Management - Level I coursework		9
PLUS		
Completion of the Business: Management - Level II coursework		9.5
PLUS		
Completion of the Business: Management - Level III coursework		11
Total Units		29.5

Course Prefix	Course Name	Units
Business: Management - Level I Coursework		
BUSM 20	Principles of Business	3
BUSM 61	Business Organization and Management	3
BUSS 36	Principles of Marketing	3
Total Units		9

Course Prefix	Course Name	Units
Business: Management - Level II Coursework		
BUSM 60	Human Relations in Business	3
BUSM 62	Human Resource Management	3
CISB 15	Microcomputer Applications	3.5
Total Units		9.5

Course Prefix	Course Name	Units
Business: Management - Level III Coursework		
BUSA 7	Principles of Accounting - Financial	5
BUSM 10	Principles of Continuous Quality Improvement	3
BUSM 51	Principles of International Business	3
Total Units		11

Special Information

Students receiving financial aid need to declare the Level II or Level III Certificate as their goal to meet Financial Aid requirements.
Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Describe the basic accounting system and how it is used to serve business needs.
- Define and outline the key principles of continuous quality management.
- Identify how governments influence trade.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Retail Management - Level I (Certificate E0500)

Business Division Certificate E0500

This introductory certificate exposes students to the business world and the role of retail distribution. Students become familiar with careers in retail management, as well as the latest trends in this fast changing field. This certificate may aid the student's search for an entry-level job in retail management.

Required Courses

Course Prefix	Course Name	Units
BUSO 25	Business Communications	3
BUSS 50	Retail Store Management and Merchandising	3
CISB 15	Microcomputer Applications	3.5
Total Units		9.5

Special Information

Students receiving financial aid need to declare the Level II or Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Compose an appropriate, effective letter presenting good news, bad news, sales, or persuasive content.
- Use informative and sales letters to convey information and influence people favorably.
- Develop and deliver a 3-5 minute presentation on a business related topic.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Retail Management - Level II (Certificate N0474)

Business Division Certificate N0474

This intermediate certificate builds upon the Level I Certificate to expose students to the various functions of managers in retail positions. Fundamentals of business organization, retail marketing and staffing provides the student a solid foundation from which to build a career in retail management.

Required Courses

Course Prefix	Course Name	Units
Completion of the Retail Management - Level I coursework		9.5
PLUS		
Completion of the Retail Management - Level II coursework		12
Total Units		21.5

Course Prefix	Course Name	Units
Business: Retail Management - Level I Coursework		
BUSO 25	Business Communications	3
BUSS 50	Retail Store Management and Merchandising	3
CISB 15	Microcomputer Applications	3.5
Total Units		9.5

Course Prefix	Course Name	Units
Business: Retail Management - Level II Coursework		
BUSA 11	Fundamentals of Accounting	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
BUSS 36	Principles of Marketing	3
Total Units		12

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply management concepts and functions.
- Explain theory and practical application of Equal Employment Opportunity current employment laws.
- Have developed a working knowledge of marketing terminology.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Retail Management - Level III (Certificate T0521)

Business Division Certificate T0521

Students completing the advanced Level III Certificate will have knowledge and practical experience in business communication, leadership and financial controls. Successful completion of this certificate prepares students to handle the increasing diversity and complexity of modern retail management.

Required Courses

Course Prefix	Course Name	Units
Completion of the Retail Management - Level I coursework		9.5
PLUS		

Completion of the Retail Management - Level II coursework	12
PLUS	
Completion of the Retail Management - Level III coursework	11
Total Units	32.5

Course Prefix	Course Name	Units
Business: Retail Management - Level I Coursework		
BUSO 25	Business Communications	3
BUSS 50	Retail Store Management and Merchandising	3
CISB 15	Microcomputer Applications	3.5
Total Units		9.5

Course Prefix	Course Name	Units
Business: Retail Management - Level II Coursework		
BUSA 11	Fundamentals of Accounting	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
BUSS 36	Principles of Marketing	3
Total Units		12

Course Prefix	Course Name	Units
Business: Retail Management - Level III Coursework		
BUSA 7	Principles of Accounting - Financial	5
BUSM 60	Human Relations in Business	3
BUSO 26	Oral Communications for Business	3
Total Units		11

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Looking for guidance? A counselor can help. This Guided Pathways for Success (GPS) is a suggested sequence of coursework needed for program completion. It is not an official educational plan. Schedule an appointment (<https://esars2012.mtsac.edu/appointments/counseling/eSARS.asp?WCI=Init&WCE=Settings>) with a counselor or advisor as soon as possible to create an individualized Mountie Academic Plan (MAP) specific to your goals and needs.

Course	Title	Units
Fall Term 1		
ENGL 1A	Freshman Composition	4
CISB 15	Microcomputer Applications	3.5
BUSS 50	Retail Store Management and Merchandising	3
Units		10.5

Winter Term 1		
BUSO 25	Business Communications	3
Certificate: Business Retail Management, L1 E0500 ⁰		
Submit petition to Admissions Records		Submit petition to Admissions Records
Units		3

Spring Term 1		
BUSA 11	Fundamentals of Accounting	3
BUSM 61	Business Organization and Management	3

BUSM 62	Human Resource Management	3
BUSS 36	Principles of Marketing	3
Certificate: Business Retail Management, L2 N0474 ⁴		
Submit petition to Admissions Records ¹ Submit petition to Admissions Records		
Units		12
Fall Term 2		
BUSM 60	Human Relations in Business	3
BUSO 26	Oral Communications for Business	3
BUSA 7	Principles of Accounting - Financial	5
Certificate: Business Retail L3 T0521 ¹		
Submit petition to Admissions Records ¹ Submit petition to Admissions Records		
Units		11
Total Units		36.5

Business: Small Business Management - Level I (Certificate E0529)

Business Division Certificate E0529

Small Business has been described as the engine of change within the economy. The Business: Small Business Management - Level I Certificate exposes students to the fundamentals of managing and planning a small business. Upon completion students may qualify for an entry-level management position in a small business. Entrepreneurs may use this certificate as a means to plan and develop new business ventures.

Required Courses

Course Prefix	Course Name	Units
BUSM 20	Principles of Business	3
BUSM 66	Small Business Management	3
BUSS 36	Principles of Marketing	3
Total Units		9

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- List and explain the foundations upon which business is built and the economic challenges facing the United States.
- Have developed a working knowledge of marketing terminology.
- Describe business planning for small business.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Small Business Management - Level II (Certificate N0475)

Business Division Certificate N0475

The Business: Small Business Management - Level II Certificate provides students with practical small business tools. This certificate focuses on issues such as motivation, teamwork, and leadership skills that lead to enhanced productivity through the development of people. Completion of this certificate will lead to new career opportunities for those currently employed in the small business arena.

Required Courses

Course Prefix	Course Name	Units
Completion of the Business: Small Business Management - Level I coursework		9
PLUS		
Completion of the Business: Small Business Management - Level II coursework		9
Total Units		18

Course Prefix	Course Name	Units
Business: Small Business Management - Level I Coursework		
BUSM 20	Principles of Business	3
BUSM 66	Small Business Management	3
BUSS 36	Principles of Marketing	3
Total Units		9

Course Prefix	Course Name	Units
Business: Small Business Management - Level II Coursework		
BUSM 60	Human Relations in Business	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
Total Units		9

Special Information

Students receiving financial aid need to declare the Level II Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Define organizational culture, socialization, and mentoring.
- Apply management concepts and functions.
- Explain theory and practical application of Equal Employment Opportunity current employment laws.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Small Business Management - Level III (Certificate N0647)

Business Division Certificate N0647

Upon completion of the Business: Small Business Management - Level III Certificate, students will have built a foundation of management strategies and practices which will enable them to prosper in an ever-changing small business environment. Computer skills applicable to small business will be developed. Students will have a strategic perspective across all small business functions. Students will acquire the skills and abilities necessary to build a successful small business career.

Required Courses

Course Prefix	Course Name	Units
Completion of the Business: Small Business Management - Level I coursework		9
PLUS		
Completion of the Business: Small Business Management - Level II coursework		9
PLUS		
Completion of the Business: Small Business Management - Level III coursework		11.5
Total Units		29.5

Course Prefix	Course Name	Units
Business: Small Business Management - Level I Coursework		
BUSM 20	Principles of Business	3
BUSM 66	Small Business Management	3
BUSS 36	Principles of Marketing	3
Total Units		9

Course Prefix	Course Name	Units
Business: Small Business Management - Level II Coursework		
BUSM 60	Human Relations in Business	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
Total Units		9

Course Prefix	Course Name	Units
Business: Small Business Management - Level III Coursework		
BUSA 7	Principles of Accounting - Financial	5
BUSM 10	Principles of Continuous Quality Improvement	3
CISB 15	Microcomputer Applications	3.5
Total Units		11.5

Special Information

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a students will be able to:

- I am able to describe the basic accounting system and how it is used to serve business needs.
- I am able to define and outline the key principles of continuous quality management.
- I am able to contrast quality management theory and previous management thought.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

CAD Technician (Certificate E0426)

Technology and Health

E0426

Skills Certificate

Provides students with the most current two-dimensional (2D) and three-dimensional (3D) computer aided design (CAD) skills required in the manufacturing, design, and engineering disciplines. These skills also provide a platform for students to learn, understand, and build other related skills such as drafting, mechanical design, part inspection and computer-aided machining (CAM) software, which requires input from a CAD system, and is required to operate computer numerical control (CNC) machine tools.

Required Courses

Course Prefix	Course Name	Units
MFG 110	Introduction to CAD	4
MFG 120	CAD for Manufacturing	4
MFG 210	Advanced CAD	3
Total Units		11

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Child Development - Early Childhood Teacher (Certificate T0865)

Business Division

The Child Development - Early Childhood Teacher certificate prepares students with the knowledge, skills, abilities, and dispositions needed for perspective job roles in a childcare and development program. This certificate contains two laboratory and one-fieldwork experiences to learn and practice working with children. This certificate meet both Title 22 and Title V State licensing requirements as well as the ECE unit requirement for California Child Development Teacher Permit when paired with the completion of 16 specified GE Areas A, B, C, and D.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
CHLD 1	Child, Family, School and Community	3
CHLD 5	Principles and Practices in Child Development Programs ²	3
CHLD 6	Introduction to Child Development Curriculum ²	3
CHLD 11	Child and Adolescent Development ²	3
CHLD 50	Teaching in a Diverse Society	3
CHLD 64	Health, Safety, and Nutrition of Children	3
CHLD 66	Early Childhood Development Observation and Assessment ¹	2
CHLD 66L	Early Childhood Development Observation and Assessment Laboratory ¹	1
CHLD 68	Introduction to Children With Special Needs ²	3
CHLD 69	Early Childhood Development Field Work Seminar	2
CHLD 75	Supervising Adults in Early Childhood Settings	2
CHLD 84	Guidance and Discipline in Child Development Settings	3
CHLD 91	Early Childhood Development Field Work ¹	1
Choose two courses from the following options:		3

CHLD 67	Early Childhood Education Practicum ¹
CHLD 67L	Early Childhood Education Practicum Laboratory ¹
or	
CHLD 86	Infant Toddler Practicum Seminar
CHLD 87	Infant Toddler Practicum Field Work Experience ¹
Required Electives	
Choose two from the following:	
CHLD 51	Early Literacy in Child Development
CHLD 61	Language Arts and Art Media for Young Children
CHLD 62	Music and Motor Development for Young Children
CHLD 63	Math and Science for Young Children
Total Units	41

¹ Students must provide documentation of influenza, pertussis (TDap), and measles immunization, as well as TB clearance, as required by SB792 prior to being permitted to enroll in this class. Instructions on submitting documentation are available at Child Development Center (<http://www.mtsac.edu/cdc/immunization/>).

² Documentation of tuberculosis (TB) clearance is required.

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Understand and use a wide array of developmentally appropriate approaches, instructional strategies, and tools to connect with children and families and positively influence each child's development and learning.
- Be able to evaluate Early care and Education Program regulations, standards, and policies according to Title 22 California.
- Be grounded in Child Development knowledge (theory) and use their understanding of young children and their needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Understand that child observation, documentation and other forms of assessment are central to the practices of all early childhood professionals. Students use systematic observations, documentation, and other effective assessment strategies to positively influence the development of every child.
- Understand the importance of developmental domains and academic content areas. Students use their knowledge and other resources to design implement, and evaluate meaningful challenging curricula and environments that promotes comprehensive developmental learning outcomes for every child.
- Understand that successful programs depend upon partnerships with children's families and communities. They use this understanding to create respectful, reciprocal relationships that support and empower families and to involve all families in their children's development and learning.
- Acquire strategies and developmentally appropriate techniques for effective teaching and classroom management.
- Understand theoretical and practical implications of oppression and privilege as they apply to young children, families, programs, classrooms, and teaching. Various classroom strategies to deal with bias are developed.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Child Development - Early Intervention and Inclusion (Certificate T0458)

Business Division

Certificate T0458

The Child Development - Early Intervention and Inclusion certificate supports teachers and paraprofessionals working with children with special needs and/or Early Intervention Programs. It acts as a pathway to career opportunities in education, California child development permits, Early Intervention Assistant Personnel Competencies for California's Early Start Program, A.S and A.S-T degrees. This certificate meets the State's competencies for early childhood intervention/early childhood special education paraprofessionals and California Title 5 requirements for the Child Development Associate Teacher permit. It also aligns with the child development permits –Teacher, and Master Teacher (when combined with 16 general education units)- issued by the State of California, Commission on Teacher Credentialing.

Required Courses

Course Prefix	Course Name	Units
CHLD 1	Child, Family, School and Community	3
CHLD 5	Principles and Practices in Child Development Programs ²	3
CHLD 11	Child and Adolescent Development ²	3
CHLD 66	Early Childhood Development Observation and Assessment ¹	2
CHLD 66L	Early Childhood Development Observation and Assessment Laboratory ¹	1
CHLD 68	Introduction to Children With Special Needs ²	3
CHLD 73	Infant and Toddler Development ²	3
CHLD 80	Curriculum and Strategies for Children with Special Needs	3
CHLD 84	Guidance and Discipline in Child Development Settings	3
CHLD 85	Infants At Risk	3
Choose one of the following course pairs:		3
CHLD 67	Early Childhood Education Practicum ¹	
CHLD 67L	Early Childhood Education Practicum Laboratory ¹	
OR		
CHLD 86	Infant Toddler Practicum Seminar	
CHLD 87	Infant Toddler Practicum Field Work Experience ¹	
Total Units		30

¹ Students must provide documentation of influenza, pertussis (TDap), and measles immunization, as well as TB clearance, as required by SB792 prior to being permitted to enroll in this class. Instructions on submitting documentation are available at Child Development Center (<https://www.mtsac.edu/cdc/immunization/>).

² Documentation of tuberculosis (TB) clearance is required.

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Child Development - Infant/Toddler Care Teacher (Certificate N0864)

Business Division

The Infant/Toddler certificate provides specialized skills and knowledge for working with infants and toddlers. This certificate exceeds Title 22 requirements for a fully qualified teacher of infants/toddlers by including the specified 3 units related to infant care. With 350 days of experience, the completion of 16 specified G.E. units in Areas A, B, C, and D and 2 adult supervision units; this certificate meets Title 5 education requirements for the Master Teacher Level Permit. This permit authorizes the holder to provide service in the care, development and instruction of children and serve as a coordinator of curriculum and staff development.

Required Courses

Course Prefix	Course Name	Units
CHLD 1	Child, Family, School and Community	3
CHLD 5	Principles and Practices in Child Development Programs ¹	3
CHLD 11	Child and Adolescent Development ¹	3
CHLD 50	Teaching in a Diverse Society	3
CHLD 72	Teacher, Parent, and Child Relationships	1
CHLD 73	Infant and Toddler Development ¹	3
CHLD 79	Infant and Toddler Care and Education ¹	3
CHLD 85	Infants At Risk	3
CHLD 86	Infant Toddler Practicum Seminar	2
CHLD 87	Infant Toddler Practicum Field Work Experience ²	1
Total Units		25

¹ Documentation of tuberculosis (TB) clearance is required.

² Students must provide documentation of influenza, pertussis (TDap), and measles immunization, as well as TB clearance, as required by SB792 prior to being permitted to enroll in this class. Instruction on submitting documentation are available at Child Development Center (<https://www.mtsac.edu/cdc/>).

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be grounded in Child Development knowledge (theory) and use their understanding of young children and their needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Understand that successful programs depend upon partnerships with children's families and communities. They use this understanding to create respectful, reciprocal relationships that support and empower families and to involve all families in their children's development and learning.

Review Student Learning Outcomes (SLOs) for this program

Child Development - Level I (Certificate M0663)

Business Division

The Child Development - Level I certificate is designed for the student who desires general knowledge about the foundations of child

development and who has an interest in teaching young children. This certificate meets the Title 22 education requirements for a fully qualified teacher. In Title 5 programs, this certificate meets the educational requirements for an Assistant/Aide position. This certificate includes the identified core courses for the Associate Teacher Child Development Permit. Fifty (50) days of experience is required to complete the permit requirements.

Required Courses

Course Prefix	Course Name	Units
CHLD 1	Child, Family, School and Community	3
CHLD 5	Principles and Practices in Child Development Programs ¹	3
CHLD 6	Introduction to Child Development Curriculum ¹	3
CHLD 11	Child and Adolescent Development ¹	3
Total Units		12

¹ Documentation of tuberculosis (TB) clearance is required.

Child Development - Level II (Certificate N0656)

Business Division

The Child Development - Level II Certificate enhances the student's knowledge beyond Level I, providing additional skills and knowledge working with young children. This certificate advances student towards units needed to become a fully qualified teacher.

Required Courses

Course Prefix	Course Name	Units
	Completion of the Child Development - Level I coursework	12
	PLUS	
	Completion of the Child Development- Level II coursework	6
Total Units		18

Course Prefix	Course Name	Units
Child Development - Level I Coursework		
CHLD 1	Child, Family, School and Community	3
CHLD 5	Principles and Practices in Child Development Programs ¹	3
CHLD 6	Introduction to Child Development Curriculum ¹	3
CHLD 11	Child and Adolescent Development ¹	3
Total Units		12

Course Prefix	Course Name	Units
Child Development - Level II Coursework		
CHLD 50	Teaching in a Diverse Society	3
CHLD 64	Health, Safety, and Nutrition of Children	3
Total Units		6

¹ Documentation of tuberculosis (TB) clearance is required.

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Understand and use a wide array of developmentally appropriate approaches, instructional strategies, and tools to connect with children and families and positively influence each child's development and learning.

- Be able to evaluate Early Care and Education Program regulations, standards, and policies according to Title 22 California.
- Be grounded in Child Development knowledge (theory) and use their understanding of young children and their needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Understand that child observation, documentation and other forms of assessment are central to the practices of all early childhood professionals. Students use systematic observations, documentation, and other effective assessment strategies to positively influence the development of every child.
- Understand that successful programs depend upon partnerships with children's families and communities. They use this understanding to create respectful, reciprocal relationship that support and empower families and to involve all families in their children's development and learning.
- Understand the importance of developmental domains and academic content areas. Students use their knowledge and other resources to design, implement, and evaluate meaningful curriculum.
- Be able to identify and conduct themselves as members of the early childhood profession. They know ethical guidelines and other professional standards related to early childhood education.
- Be able to apply effective guidance and interaction strategies that support all children's social learning, identity, and self-confidence.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Child Development - Level III (Certificate N0655)

Business Division

The Child Development Level III certificate increases skills in planning for children by focusing on different areas of curriculum. With 175 days of experience and the completion of 16 specific G.E. Units in Areas A, B, C and D, this certificate meets the Title 5 education requirements for a fully qualified teacher.

Required Courses

Course Prefix	Course Name	Units
Completion of the Child Development - Level I coursework		12
PLUS		
Completion of the Child Development - Level II coursework		6
PLUS		
Completion of the Child Development - Level III coursework		6
Total Units		24

Course Prefix	Course Name	Units
Child Development - Level I Coursework		
CHLD 1	Child, Family, School and Community	3
CHLD 5	Principles and Practices in Child Development Programs ¹	3
CHLD 6	Introduction to Child Development Curriculum ¹	3
CHLD 11	Child and Adolescent Development ¹	3
Total Units		12

Course Prefix	Course Name	Units
Child Development - Level II Coursework		
CHLD 50	Teaching in a Diverse Society	3
CHLD 64	Health, Safety, and Nutrition of Children	3
Total Units		6

Course Prefix	Course Name	Units
Child Development - Level III Coursework		
Choose two courses from the following:		6
CHLD 51	Early Literacy in Child Development	
CHLD 61	Language Arts and Art Media for Young Children	
CHLD 62	Music and Motor Development for Young Children	
CHLD 63	Math and Science for Young Children	
CHLD 68	Introduction to Children With Special Needs ¹	
CHLD 73	Infant and Toddler Development ¹	
CHLD 84	Guidance and Discipline in Child Development Settings	
Total Units		6

¹ Documentation of tuberculosis (TB) clearance is required.

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Understand and use a wide array of developmentally appropriate approaches, instructional strategies, and tools to connect with children and families and positively influence each child's development and learning.
- Be able to evaluate Early care and Education Program regulations, standards, and policies according to Title 22 California.
- Be grounded in Child Development knowledge (theory) and use their understanding of young children and their needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Understand that child observation, documentation and other forms of assessment are central to the practices of all early childhood professionals. Students use systematic observations, documentation, and other effective assessment strategies to positively influence the development of every child.
- Understand that successful programs depend upon partnerships with children's families and communities. They use this understanding to create respectful, reciprocal relationship that support and empower families and to involve all families in their children's development and learning.
- Understand the importance of developmental domains and academic content areas. Students use their knowledge and other resources to design, implement, and evaluate meaningful curriculum.
- Be able to identify and conduct themselves as members of the early childhood profession. They know ethical guidelines and other professional standards related to early childhood education. They are life-long, collaborative learners who continue to broaden their knowledge and skills, remain informed about child development issues, and are informed advocates for sound educational practices and policies.
- Be able to apply effective guidance and interaction strategies that support all children's social learning, identity, and self-confidence.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Child Development - Program Administration (Certificate T0863)

Business Division

The Child Development - Program Administration certificate is designed for students who desire general knowledge about Early Childhood Development and the professional knowledge and skills expected of a beginning level early childhood program administrator. This certificate meets or exceeds Title 22 education requirements for Center Director. Course work prepares students to effectively support the growth, development, and learning of all young children; the growth and development of ECE program staff; collaboration with families to bolster young children's learning; a safe early childhood environment compliant with applicable State health, safety, nutrition, food, and sanitary requirements as well as applicable business, personnel and fiscal accounting standards and requirements. Direct experience working with children and their families is highly recommended to develop the knowledge, skills, and dispositions necessary to be an effective administrator or early childhood programs.

Required Courses

Course Prefix	Course Name	Units
CHLD 1	Child, Family, School and Community	3
CHLD 5	Principles and Practices in Child Development Programs ¹	3
CHLD 6	Introduction to Child Development Curriculum ¹	3
CHLD 10 or CHLD 10H or CHLD 11	Child Growth and Lifespan Development ¹ Child Growth and Lifespan Development - Honors Child and Adolescent Development	3
CHLD 50	Teaching in a Diverse Society	3
CHLD 64	Health, Safety, and Nutrition of Children	3
CHLD 68	Introduction to Children With Special Needs ¹	3
CHLD 71A	Administration of Child Development Programs	3
CHLD 71B	Personnel and Leadership in Child Development Programs	3
CHLD 75	Supervising Adults in Early Childhood Settings	2
Choose three courses (9 units) from the following:		9
BUSM 66	Small Business Management	
CHLD 61	Language Arts and Art Media for Young Children	
CHLD 62	Music and Motor Development for Young Children	
CHLD 63	Math and Science for Young Children	
CHLD 72	Teacher, Parent, and Child Relationships	
CHLD 73	Infant and Toddler Development ¹	
CHLD 83	Current Issues in Child Development	
CHLD 84	Guidance and Discipline in Child Development Settings	
Total Units		38

¹ Documentation of tuberculosis (TB) clearance is required.

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be grounded in Child Development knowledge (theory) and use their understanding of young children and their needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Understand that successful programs depend upon partnerships with children's families and communities. They use this understanding to

create respectful, reciprocal relationships that support and empower families and to involve all families in their children's development and learning.

- Understand theoretical and practical implications of oppression and privilege as they apply to young children, families, programs, classrooms, and teaching. Various classroom strategies are employed.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Child Development - School-Age Child (Certificate N0862)

Business Division

Designing, planning and implementing developmentally appropriate child development programs, and working with school-age children in before- and after-school care settings. Techniques for discipline, guidance, conflict resolution, and relationships. Planning and conducting of interactive activities and games. This class meets the Title 22 licensing requirements for personnel in school-age programs. TB test required for observations.

Required Courses

Course Prefix	Course Name	Units
CHLD 1	Child, Family, School and Community	3
CHLD 5	Principles and Practices in Child Development Programs ¹	3
CHLD 6	Introduction to Child Development Curriculum ¹	3
CHLD 10 or CHLD 10H or CHLD 11	Child Growth and Lifespan Development ¹ Child Growth and Lifespan Development - Honors Child and Adolescent Development	3
CHLD 50	Teaching in a Diverse Society	3
CHLD 51	Early Literacy in Child Development	3
CHLD 61	Language Arts and Art Media for Young Children	3
or CHLD 62	Music and Motor Development for Young Children	
or CHLD 63	Math and Science for Young Children	
or LIT 40	Children's Literature	
CHLD 74	Program Planning for the School Age Child ¹	3
EDUC 10	Introduction to Education	3
Total Units		27

¹ Documentation of tuberculosis (TB) clearance is required.

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Use a wide array of developmentally appropriate approaches within the school-age care setting and understand the effects on the social, emotional, physical, cognitive, and cultural development of the school-age child.
- Be able to evaluate School Age Program regulations, standards, and policies.
- Understand and use a wide array of developmentally appropriate approaches, instructional strategies, and tools to connect with school-age children and support their school assignments.
- Analyze principles of human development theories as they specifically relate to the school-age child's growth and development.

- Understand the importance of developmental domains and academic content areas. Students will use their knowledge and other resources to design, implement, and evaluate schools age activities and curriculum.
- Be grounded in Child Development knowledge (theory) and use their understanding of young children and their needs to create environments that are healthy, respectful, supportive, and challenging for each school-age child.
- Be able to explore and evaluate community support services and agencies that are available to families, develop referral skills that help children and families access empowering community resources, and analyze effective advocacy skills that establish effectual public policies pertaining to children and families.
- Understand theoretical and practical implications of oppression and privilege as they apply to young children, families, programs, classrooms, and teaching. Various classroom strategies.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

CIS Cloud Computing for Amazon Web Services (Certificate M0672)

Business Division

The CIS Cloud Computing for Amazon Web Services certificate program prepares students to design solutions for Infrastructure as a Service (IaaS) architectures by provisioning computing instances, establishing virtual private networks, managing databases and storage within a secure online environment. Students produce dynamic solutions responsive to information and computing technology workloads with on-demand pay-as-you-go pricing allowing flexibility for small business, entrepreneurship and enterprise adoption. Industry certifications are embedded to prepare for occupations in Cloud Architect, Cloud Support Associate, Cloud Engineer or Cloud Technicians. Some preparation in information technology or computer programming is recommended.

Required Courses

Course Prefix	Course Name	Units
CISN 71	Introduction to Cloud Computing	3
CISN 72A	Cloud Computing Database Essentials for Amazon Web Services	3
CISN 73A	Compute Engines in Amazon Web Services	3
CISN 74A	Security in Amazon Web Services	3
Required Electives		3 - 3.5
CISP 21	Programming in Java	
CISP 21L	Programming in Java Laboratory	
Or		
CISP 71	Programming in Python	
CISP 71L	Programming in Python Laboratory	
Or		
CISW 17	HTML, CSS, and JavaScript Programming	
Or		
CISW 21	Secure Web Programming with ASP.NET	
CISW 21L	Secure Web Programming with ASP.NET Laboratory	
Or		
CISW 24	Secure Web Server Programming in Python	
CISW 24L	Secure Web Server Programming in Python Laboratory	

Or

CISW 31	Secure Web Server Programming in PHP
CISW 31L	Secure Web Server Programming in PHP Laboratory
Recommended Electives	
CISB 11	Computer Information Systems
Total Units	15-15.5

CIS Professional in C++ Programming (Certificate E0714)

Business Division

Certificate E0714

The CIS Professional Certificate in C++ Programming prepares students for a career in computer programming. It is intended for returning CIS professionals with several years of experience or current students who have completed several CIS courses. Emphasis is placed on object-oriented programming, database programming and developing a graphical user interface. Students will demonstrate the ability to create business-oriented applications using both the C++ and Visual C++ programming languages; demonstrate effective object-oriented design techniques; write effective program documentation, and demonstrate program troubleshooting skills. Opportunities available after the completion of this certificate include programming for standalone applications, games and databases.

Required Courses

Course Prefix	Course Name	Units
CISP 10	Principles of Object-Oriented Design	2.5
CISP 31	Programming in C++	3
CISP 31L	Programming in C++ Laboratory	0.5
CISP 34	Advanced C++ Programming	3
CISP 34L	Advanced C++ Programming Laboratory	0.5
Choose one from the following sequences:		3.5
CISD 11 & 11L	Database Management - Microsoft Access and Database Management - Microsoft Access Laboratory	
CISD 21 & 21L	Database Management - Microsoft SQL Server and Database Management - Microsoft SQL Server Laboratory	
CISD 31 & 31L	Database Management - Oracle and Database Management - Oracle Laboratory	
Total Units		13

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Create event-driven program, using Windows Forms.
- Connect C++ program to the database and incorporate SQL statements into C++ code.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

CIS Professional in Excel and Access (Certificate M0690)

Business Division

Certificate M0690

This certificate in Excel and Access is designed to prepare students for working with Microsoft Excel and Access in a business environment. The certificate offers a balanced set of classes that prepares students for using advanced features of both Excel and Access needed by industry. Emphasis is placed on Excel functions as well as Access' relational database techniques. Within Excel, students create a variety of workbooks, utilizing charts, PivotTables, various functions, macros, lists and tables. With Access, students create a variety of objects, including tables, queries, forms, reports and macros, as well as VBA programming. In the VBA for Excel and Access, VBA is used in both Excel and Access to program advanced functionality that may be needed within these applications. Much attention is paid to design principles, including normalization, securing databases, and other current topics in the database field. Students will demonstrate understanding of the topics via projects using various real-world workbooks and databases. Opportunities available after the completion of this certificate include, but are not limited to, administrative aides, database administrators, designers and developers, and database systems analysts. In addition, courses help prepare students to take the Microsoft MOS certification exam in Excel and Access.

Required Courses

Course Prefix	Course Name	Units
CISB 21	Microsoft Excel	3
CISD 11	Database Management - Microsoft Access	3
CISD 11L	Database Management - Microsoft Access Laboratory	0.5
CISD 14	VBA for Excel and Access	3
CISD 14L	Visual Basic for Applications (VBA) Excel and Access Laboratory	0.5
CISD 40	Database Design	3
Total Units		13

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply appropriate Visual Basic for Application code (VBA) to update Access table data.
- Use embedded SQL statements within VBA procedures to create and run ad hoc queries for users.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

CIS Professional in Information and Operating Systems Security (Certificate M0814)

Business Division

Certificate M0814

The Information and Operating Systems Security certificate provides students the skills to analyze security risks to a computer network and select and deploy countermeasures to reduce the network's exposure to such risks. The certificate offers a balanced set of classes that provides students the skills to identify network threats and protect the system against them. Students will demonstrate the ability to create a secure computer system and utilize security tools to protect it from security threats. Although this certificate, by itself, may not qualify a student for a career in network security, it would ideally complement other network security certificates and/or degrees within the CIS program.

Required Courses

Course Prefix	Course Name	Units
CISS 11	Practical Computer Security	2
CISS 13	Principles of Information Systems Security	4
CISS 15	Operating Systems Security	3
Total Units		9

CIS Program Website (<http://www.mtsac.edu/cis/>)

CIS Professional in Java Programming (Certificate M0689)

Business Division

Certificate M0689

The Java programming certificate is designed to prepare students for a career in computer programming. The certificate offers a balanced set of classes that provides students with client, server, and database programming skills required by industry. Emphasis is placed on object-oriented programming applications Web-based applets configuring an Apache Tomcat servlet, implementing JavaServer Pages, JavaBeans, and NetBeans for reusable software components. Students will demonstrate the ability to design and implement a Java application that will contain the front end user interface and back end database. Opportunities available after the completion of this certificate include programming for systems, mobile devices, device drivers and software engineering.

Required Courses

Course Prefix	Course Name	Units
CISP 10	Principles of Object-Oriented Design	2.5
CISP 21	Programming in Java	3
CISP 21L	Programming in Java Laboratory	0.5
CISP 24	Advanced Java Programming	3
CISP 24L	Advanced Java Laboratory	0.5
Choose one from the following sequences:		3.5
CISD 11 & 11L	Database Management - Microsoft Access and Database Management - Microsoft Access Laboratory	
CISD 21 & 21L	Database Management - Microsoft SQL Server and Database Management - Microsoft SQL Server Laboratory	
CISD 31 & 31L	Database Management - Oracle and Database Management - Oracle Laboratory	
Total Units		13

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Develop a dynamic web page programming Java Server Pages.
- Create an object oriented program that will use remote method invocation using the Java programming Language.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

CIS Professional in LINUX (Certificate M0816)

Business Division

Certificate M0816

The CIS Certificate in Linux prepares students to install, manage, program and troubleshoot Linux operating systems. The certificate offers a balanced set of classes that prepares students to create and operate Linux workstations, servers and networks used by industry. Emphasis is placed on configuring a Linux distribution to create workstations with client applications; email, file, FTP, DNS and other servers; and routers, firewalls and other network services. Special attention is given to security concepts and tools and their implementation in a Linux system. Students will also learn to configure and install an Apache web server in a Linux system to access a MySQL database using PHP programs. Opportunities available after the completion of this certificate include system or network administration, web server, and database programmers. The certificate covers the major topics of an industry standard certification exam for Linux.

Required Courses

Course Prefix	Course Name	Units
CISN 31	Linux Operating System	3
CISN 31L	Linux Operating System Laboratory	0.5
CISN 34	Linux Networking and Security	3
CISN 34L	Linux Networking and Security Laboratory	0.5
CISW 31	Secure Web Server Programming in PHP	3
CISW 31L	Secure Web Server Programming in PHP Laboratory	0.5
Total Units		10.5

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Know how to install a SAMBA server in a Linux computer.
- Know how to install an Apache web server in a Linux computer and access its web pages from another computer.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

CIS Professional in Network Security (Certificate M0688)

Business Division

Certificate M0688

The CIS Professional in Network Security program is designed to prepare students for a career in the computer network security industry. The certificate offers a balanced set of classes that prepare students to

design, implement, manage and secure the heterogeneous corporate network. The security management courses emphasize firewall security appliances, network protocol analysis, Linux network, Snort intrusion detection, intrusion prevention, and vulnerability management. Students will acquire the skills to utilize network protocol analyzers, to troubleshoot network problems, deploy intrusion prevention systems, configure firewall security appliances and Virtual Private Network (VPN), and assess network vulnerabilities and implement countermeasures. Individual courses will help students prepare for industry certification exams such as Certify Ethical Hacker (CEH), Cisco Firewall Specialist, and Cisco IPS Specialist. Opportunities available upon completion of the certificate program include Network Security Analyst, Junior Network Security Engineer, Network Vulnerability Management, and Network Security Architect.

Required Courses

Course Prefix	Course Name	Units
CISS 21	Network Vulnerabilities and Countermeasures	3
CISS 21L	Network Vulnerabilities and Countermeasures Laboratory	0.5
CISS 23	Network Analysis, Intrusion Detection/Prevention Systems	3
CISS 23L	Network Analysis, Intrusion Detection/Prevention Systems Laboratory	0.5
CISS 25	Network Security and Firewalls	3
CISS 25L	Network Security and Firewalls Laboratory	0.5
CISS 27	Cyber Defense	1
Total Units		11.5

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Configure and install a firewall.
- Implement a secured translation for service hosting through firewall.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

CIS Professional in Networking (Certificate M0809)

Business Division

Certificate M0809

The CIS Professional in Networking program is designed to prepare students for a career in the computer networking industry. The certificate offers a balanced set of classes that prepare students to design, implement, and manage the heterogeneous corporate network. The network administration courses emphasize network operating systems, network infrastructure and data communications. Students will acquire the skills to install and administer a Windows network, Virtualization, Active Directory, group policy, file system security, DNS, DHCP, Linux Networking, Cisco routers, switches, network infrastructure, access control list, Virtual LAN (VLAN) and VLAN routing. Individual courses will help students prepare for related industry certification exams such as Network+, Microsoft MCITP, Cisco CCNA and Red Hat RHCSA. Opportunities available upon completion of this certificate include entry-level and mid-management positions in Network Administration.

Required Courses

Course Prefix	Course Name	Units
CISN 11	Telecommunications Networking	3
CISN 11L	Telecommunications/Networking Laboratory	0.5
CISN 24	Window Server Network and Security Administration	3
CISN 24L	Window Server Network and Security Administration Laboratory	0.5
CISN 34	Linux Networking and Security	3
CISN 34L	Linux Networking and Security Laboratory	0.5
CISN 51	Cisco CCNA Networking and Routing	3
CISN 51L	Cisco CCNA Networking and Routing Laboratory	0.5
Total Units		14

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Configure and setup static routing.
- Implement VLAN and VLAN routing.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

CIS Professional in Object-Oriented Design & Programming (Certificate M0813)

Business Division Certificate M0813

The CIS Professional Certificate in Object-Oriented Design and Programming prepares students for a career in computer programming. The certificate offers a balanced set of classes that provides students the skills to design and develop business applications using the Unified Modeling Language (UML) and an object-oriented programming language. Students will demonstrate the ability to design and implement business environment applications that will contain the front end user interface and back end database. Students in this program select one of two programming language concentrations: Java or C++. Career opportunities available after the completion of this certificate include programming for systems, mobile devices, device drivers, and software engineering.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
CISP 10	Principles of Object-Oriented Design	2.5
Choose one from the following programming tracks:		7
Java		
CISP 21	Programming in Java	
CISP 21L	Programming in Java Laboratory	
CISP 24	Advanced Java Programming	
CISP 24L	Advanced Java Laboratory	
C++		
CISP 31	Programming in C++	
CISP 31L	Programming in C++ Laboratory	
CISP 34	Advanced C++ Programming	

CISP 34L	Advanced C++ Programming Laboratory	
Total Units		9.5

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Write valid decision statements (if/else constructs) in the C#.NET programming language.
- Create an object oriented program using multiple classes in the C#.NET programming language.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

CIS Professional in Python Programming (Certificate M0675)

Business Division

The CIS Professional in Python Programming certificate prepares students for a career in computer programming. It is intended for returning CIS professionals with several years of experience or current students who have completed several CIS courses. Emphasis is placed on object-oriented programming, database programming, developing a graphical user interface, web development, and web scraping. Students will demonstrate the ability to create business-oriented applications using Python programming language; demonstrate effective object-oriented design techniques; write effective program documentation, and demonstrate program troubleshooting skills. Opportunities available after the completion of this certificate include standalone applications, database, web based, web scraping, and business applications.

Required Courses

Course Prefix	Course Name	Units
CISP 10	Principles of Object-Oriented Design	2.5
CISP 71	Programming in Python	3
CISP 71L	Programming in Python Laboratory	0.5
CISP 74	Advanced Programming in Python	3
CISP 74L	Advanced Programming in Python Laboratory	0.5
Total Units		9.5

CIS Professional in SQL (Certificate M0811)

Business Division Certificate M0811

The SQL Server certificate is designed to prepare students for a career in database administration using SQL Server. The certificate offers a balanced set of classes that provides students skills in database design, data retrieval and database programming. Emphasis is placed on building databases; retrieving data; creating and maintaining database objects; writing stored procedures, functions and triggers for reusable software components. Students will demonstrate the ability to view and update databases and develop programs to automate database functions. Opportunities available after the completion of this certificate include SQL Server report writer, SQL Server developer and software engineer.

Required Courses

Course Prefix	Course Name	Units
CISD 21	Database Management - Microsoft SQL Server	3
CISD 21L	Database Management - Microsoft SQL Server Laboratory	0.5
CISD 31	Database Management - Oracle	3
CISD 31L	Database Management - Oracle Laboratory	0.5
CISD 40	Database Design	3
Total Units		10

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Objectives

Upon successful completion of this program, a student will be able to:

- Apply normalization rules to database design.
- Create E-R (Entity Relationship) and UML (Unified Modeling Language) diagrams for a given database scenario.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

CIS Professional in Telecommunications (Certificate M0810)

Business Division Certificate M0810

The CIS Professional in Telecommunications program is designed to prepare students for a career in the computer networking industry. The certificate offers a balanced set of classes that prepare students to design, implement and manage the heterogeneous corporate network. The network administration courses emphasize network operating systems, network infrastructure and data communications. Students will acquire the skills to install and administer a Windows network, Virtualization, Active Directory, group policy, file system security, DNS, DHCP, Cisco routers, switches, network infrastructure, access control list, Virtual LAN (VLAN) and VLAN routing. Individual courses will assist students in preparing for industry certification exams such as Network+, Microsoft MCITP and Cisco CCNA. Opportunities available upon completion of the certificate program include entry-level and mid-management positions in Network Administration.

Required Courses

Course Prefix	Course Name	Units
CISN 11	Telecommunications Networking	3
CISN 11L	Telecommunications/Networking Laboratory	0.5
CISN 24	Window Server Network and Security Administration	3
CISN 24L	Window Server Network and Security Administration Laboratory	0.5
CISN 51	Cisco CCNA Networking and Routing	3
CISN 51L	Cisco CCNA Networking and Routing Laboratory	0.5
Total Units		10.5

Guided Pathways of Study Suggested Course Sequence (<https://www.mtsac.edu/guided-pathways/pathway-results.html>)

pthwyvar=E0718&desc=CIS+Professional+Certificate+in+Telecommunications%2C+E0718)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Configure and setup static routing.
- Able to implement VLAN and VLAN routing.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

CIS Professional in Web Programming (Certificate M0812)

Business Division

Certificate M0812

The CIS Professional Certificate in Web Programming provides students the programming skills to create effective web pages and web sites. The certificate offers a balanced set of classes that prepares students to design, debug and implement both client-side and server-side web programs. Emphasis is placed on acquiring programming skills in various web programming, scripting or markup languages such as JavaScript, HTML, DHTML, XHTML, XML, CSS, ASP.NET, AJAX, SQL and Perl. Students will also learn to configure and install an Apache web server in a Linux or Windows system and access a MySQL database using PHP programs. Opportunities available after the completion of this certificate include web programming or web and database server administration.

Required Courses

Course Prefix	Course Name	Units
CISW 17	HTML, CSS, and JavaScript Programming	3
CISW 31	Secure Web Server Programming in PHP	3
CISW 31L	Secure Web Server Programming in PHP Laboratory	0.5
Choose one of the following combinations:		3.5
CISW 21 & 21L	Secure Web Programming with ASP.NET and Secure Web Programming with ASP.NET Laboratory	
CISW 24 & 24L	Secure Web Server Programming in Python and Secure Web Server Programming in Python Laboratory	
Total Units		10

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Know how to install and configure a secure web server.
- Know how to access a database from a program in a web server.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

CIS Professional in Windows Operating System Administration (Certificate E0720)

Business Division Certificate E0720

The CIS Professional Certificate in Windows Operating System Administration is designed for returning CIS professionals with several years of experience or current students who have completed several CIS courses. This certificate will prepare students for technical support jobs for companies using Windows operating systems. The certificate will provide students the skills to install, manage/administer and troubleshoot Microsoft Windows workstations and Microsoft server operating systems. The courses in this certificate cover the major topics of industry standard certification exams. Opportunities available upon completion of the certificate program include entry-level and mid-level help desk and Windows Administrative positions.

Required Courses

Course Prefix	Course Name	Units
CISN 21	Windows Operating System	3
CISN 24	Window Server Network and Security Administration	3
CISN 24L	Window Server Network and Security Administration Laboratory	0.5
Total Units		6.5

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Configure and install Windows Active Directory.
- Implement Windows file system security.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

CNC Technician (Certificate E0431)

Technology and Health Division E0431 Skills Certificate

Theory and application of computer numerical control (CNC) machining practices using mills and lathes typical in a wide range of industries. Designed to adapt and upgrade machining skills to industry standards and encourage the development of supplemental skills in computer aided design (CAD) and computer aided manufacture (CAM), metrology, and problem-solving to better address the current needs and expectations of industry. Includes project models that closely approximate industry-representative applications with an emphasis on best practices, efficiency, and an understanding of the way machined parts relate to other related components in the manufacturing environment.

Required Courses

Course Prefix	Course Name	Units
MFG 130	Manufacturing Processes and Materials	3
MFG 250	Introduction to CNC Programming	3

MFG 260	CNC Operation	3
Total Units		9

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Coaching (Certificate E0804)

Certificate E0804

This certificate program is intended to prepare students for employment as high school (walk-on) coaches, but is appropriate for coaches at various levels.

Required Courses

Course Prefix	Course Name	Units
KIN 13	Sports Officiating	3
KIN 34	Fitness for Living	3
KIN 44	Theory of Coaching	3
KIN 81	Work Experience for Coaching	2
Total Units		11

Exit Requirement: First Aid and CPR Certification
Kinesiology, Athletics, and Dance Website (<http://www.mtsac.edu/kinesiology/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Develop and apply their coaching philosophy.
- Create practice plans using the 5 components of fitness.
- Communicate and apply their knowledge and understanding of the "rules of game" in their chosen sport.
- Create full season training curriculum using short and long-term goal setting.
- Demonstrate effective communication skills and interpersonal skills with their athletes, parents, other coaches and co-workers, officials, community members, and the media.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Computed Tomography (Certificate N0687)

Technology and Health Division Certificate N0687

The Computed Tomography (CT) program at Mt. SAC is a two semester certificate program open to Technologists who possess a valid California Certified Radiologic Technologist (CRT) license and are certified and registered by the American Registry of Radiologic Technologists (ARRT) in one of the following supporting disciplines: Radiologic Technology, Nuclear Medicine Technology Certification Board (or NMTCB), or Radiation Therapy. The program provides a complete educational experience for registered Radiologic Technologists (RT's) who wish to expand their skills into the study in the theory and practice of CT. Students will have the opportunity to learn and develop competence in patient care, communication skills, critical thinking, and technical skills that will prepare the student to become a competent entry level CT Technologist.

The program curriculum is designed to meet the CT educational and clinical training requirements set forth by the ARRT. The educational standards established by the American Society of Radiologic Technologists (ASRT) are also incorporated into the curriculum. Educational activities include lecture, discussions, group activities, and hands-on clinical training at a clinical site. The program includes:

- ARRT clinical experience requirements and content specifications
- ARRT 16 hour structured education requirement
- Course work in cross sectional anatomy, pathology, patient care and safety, CT procedures, equipment, image evaluation, instrumentation, technique, physics, quality assurance, and quality control.

Clinical training will be conducted at affiliated healthcare institutions and there is no guarantee the student will be placed close to home. Hours for clinical training are arranged with the clinical site (days and times will vary depending on the site). No arrangements for part time status are available.

Applicants will be required to complete a background check, physical, and provide proof of immunizations during the admissions process. Upon successful completion of the program, the student will receive a Certificate of Completion from Mt. San Antonio College. Technologist certified and registered by ARRT in the appropriate disciplines will be eligible to sit for the ARRT Computed Tomography certification examination.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Required Courses

Course Prefix	Course Name	Units
RAD 7A	Computed Tomography Clinical Experience 7A	2
RAD 7B	Computed Tomography Clinical Experience 7B	7
RAD 70	Computed Tomography Sectional Anatomy and Pathology	2
RAD 71	Computed Tomography Procedures and Patient Care	3
RAD 72	Computed Tomography Physics and Instrumentation	3
Total Units		17

To remain in the program, students must maintain a grade of "C" or better in all courses.

Computed Tomography Website (<https://www.mtsac.edu/radiologic/computed-tomography/>)

Admission Requirements

In addition to meeting Mt. San Antonio College's academic standards for admission, applicants must be in good standing and satisfy the following requirements prior to program admission:

1. Be 18 years of age.
2. Possess a valid Social Security Card. This is a licensed profession, and a valid Social Security Number is required to obtain national licensure.

3. Possess a valid and current California Diagnostic Radiologic Technology Certificate. Certification must be maintained throughout the program.

4. Be Certified and Registered by the ARRT in one of the following supporting disciplines: Radiologic Technology, Nuclear Medicine Technology Certification Board (or NMTCB), or Radiation Therapy. Certification must be maintained throughout the program.

5. Possess current American Heart Association: Basic Life Support (BLS) for Healthcare Providers CPR certification.

6. Submit a CT Program application.

7. Complete a physical examination, including specific immunizations and drug testing. Drug testing procedures will be provided upon admission.

8. Complete a background check indicating a passing clearance. A valid Social Security number is required to complete this process. Information on background check procedures and clinical affiliate's review of results will be provided upon admission.

9. Complete site-specific clinical requirements if applicable.

10. Attend a mandatory program orientation.

11. Meet the following **Essential Functions for Success** in the Radiologic Technology Program:

Physical Demands

- Perform prolonged, extensive, or considerable standing/walking, lifting positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift/carry 50 lbs. or more)
- Perform considerable reaching, stooping, bending, kneeling, and crouching
- Respond rapidly to situations involving the health and safety of patients
- Function adequately under stressful situations

Sensory Demands

(May be corrected with adaptive devices)

- Color vision: ability to distinguish and identify colors
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases

- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle emergency or crisis situations
- Subject to many interruptions
- Requires judgment/action which could result in death of a patient
- Exposed to products containing latex

Additional Information

1. Possessing California Venipuncture Certification is highly recommended.
2. Clinical training will be conducted at affiliated clinical sites and there is no guarantee the student will be placed close to home. Clinical training schedules are arranged with the clinical site. Day and hours vary depending on the site; thus, student availability must be flexible. Weekly training hours must be fulfilled to earn a passing grade for the course.

English Language Skills

Although proficiency in English is not a criterion for admission into the Program, students must be able to speak, write and read English to ensure patient safety and to complete courses successfully.

Selection Procedure

Selection of students is lottery based. Applications are selected through a computerized, random process. Applicants who are not selected can reapply the following year.

The Department will make every effort to notify the applicant of admission no less than one month prior to program commencement.

Program Completion Requirements

Students must complete all program-required coursework to earn a certificate of completion in Computed Tomography. This certificate will permit the student to apply for the CT registry exam through the American Registry of Radiologic Technologist.

Program Learning Outcomes

Upon successful completion of this program, a student will:

- develop workforce readiness skills
- apply accurate positioning skills and provide appropriate patient care
- select optimal technical factors
- utilize appropriate radiation protection and ALARA principles
- demonstrate academic and technical competence as an entry-level CT Technologists
- communicate effectively with patients, clinical staff, and peers
- demonstrate effective written and verbal communication skills in didactic and clinical settings

- use critical thinking skills in both routine and non-routine clinical situations
- adapt standard procedures for non-routine patients
- analyze images to determine diagnostic quality and make modifications as needed
- exhibit professional work ethic, behavior, and attitude
- abide by the ASRT Code of Ethics
- use professional judgment when working with patients and others
- identify the advantage of belonging to professional organizations
- understand the need for continued professional development and growth
- participate in professional development activities
- pass the ARRT certification exam in CT
- secure employment as a CT Technologist within one year of program completion

Review Student Learning Outcomes (SLOS) for this program [Student Learning Outcomes \(SLOs\)](#)

Computer and Networking Technology - Level I (Certificate N0478)

Technology and Health Division Certificate N0478

The Computer and Networking Technology Level I and II certificate programs prepare students to become computer and networking service technicians. Courses required for the Level I certificate provide foundations in basic electricity and electronics, operating systems, computer service and troubleshooting, and preparation for the A+ certification examination sponsored by CompTIA and offered at testing centers throughout the country. Level I certificate students learn to install, configure, maintain, troubleshoot, and repair computers and networks. With further preparation leading to the Level II certificate, students will ready themselves for the CompTIA Network+, Server+, and Security+ certification tests. These industry certifications are recognized worldwide as benchmarks for the computer and networking technician. Further, students will have requisite skills upon which to seek additional I.T. certifications available for the computer and networking fields.

Required Courses

Course Prefix	Course Name	Units
CNET 50	Personal Computer (PC) Servicing	4
CNET 52	PC Operating Systems	4
CNET 54	PC Troubleshooting	4
CNET 60	A+ Certification Preparation	2
ELEC 11 or CISB 15	Technical Applications in Microcomputers Microcomputer Applications	3-3.5
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 56	Digital Electronics	4
Total Units		29-29.5

Electronics and Computer Technology Website (<https://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply knowledge of fundamental electronics principles, including voltage, current, and signal levels, to the analysis and troubleshooting of computers and data-communications networks.
- Apply knowledge of computers and their components to the development and implementation of interconnected systems of computers.
- Apply knowledge of computer technology, with an emphasis on hardware, to the development and deployment of complete computer networks.
- Demonstrate an understanding of the physical and logical characteristics needed to support and secure network and server environments.
- Function effectively as a member of a technical team including documenting work, writing clearly and appropriately in an Information Technology context, respecting user data, and considering the ethical consequences of decisions.
- Articulate knowledge of the CompTIA certification processes, including potential exam content, philosophy, and test taking and study strategies.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Computer and Networking Technology - Level II (Certificate T0726)

Technology and Health Division Certificate T0726

The Computer and Networking Technology Level I and II certificate programs prepare students to become computer and networking service technicians. Courses required for the Level I certificate provide foundations in basic electricity and electronics, operating systems, computer service and troubleshooting, and preparation for the A+ certification examination sponsored by CompTIA and offered at testing centers throughout the country. In addition to the Level I certificate requirements, students seeking the Level II certificate cover computer networks, servers, and customer relations, and will take preparatory courses for the CompTIA Network+, Server+, and Security+ certification exams. These industry certifications are recognized worldwide as benchmarks for the computer and networking technician. Further, students will have requisite skills upon which to seek additional I.T. certifications available for the computer and networking fields.

Required Courses

Course Prefix	Course Name	Units
Completion of the Computer and Networking Technology - Level I coursework		29-29.5
PLUS		
Completion of the Computer and Networking Technology - Level II coursework		16
Total Units		45-45.5

Course Prefix	Course Name	Units
Computer and Networking Technology - Level I Coursework		
CNET 50	Personal Computer (PC) Servicing	4
CNET 52	PC Operating Systems	4
CNET 54	PC Troubleshooting	4
CNET 60	A+ Certification Preparation	2
ELEC 11 or CISB 15	Technical Applications in Microcomputers Microcomputer Applications	3-3.5
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 56	Digital Electronics	4
Total Units		29-29.5

Course Prefix	Course Name	Units
Computer and Networking Technology - Level II Coursework		
CNET 56	Computer Networks	4
CNET 58	Server Systems	4
CNET 62	Network+ Certification Preparation	2
CNET 64	Server+ Certification Preparation	2
CNET 66	Security+ Certification Preparation	2
TECH 60	Customer Relations for the Technician	2
Total Units		16

Recommended Electives

Course Prefix	Course Name	Units
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 74	Microcontroller Systems	4

Electronics and Computer Technology Website (<http://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply knowledge of fundamental electronics principles, including voltage, current, and signal levels, to the analysis and troubleshooting of computers and data-communications networks.
- Apply knowledge of computers and their components to the development and implementation of interconnected systems of computers.
- Apply knowledge of computer technology, with an emphasis on hardware, to the development and deployment of complete computer networks.
- Demonstrate an understanding of the physical and logical characteristics needed to support and secure network and server environments.
- Function effectively as a member of a technical team including documenting work, writing clearly and appropriately in an Information Technology context, respecting user data, and considering the ethical consequences of decisions.
- Articulate knowledge of the CompTIA certification processes, including potential exam content, philosophy, and test taking and study strategies.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Computer Networking Technology Fundamentals (Certificate M0682)

Technology and Health Division

This one-semester program covers the fundamentals of computer networking technology. These core courses provide the necessary skills for those seeking entry-level employment as computer service technicians without areas of specialization. General topics include Personal Computer Servicing, Computer Operating Systems, and PC Troubleshooting. This Fundamentals certificate will prepare students with the requisite knowledge for subsequent Computer Networking Technology certificates and degrees. The courses in the fundamentals certificate approach computer repair from a hardware first perspective. This distinguishes this certificate from other programs/certificates on campus. It is our department's core belief that a solid understanding of the electronics from a hardware angle reinforces the necessary knowledge and skills to troubleshoot and repair computing equipment.

Required Courses

Course Prefix	Course Name	Units
CNET 50	Personal Computer (PC) Servicing	4
CNET 52	PC Operating Systems	4
CNET 54	PC Troubleshooting	4
Total Units		12

Computer Networking Technology Industry Certification (M0849)

Technology and Health Division

This certificate covers the material necessary to successfully pass the CompTIA A+, Network+, Security+, and the Server+ professional certificates. These preparation courses provide the necessary information for those seeking to obtain professional industry CompTIA certificates. Topics include instruction and hands on material that supports the exam objectives as set forth by CompTIA. This Industry Certifications certificate will prepare students with the requisite knowledge for subsequent computer networking technology certificates and degrees. These courses are typically taken near the end of a student's coursework and help to validate the knowledge and skills they have obtained from earlier courses which have extensive hands on lab components.

Required Courses

Course Prefix	Course Name	Units
CNET 60	A+ Certification Preparation	2
CNET 62	Network+ Certification Preparation	2
CNET 64	Server+ Certification Preparation	2
CNET 66	Security+ Certification Preparation	2
Total Units		8

Consumer Relations (Certificate M0479)

Business Division Certificate M0479

This program provides semi-professional training for those who seek immediate Consumer Relations employment in non-profit agencies, government, education, or business such as utilities,

telecommunications, and finance. Positions include, but are not limited to: consumer affairs representatives, client related government jobs, and community advocates.

Required Courses

Course Prefix	Course Name	Units
BUSO 25	Business Communications	3
BUSO 26	Oral Communications for Business	3
FCS 41	Life Management	3
FCS 51	Consumerism: The Movement, its Impact, and Issues	3
FCS 80	Personal Financial Planning	3
or BUSA 71	Personal Financial Planning	
Total Units		15

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate meaningful self-evaluation related to increasing their lifelong personal well-being.
- Identify, prioritize, and evaluate their personal and personal financial goals.
- Identify consumer related laws and government agencies.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Culinary Advanced (Certificate T0457)

Business Division Certificate T0457

The certificate prepares students for career opportunities in restaurants, catering, hotels, theme parks, and other food service businesses. Students gain practical training in the use of commercial equipment and acquire the skills necessary to be successful in the field of culinary arts such as: knife skills, food production, presentation, menu development, portion control, cost control, menu planning, and nutrition. Students who successfully complete the requirements for this degree will also earn the Food Protection Manager Certification. The program combines management theory and practical application of skills and abilities preparing them to meet the needs of employers.

Required Courses

Course Prefix	Course Name	Units
CUL 101	Professional Cooking Foundations	3
CUL 102	Professional Cooking I	3
CUL 103	Professional Cooking II	3
CUL 104	Garde Manger	3
CUL 105	Baking and Pastry I	3
CUL 111	Exploring Beverages	3
HRM 52	Food Safety and Sanitation	2
HRM 56	Hospitality Supervision	3
HRM 57	Hospitality Cost Control	3
HRM 61	Menu Planning	3
Restaurant Series		
CUL 91	Culinary Work Experience	5

CUL 114	Dining Room Service Management	3
CUL 115	Restaurant Operations	3
Required Electives		
Choose 3 units from the following:		3
CUL 106	Baking and Pastry II	
CUL 107	World Cuisines	
CUL 108	Cooking for Special Diets	
CUL 109	Butchery & Charcuterie	
CUL 110	Street Foods	
CUL 112	Sustainability in Culinary Arts	
HRM 62	Event Planning and Catering	
HRM 72	Hospitality Purchasing and Procurement	
Total Units		43

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Culinary Arts (Certificate E0373)

Business Division

Certificate E0373

The program prepares students for entry-level career opportunities in restaurants, catering, hotels, theme parks, and other food service businesses. Students gain practical training in the use of commercial equipment and acquire the skills necessary to be successful in the field of culinary arts such as: knife skills, food production, presentation, menu development, portion control, and nutrition. Students who successfully complete the requirements for this certificate will also earn a nationally recognized Food Protection Manager Certification.

Required Courses

Course Prefix	Course Name	Units
CUL 102	Professional Cooking I	3
CUL 104	Garde Manger	3
CUL 105	Baking and Pastry I	3
CUL 107	World Cuisines	3
HRM 52	Food Safety and Sanitation	2
Choose one course from the following:		3
NF 10	Nutrition for Health and Wellness	
NF 20	Principles of Food with Laboratory	
NF 25	Introduction to Nutrition Science	
or NF 25H	Introduction to Nutrition Science - Honors	
Total Units		17

Program Learning Outcomes:

Upon successful completion of this program, a student will be able to:

- Plan a food production schedule and assemble the tools, equipment, and ingredients required to produce a recipe in an organized and efficient manner.
- Recipe knowledge, accuracy, and execution: Follow recipe procedures to produce food at the appropriate temperature, consistency, texture, flavor, and in a timely manner.
- Determine the presence of foodborne-illness outbreak.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Dance Teacher (Certificate N0649)

Certificate N0649

The Dance Teacher Certificate is intended to prepare students for careers as dance instructors in private dance studios, recreation centers, and K-12 dance programs. Focus is on the genres of Ballet, Jazz and Modern Dance with pedagogical principles that can be applied to other dance forms. This certificate may aid the student's search for an entry-level job in the dance teaching world.

Required Courses

Course Prefix	Course Name	Units
DN-T 20	History and Appreciation of Dance	3
DN-T 38	Dance Teaching Methods	3
DNCE 2B	Ballet II	1
DNCE 4	Choreography	0.5
DNCE 11A	Social Dance Forms I ¹	1
DNCE 12B	Modern II ¹	1
DNCE 14B	Jazz II ¹	1
DNCE 18A	Tap I	0.5
DNCE 24	Dance Production	1.5
DNCE 32	Commercial Dance	0.5
DNCE 33	Improvisation	0.5
DNCE 34	Dance Directives	0.5
DNCE 35	Repertory	2
DNCE 39	Pilates Fundamentals	0.5-1
KIN 24	Applied Kinesiology	2
Total Units		18.5-19

Kinesiology, Athletics, and Dance Website (<http://www.mtsac.edu/kinesiology/>)

Program Learning Objectives

Upon successful completion of this program, a student will be able to:

- Teach creative and technical dance skills using correct body alignment, muscle coordination, and dance terminology of various dance genres.
- Present a comprehensive job portfolio that includes a cover letter, resume, sample lesson plans, teaching analogies, and a reel of choreography.
- Develop an articulate, original choreographic voice by expressing themselves creatively through the production of dance composition and performance.
- Attain an intermediate level of proficiency in contemporary dance techniques.
- Acquire a broad understanding and appreciation of historical and cultural values expressed through dance.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Digital Systems Technology (Certificate T0438)

Technology and Health Division Certificate T0438

In addition to courses in electronics fundamentals, the Digital Systems Technology certificate encompasses advanced coursework in computer and digital systems circuitry, including microcontrollers and microprocessors. This advanced certificate is one of three available for students who do not complete all second-year systems courses at once, or who complete them one at a time. A.S. degree recipients are automatically eligible to receive, without further examination, a 3rd Class Technician License from the National Association of Radio and Telecommunications Engineers (N.A.R.T.E.), while students completing certificate programs are automatically eligible for the N.A.R.T.E. 4th Class Technician License.

Required Courses

Course Prefix	Course Name	Units
ELEC 11	Technical Applications in Microcomputers	3
ELEC 12	Computer Simulation and Troubleshooting	2
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 56	Digital Electronics	4
ELEC 61	Electronic Assembly and Fabrication	3
ELEC 74	Microcontroller Systems	4
TECH 60	Customer Relations for the Technician	2
Total Units		30

Electronics and Computer Technology Website (<http://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- be able to employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).
- demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- quantitatively determine unknown electrical parameters from given or measured values and use these results to assess or troubleshoot faults in circuit and system operation.
- communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.
- in advanced courses, connect concepts learned in introductory courses to more general principles applicable in the employment context.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Domestic Violence Certification (Certificate 00366)

Technology and Health Division Certificate 00366

Overview of domestic violence and its ramifications. Examines the relationship between domestic violence and substance abuse. Meets state training requirements to work or volunteer in domestic violence agency as mandated by the State of California Evidence Code 1037.1 and Penal Code Section 1203.037. Certificate issued.

Required Courses

Course Prefix	Course Name	Units
AD 4	Issues in Domestic Violence	3
Total Units		3

Guided Pathways of Study Suggested Course Sequence (<https://www.mtsac.edu/guided-pathways/pathway-results.html?pthwyvar=00366&desc=Domestic+Violence+Certification%2C+Certificate+00366>)

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

eDiscovery and Litigation Support (Certificate E0441)

Business Division Certificate E0441

The eDiscovery and Litigation Support Certificate is designed for paralegals and other professionals interested in gaining employment in the emerging fields of litigation support and electronic discovery. Litigation support professionals help identify, preserve, collect, produce, and manage electronically stored information (ESI) in modern litigation. Courses focus on how such technology is rapidly changing the legal field and provides practical skills in popular eDiscovery platforms and databases.

Required Courses

Course Prefix	Course Name	Units
PLGL 100	The Litigation Practice and eDiscovery	3
PLGL 101	Project Management Principles in eDiscovery	3
PLGL 102	Litigation Support Technology from Data Collection to Trial	3
PLGL 103	Litigation Support Applications	3
Total Units		12

Program Learning Outcomes

Review Student Learning Outcomes (SLOs) for this program.

***Please note:** The Mt. SAC Paralegal/Legal Assistant Associate in Science Degree program is approved by the ABA and is the only Mt. SAC program approved by the American Bar Association (ABA). The eDiscovery and Litigation Support Certificate is a separate and distinct certificate which does not prepare students for a career as a paralegal and is not approved by the ABA nor is it an approved program option of the Paralegal Degree.

A paralegal shall perform work under the direction and supervision of an active member of the State Bar of California or other entity authorized under California law. A paralegal may not provide legal advice or engage in conduct that constitutes the unauthorized practice of law. (Business & Professions Code §§ 6450, 6451).

Electronic Assembly and Fabrication (Certificate E0929)

Technology and Health Division Certificate E0929

The Electronic Assembly and Fabrication Certificate is intended to prepare students to enter the electronics field as assembly and

fabrication technicians. The program provides a series of courses to meet the needs of industry in assembly, soldering/de-soldering skills, and fabrication for both through-hole and surface mount devices (SMD). Included are skills for various types of cabling and connections.

Electronic fundamentals (test instruments, basic electrical measurements, color-codes, schematic symbols, device outlines, etc.) are provided in the introductory courses. Complete surface mount technology (SMT) skills are taught with a culmination in the IPC7711/IPC7721 rework and repair of electronic assemblies certification. Recertification is required every two years. ELEC 63 is a prep course for the recertification.

Required Courses

Course Prefix	Course Name	Units
ELEC 10	Introduction to Mechatronics	2
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 61	Electronic Assembly and Fabrication	3
ELEC 62	Advanced Surface Mount Assembly and Rework	2
Total Units		15

Electronics and Computer Technology Website (<http://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this course, a student will be able to:

- design, fabricate, and populate a through-hole circuit board.
- communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Electronics and Computer - Engineering Technology (Certificate T0906)

Technology and Health Division

Certificate T0906

The Electronics and Computer Engineering Technology (ECET) degree program prepares individuals either for initial employment or for enhancement of existing skills in the electronics field. In addition to exposing students to core topics such as components and circuits, the program includes coursework in advanced areas including microcontrollers and interfacing, communications, and industrial electronic controls. Nearly all laboratories have equipment to provide students with quality, hands-on learning experiences. Students completing ECET degree and certificate programs possess ample skills to make them versatile employees. Typical technician-level job classifications include field service technician, fields engineer, computer service technician, customer service technician, communications technician, maintenance technician and electronics technician. All students completing the A.S. degree program are automatically eligible to receive, without further examination, the 3rd class technician license from the National Association of Radio and Telecommunications Engineers (N.A.R.T.E.). There are no prerequisites and/or enrollment limitations.

Required Courses

Course Prefix	Course Name	Units
ELEC 11	Technical Applications in Microcomputers	3
ELEC 12	Computer Simulation and Troubleshooting	2
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 53	Communications Systems	4
ELEC 54A	Industrial Electronics	4
ELEC 54B	Industrial Electronic Systems	3
ELEC 55	Microwave Communications	4
ELEC 56	Digital Electronics	4
ELEC 61	Electronic Assembly and Fabrication	3
ELEC 74	Microcontroller Systems	4
TECH 60	Customer Relations for the Technician	2
Total Units		45

Recommended Electives

Course Prefix	Course Name	Units
CISP 11	Programming in Visual Basic	3
CNET 56	Computer Networks	4
ELEC 10	Introduction to Mechatronics	2
ELEC 62	Advanced Surface Mount Assembly and Rework	2
ELEC 76	FCC General Radiotelephone Operator License Preparation	2

Electronics and Computer Technology Website (<http://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply knowledge of electronic principles to the areas of communications, industrial electronics, and microcontrollers.
- Demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- Quantitatively determine unknown electrical parameters from given or measured values and use these results to assess or troubleshoot faults in circuit and system operation.
- Communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.
- In advanced courses, connect concepts learned in introductory courses to more general principles applicable in the employment context.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Electronics Communications (Certificate T0904)

Technology and Health Division

Certificate T0904

In addition to courses in electronics fundamentals, the Electronics Communications certificate program encompasses the study of both wire-based and wireless forms of analog and digital communications

systems. Among the topics covered are amplitude and frequency modulation, multiplexing, antennas, transmission lines, and radio-wave propagation, as well as microwave systems, including radar and satellite operations, and computer networks.

This advanced certificate is one of three available for students who do not complete all second-year systems courses at once or who complete them one at a time. Students completing certificate programs are automatically eligible for the National Association of Radio and Telecommunications Engineers (N.A.R.T.E.) 4th Class Technician license.

Required Courses

Course Prefix	Course Name	Units
CNET 56	Computer Networks	4
ELEC 11	Technical Applications in Microcomputers	3
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 53	Communications Systems	4
ELEC 55	Microwave Communications	4
ELEC 56	Digital Electronics	4
ELEC 76	FCC General Radiotelephone Operator License Preparation	2
TECH 60	Customer Relations for the Technician	2
Total Units		35

Electronics and Computer Technology Website (<http://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- be able to employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).
- demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- quantitatively determine unknown electrical parameters from given or measured values and use these results to assess or troubleshoot faults in circuit and system operation.
- communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.
- in advanced courses, connect concepts learned in introductory courses to more general principles applicable in the employment context.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Electronics: Industrial Systems (Certificate T0908)

Technology and Health Division Certificate T0908

In addition to courses in electronics fundamentals, the Industrial Systems curriculum encompasses advanced coursework in industrial electronics, including electronic devices for industrial and motor controls. The curriculum culminates in the study of programmable logic controls

(PLCs) using the Allen-Bradley series of PLCs running Windows ladder logic software.

This advanced certificate is one of three available for students who do not complete all second-year systems courses at once, or who complete them one at a time. Two other certificate programs are also available: a one-year certificate in Electronics Technology, and a two-year certificate having the same title as the A.S. degree. A.S. degree recipients are automatically eligible to receive, without further examination, a 3rd class Technician License from the National Association of Radio and Telecommunications Engineers (N.A.R.T.E.), while students completing certificate programs are automatically eligible for the N.A.R.T.E. 4th Class Technician license.

Required Courses

Course Prefix	Course Name	Units
ELEC 11	Technical Applications in Microcomputers	3
ELEC 12	Computer Simulation and Troubleshooting	2
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 54A	Industrial Electronics	4
ELEC 54B	Industrial Electronic Systems	3
ELEC 56	Digital Electronics	4
ELEC 61	Electronic Assembly and Fabrication	3
TECH 60	Customer Relations for the Technician	2
Total Units		33

Electronics and Computer Technology Website (<http://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- be able to employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).
- demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- quantitatively determine unknown electrical parameters from given or measured values and use these results to assess or troubleshoot faults in circuit and system operation.
- communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.
- in advanced courses, connect concepts learned in introductory courses to more general principles applicable in the employment context.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Electronics Technology (Certificate N0480)

Technology and Health Division Certificate N0480

This one-year program covers the fundamentals of electronics technology. These core courses provide the necessary skills for those seeking entry-level employment as electronics technicians without areas of specialization. Also included is a course in customer-relations training.

Required Courses

Course Prefix	Course Name	Units
ELEC 11	Technical Applications in Microcomputers	3
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 56	Digital Electronics	4
ELEC 61	Electronic Assembly and Fabrication	3
TECH 60	Customer Relations for the Technician	2
Total Units		24

Electronics and Computer Technology Website (<http://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).
- demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- quantitatively determine unknown electrical parameters from given or measured values and use these results to assess or troubleshoot faults in circuit and system operation.
- communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Electronics Technology - Level 1 (Certificate M0679)

Technology and Health Division

This one-semester program covers the fundamentals of Electronics Technology. General topics include direct current electronics, alternating current electronics, and digital electronics. These introductory courses provide entry-level skills for those seeking employment as electronics technicians. This Level 1 certificate will prepare students with the requisite knowledge for subsequent electronics certificates and degrees.

Required Courses

Course Prefix	Course Name	Units
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 56	Digital Electronics	4
Total Units		12

Electronics Technology - Level 2 (Certificate N0680)

Technology and Health Division

This program covers the fundamentals of Electronics Technology plus additional coursework in other areas of specialty. It is composed of the same 12 unit coursework from the Electronics Technology Level 1 certificate plus 12 additional elective units chosen from other electronics courses within the Electronics Department. This certificate allows

students the flexibility to combine Electronics courses to meet individual goals in a specialty of their choosing. This Level 2 certificate will prepare students with the requisite knowledge for subsequent Electronics certificates and degrees.

Required Courses

Course Prefix	Course Name	Units
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 56	Digital Electronics	4

Required Electives

Students may choose from any of the courses in List A or List B to fulfill the 12 units of required electives

List A: Associate Degree Track

ELEC 11	Technical Applications in Microcomputers
ELEC 12	Computer Simulation and Troubleshooting
ELEC 51	Semiconductor Devices and Circuits
ELEC 53	Communications Systems
ELEC 54A	Industrial Electronics
ELEC 54B	Industrial Electronic Systems
ELEC 55	Microwave Communications
ELEC 61	Electronic Assembly and Fabrication
ELEC 74	Microcontroller Systems
TECH 60	Customer Relations for the Technician

List B: Other acceptable courses

CNET 56	Computer Networks
ELEC 10	Introduction to Mechatronics
ELEC 62	Advanced Surface Mount Assembly and Rework
ELEC 76	FCC General Radiotelephone Operator License Preparation

Total Units

24-27

Engineering and Construction Technology Level I (Certificate E0423)

Technology and Health Division

Certificate E0423

This foundational certificate is the first part of a multi-level certificate program preparing students to enter the field of construction, general or civil engineering technology, building inspection as well as construction management. Skills in reading construction drawings, construction processes and terminology, CADD computer applications in building construction and engineering will be developed. These skills are critical for employment in the engineering and construction technology or construction management sectors.

Required courses

Course Prefix	Course Name	Units
ECT 16	CADD and Digital Design Media Level I	4
ECT 67	Reading Construction Drawings	3
ECT 70	Elements of Construction Management	3
Total Units		10

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be technically competent.
- Be employed or seeking employment in the field or a related field.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Engineering and Construction Technology Level II (Certificate N0481)

Technology and Health Division Certificate N0481

This intermediate certificate is intended to continue preparing students for employment in the engineering and construction field. An understanding of building materials and architectural specifications in construction, building and zoning codes, permits, and architectural CAD and BIM will be developed. These skills are critical for direct employment in the fields of construction, general or civil engineering technology, building inspection and construction management. Students desiring a Bachelor's Degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
Completion of the Engineering and Construction Technology - Level I PLUS		10
Completion of the Engineering and Construction Technology - Level II		10
Total Units		20

Course Prefix	Course Name	Units
Completion of the Engineering and Construction Technology - Level I		
ECT 16	CADD and Digital Design Media Level I	4
ECT 67	Reading Construction Drawings	3
ECT 70	Elements of Construction Management	3
Total Units		10

Course Prefix	Course Name	Units
Completion of the Engineering and Construction Technology - Level II		
ARCH 142	Architectural Materials and Specifications	4
ARCH 145	Building and Zoning Codes	3
ARCH 147	Architectural CAD and BIM	3
Total Units		10

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be technically competent.
- Be employed or seeking employment in the field or a related field.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Engineering Fundamentals (Certificate N0846)

Natural Science Division

Engineering and Engineering Technology are fields of study that require the application of scientific and engineering knowledge, methods, and technical skills in support of engineers and other professionals. Engineering technologists use engineering principles, physical sciences, basic Physics, Mathematics, Surveying, materials testing, computing, fabrication, technical documentation, specifications, and engineering reports. This program is for job seekers interested in Engineering and Engineering technology; as well as students interested in university programs in Engineering and Engineering technology.

This program incorporates the college-level English, Mathematics, Physics, critical thinking, and Engineering Technology skills needed by an entry-level Engineering Technology employee. Completion of this certificate may prepare graduates for technical work involving electrical circuits and systems, mechanical systems, Microsoft Excel, MATLAB, written communication, oral communication, functional analysis, project management, developing presentations, and client interactions. This program may prepare students for terminal positions as assistant engineers, engineering technicians and analysts; and may facilitate transfer into a Bachelor of Science degree in Engineering Technology or other related fields.

Required Courses

Course Prefix	Course Name	Units
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
Total Units		16 - 17

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Chemical and Material Engineering Applications - Level 1 (Certificate T0830)

Natural Sciences Division

The Engineering with Emphasis in Chemical and Materials Engineering Applications program concentrates on the application of chemistry in an industrial setting through the study of design principles, contextualized problem-solving, engineering materials, applied mechanics and industry standard tools. This degree program is for job seekers interested in chemical engineering, materials engineering, chemical engineering technology and materials engineering technology; as well as students interested in university programs in material engineering technology, chemical engineering technology, chemical engineering and materials engineering.

The Engineering with Emphasis in Chemical and Materials Engineering Applications - Level 1 certificate incorporates the engineering, science, and communications skills needed by an entry-level chemical engineering technology and materials engineering technology employee. Completion of this certificate will prepare graduates for multiple terminal technologist positions, including quality control technician, lab technician, engineering technician, project analyst, engineering assistant. Through this program, students will develop proficiency with data acquisition, mechanical systems, Microsoft Excel, oral communication, functional analysis, project management, developing presentations, laboratory analysis, materials testing, and technical reporting. Completion of this certificate may facilitate transfer into B.S. programs in Engineering Technology, Chemical Engineering, Materials Engineering or other related programs.

Required courses

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals coursework		16-17
PLUS		

Completion of Engineering with Emphasis in Chemical and Material Engineering Applications - Level 1 coursework	13

Total Units	29-30

Course Prefix	Course Name	Units
Engineering Fundamentals Coursework		

ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	

ENGR 1	Introduction to Engineering	2

ENGR 1C	Engineering Critical Thinking	3

MATH 150	Trigonometry	3

or MATH 160	Precalculus Mathematics	

or MATH 180	Calculus and Analytic Geometry	

PHYS 2AG	General Physics	4

Total Units	16-17

Course Prefix	Course Name	Units
Engineering with Emphasis in Chemical and Material Engineering Applications - Level 1 Coursework		

CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	

ENGR 8	Properties of Materials	4

SPCH 1A	Public Speaking	4

or SPCH 1AH	Public Speaking - Honors	

Total Units	13

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Chemical and Material Engineering Applications - Level 2 (Certificate T0831)

Natural Science Division

The Engineering with Emphasis in Chemical and Materials Engineering Applications program concentrates on the application of chemistry in an industrial setting through the study of design principles, contextualized problem-solving, engineering materials, applied mechanics and industry standard tools. This program is for job seekers interested in chemical engineering, materials engineering, chemical engineering technology and materials engineering technology; as well as students interested in university programs in material engineering technology, chemical engineering technology, chemical engineering and materials engineering.

The Engineering with Emphasis in Chemical and Materials Engineering Applications - Level 2 certificate incorporates the engineering, science, and communications skills needed by an entry-level chemical engineering technology and materials engineering technology employee. Completion of this certificate will prepare graduates for multiple terminal technologist positions, including quality control technician, lab technician, engineering technician, project analyst, engineering assistant. Through this program students will develop proficiency with data acquisition, mechanical systems, Microsoft Excel, oral communication, functional analysis, project management, developing presentations, laboratory analysis, materials testing, programming, numerical methods and technical reporting. Completion of this certificate may facilitate transfer into B.S. programs in Engineering Technology, Chemical Engineering, Materials Engineering or other related programs.

Required Courses

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals coursework		16-17
PLUS		

Completion of Engineering with Emphasis in Chemical and Material Engineering Applications - Level 1 coursework	13

PLUS		

Completion of Engineering with Emphasis in Chemical and Material Engineering Applications - Level 2 coursework	8

Total Units	37 - 38

Course Prefix	Course Name	Units
Engineering Fundamentals		

ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1A	Freshman Composition	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	

ENGR 1	Introduction to Engineering	2

ENGR 1C	Engineering Critical Thinking	3

MATH 150	Trigonometry	3

or MATH 160	Precalculus Mathematics	

or MATH 180	Calculus and Analytic Geometry	

PHYS 2AG	General Physics	4

Total Units	16-17

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Chemical and Material Engineering Applications - Level 1 coursework		
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
ENGR 8	Properties of Materials	4
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
Total Units		13

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Chemical and Material Engineering Applications - Level 2 coursework		
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
or ENGR 7	Programming Applications for Engineers	
MATH 181	Calculus and Analytic Geometry	4
Total Units		8

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Civil Engineering Applications - Level 1 (Certificate T0833)

Natural Sciences Division

The Engineering with Emphasis in Civil Engineering Applications program prepares the students for an entry-level career working as a technician under the direction of civil engineers, surveyors, contractors and architects through project-based learning activities. This degree program is for job seekers interested in civil engineering and civil engineering technology; as well as students interested in university programs in civil engineering and civil engineering technology.

The Engineering with Emphasis in Civil Engineering Applications Level 1 certificate incorporates the engineering, science, and communications skills needed by an entry-level civil engineering technology employee. Completion of this certificate will prepare graduates for multiple terminal technologist positions, including engineering technician, civil engineering technician, project engineer, engineering assistant, and designer. Through this program, students will develop proficiency with mechanical systems, Microsoft Excel, oral communication, functional analysis, project management, developing presentations, laboratory analysis, land surveying, mapping, and technical reporting. Completion of this certificate may facilitate transfer into B.S. programs into Civil Engineering, Construction Engineering, and Construction Engineering Management related programs.

Required Courses

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals coursework		16-17
PLUS		

Completion of Engineering with Emphasis in Civil Engineering - Level 1 coursework	15
Total Units	31-32

Course Prefix	Course Name	Units
Engineering Fundamentals Coursework		
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
Total Units		16-17

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Civil Engineering Applications - Level 1 coursework		
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
SPCH 1A	Public Speaking	4
or SPCH 1A	Public Speaking	
SURV 1A	Surveying	3
SURV 1B	Surveying	3
or ENGR 18	Introduction to Engineering Graphics	
Total Units		15

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Civil Engineering Applications - Level 2 (Certificate T0834)

Natural Sciences Division

The Engineering with Emphasis in Civil Engineering Applications program prepares the students for an entry-level career working as a technician under the direction of civil engineers, surveyors, contractors and architects through project-based learning activities. This degree program is for job seekers interested in civil engineering and civil engineering technology; as well as students interested in university programs in civil engineering and civil engineering technology.

The Engineering with Emphasis in Civil Engineering Applications Level 2 certificate incorporates the engineering, science, and communications skills needed by an entry-level civil engineering technology employee. Completion of this certificate will prepare graduates for multiple terminal technologist positions, including engineering technician, civil engineering technician, project engineer, engineering assistant, and designer. Through this program students will develop proficiency with mechanical systems, Microsoft Excel, oral communication, functional analysis, project management, developing presentations, laboratory analysis, land

surveying, mapping, computer aided design, geometric dimensioning and tolerances, programming, numerical methods and technical reporting. Completion of this certificate may facilitate transfer into B.S. programs into Civil Engineering, Construction Engineering, and Construction Engineering Management related programs.

Required Courses

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals coursework		16-17
PLUS		
Completion of Engineering with Emphasis in Civil Engineering Applications - Level 1 coursework		15
PLUS		
Completion of Engineering with Emphasis in Civil Engineering Applications - Level 2 coursework		16
Total Units		47-48

Course Prefix	Course Name	Units
Engineering Fundamentals Coursework		
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
Total Units		16-17

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Civil Engineering Applications - Level 1 Coursework		
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
SURV 1A	Surveying	3
SURV 1B	Surveying	3
or ENGR 18	Introduction to Engineering Graphics	
Total Units		15

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Civil Engineering Applications - Level 2 Coursework		
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
or ENGR 7	Programming Applications for Engineers	
ENGR 8	Properties of Materials	4
ENGR 24	Engineering Graphics	4
MATH 181	Calculus and Analytic Geometry	4
Total Units		16

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Electrical Engineering Applications - Level 1 (Certificate T0836)

Natural Sciences Division

The Engineering with Emphasis in Electrical Engineering Applications Level – 1 certificate is designed to incorporate the engineering, science, and communications skills needed to prepare students for multiple entry-level positions in the electrical engineering field.

Required Courses

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals coursework		16-17
PLUS		
Completion of Engineering with Emphasis in Electrical Engineering Applications - Level 1 coursework		12.5-13
Total Units		28.5-30

Course Prefix	Course Name	Units
Engineering Fundamentals Coursework		
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
Total Units		16-17

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Electrical Engineering Applications - Level 1 Coursework		
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
CSCI 110	Fundamentals of Computer Science	3.5
or ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
Total Units		12.5-13

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Electrical Engineering Applications Level - 2 (Certificate T0837)

Natural Sciences Division

The Engineering with Emphasis in Electrical Engineering Applications Level – 2 certificate is designed to incorporate the engineering, science, and communications skills needed to prepare students for multiple entry-level positions in the electrical engineering field.

Required Courses

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals coursework		16-17
PLUS		
Completion of Engineering with Emphasis in Electrical Engineering Applications - Level 1 coursework		12.5-13
PLUS		
Completion of Engineering with Emphasis in Electrical Engineering Applications - Level 2 coursework		7.5 - 8
Total Units		36-38

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals Coursework		
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
Total Units		16-7

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Electrical Engineering Applications - Level 1 Coursework		
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
CSCI 110	Fundamentals of Computer Science	3.5
or ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
Total Units		12.5-13

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Electrical Engineering Applications - Level 2 Coursework		
CSCI 140	C++ Language and Object Development	4
or CSCI 220	Data Structures I	
or ENGR 16	Introduction to Digital Electronics with FPGA Programming	
MATH 181	Calculus and Analytic Geometry	4
Total Units		7.5-8

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Mechanical Engineering Applications Level - 1 (Certificate T0839)

Natural Science Division

The Engineering with Emphasis in Mechanical Engineering Applications program concentrates on the development of mechanical devices and emerging technologies through the study of design principles, contextualized problem-solving, engineering materials, applied mechanics and industry standard tools. This degree program is for job seekers interested in mechanical engineering and mechanical engineering technology; as well as students interested in university programs in mechanical engineering and mechanical engineering technology.

The Engineering with Emphasis in Mechanical Engineering Applications Level 1 certificate incorporates the engineering, science, and communications skills needed by an entry-level mechanical engineering technology employee. Completion of this certificate will prepare graduates for multiple terminal technologist positions, including engineering technician, maintenance technician, facilities manager, manufacturing technician, operations technician, lab technician, technical sales and other endeavors related to mechanical components and systems. Through this program, students will develop proficiency with mechanical systems, Microsoft Excel, oral communication, functional analysis, project management, developing presentations, laboratory analysis, and technical reporting. Completion of this certificate may facilitate transfer into B.S. programs in Electro-mechanical Systems Engineering Technology, Mechanical Engineering or other related fields.

Required Courses

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals coursework		16-17
PLUS		
Completion of Engineering with Emphasis in Mechanical Engineering Application - Level 1 coursework		12-13
Total Units		28-30

Course Prefix	Course Name	Units
Completion of Engineering Engineering Fundamentals Coursework		
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
Total Units		16-17

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Mechanical Engineering Applications - Level 1 Coursework		
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	

or CHEM 55	Chemistry for Engineers	
ENGR 8	Properties of Materials	4
or ENGR 18	Introduction to Engineering Graphics	
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
Total Units		12-13

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Mechanical Engineering Applications Level - 2 (Certificate T0840)

Natural Science Division

The Engineering with Emphasis in Mechanical Engineering program concentrates on the development of mechanical devices and emerging technologies through the study of design principles, contextualized problem-solving, engineering materials, applied mechanics and industry standard tools. This degree program is for job seekers interested in mechanical engineering and mechanical engineering technology; as well as students interested in university programs in mechanical engineering and mechanical engineering technology.

The Engineering with Emphasis in Mechanical Engineering Applications Level 2 certificate incorporates the engineering, science, and communications skills needed by an entry-level mechanical engineering technology employee. Completion of this certificate will prepare graduates for multiple terminal technologist positions, including engineering technician, maintenance technician, facilities manager, manufacturing technician, operations technician, lab technician, technical sales and other endeavors related to mechanical components and systems. Through this program students will develop proficiency with mechanical systems, Microsoft Excel, oral communication, functional analysis, project management, developing presentations, laboratory analysis, computer aided design, geometric dimensioning and tolerances, programming, numerical methods and technical reporting. Completion of this certificate may facilitate transfer into B.S. programs in Electro-mechanical Systems Engineering Technology, Mechanical Engineering or other related fields.

Required Courses

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals coursework		16-17
PLUS		
Completion of Engineering with Emphasis in Mechanical Engineering Applications - Level 1 coursework		12-13
PLUS		
Completion of Engineering with Emphasis in Mechanical Engineering Applications - Level 2 coursework		12
Total Units		40-42

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals Coursework		
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	

or AMLA 1A	College Composition for Non-Native English Speakers	
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
Total Units		16-17

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Mechanical Engineering Applications - Level 1 Coursework		
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
ENGR 8	Properties of Materials	4
or ENGR 18	Introduction to Engineering Graphics	
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
Total Units		12-13

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Mechanical Engineering Applications - Level 2 Coursework		
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
or ENGR 7	Programming Applications for Engineers	
ENGR 24	Engineering Graphics	4
MATH 181	Calculus and Analytic Geometry	4
Total Units		12

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Software Engineering Applications Level - 1 (Certificate T0842)

Natural Science Division

The Engineering with Emphasis in Software Engineering Applications program concentrates on the design of complex computing systems through the applications of computing languages, contextualized problem-solving, control systems, and applied mathematics. This degree program is for job seekers interested in software engineering technology as well as students interested in university programs in software engineering and software engineering technology.

The Engineering with Emphasis in Software Engineering Applications Level 1 certificate incorporates the engineering, science, and communications skills needed by an entry-level software engineering technology employee. Completion of this certificate will prepare graduates for multiple terminal technologist positions, including engineering technician, software engineering technician, application developer, assistant engineer, technical sales, technical consultant and other endeavors related to electrical systems. Through this program, students will develop proficiency with electrical systems, mechanical systems, Microsoft Excel, oral communication, functional analysis,

project management, developing presentations, laboratory analysis, programming, numerical methods, software development, and hardware interface tools. Completion of this certificate may facilitate transfer into B.S. programs in Engineering Technology, Software Engineering or Computer Science related degree programs.

Required Courses

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals coursework		16-17
PLUS		
Completion of Engineering with Emphasis in Software Engineering Applications - Level 1		15.5
Total Units		31.5-32.5

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals Coursework		
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
Total Units		16-17

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Software Engineering Applications - Level 1 Coursework		
CSCI 110	Fundamentals of Computer Science	3.5
CSCI 190	Discrete Mathematics Applied to Computer Science	4
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
Total Units		15.5

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Software Engineering Applications Level - 2 (Certificate T0843)

Natural Science Division

The Engineering with Emphasis in Software Engineering Applications program concentrates on the design of complex computing systems through the applications of computing languages, contextualized problem-solving, control systems, and applied mathematics. This degree program is for job seekers interested in electrical software engineering

technology as well as students interested in university programs in software engineering and software engineering technology.

Engineering with Emphasis in Software Engineering Applications Level 2 certificate incorporates the engineering, science, and communications skills needed by an entry-level software engineering technology employee. Completion of this certificate will prepare graduates for multiple terminal technologist positions, including engineering technician, software engineering technician, application developer, assistant engineer, technical sales, technical consultant and other endeavors related to electrical systems. Through this program, students will develop proficiency with electrical systems, mechanical systems, Microsoft Excel, oral communication, functional analysis, project management, developing presentations, laboratory analysis, programming, numerical methods, software development, and hardware interface tools. Completion of this certificate may facilitate transfer into B.S. programs in Engineering Technology, Software Engineering or Computer Science related degree programs.

Required Courses

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals coursework		16-17
PLUS		
Completion of Engineering with Emphasis in Software Engineering Applications - Level 1 coursework		15.5
PLUS		
Completion of Engineering with Emphasis in Software Engineering Applications - Level 2 coursework		11.5 - 13
Total Units		43-45.5

Course Prefix	Course Name	Units
Completion of Engineering Fundamentals Coursework		
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
Total Units		16 - 17

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Software Engineering Applications - Level 1 Coursework		
CSCI 110	Fundamentals of Computer Science	3.5
CSCI 190	Discrete Mathematics Applied to Computer Science	4
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
Total Units		15.5

Course Prefix	Course Name	Units
Completion of Engineering with Emphasis in Software Engineering Applications - Level 2 Coursework		
CSCI 140	C++ Language and Object Development	4

or CSCI 220	Data Structures I	
or CSCI 240	Data Structures and Algorithms	
ENGR 16	Introduction to Digital Electronics with FPGA Programming	4
MATH 181	Calculus and Analytic Geometry	4
Total Units		11.5 - 13

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Exhibition Concept, Design, and Production (Certificate N0659)

Arts Division

This certificate is designed to provide students with the necessary theoretical and practical knowledge and skills to display an esthetically and conceptually effective art exhibition. Students will acquire the knowledge of various/diverse artistic media and develop a career-oriented artistic perspective.

Required Courses

Course Prefix	Course Name	Units
ARTC 100	Fundamentals of Graphic Design	3
ARTG 20	Art, Artists, and Society	3
ARTG 21A	Introduction to Exhibition Production	3
ARTG 21B	Intermediate Exhibition Production	3
ARTG 22A	Exhibition Design and Art Gallery Operation Work Experience ¹	2
ARTG 23	Art Writing	1.5
ARTG 24	Shop Practices for Art Careers	1.5
Required Electives (3 Units)		3
AHIS 5	History of Western Art: Renaissance Through Modern	
or AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	
or AHIS 6	History of Modern Art	
or AHIS 6H	History of Modern Art - Honors	
Total Units		20

¹ Course to be taken twice - once as an off-campus experience and once as an on-campus experience (2 Units)

Program Learning Outcomes

Upon the successful completion of this program, a student will:

- Have completed the foundation courses of the major which are the aesthetic base needed for transfer into bachelors programs or independent work as an artist.
- Will be able to apply critical thinking skills to original work.
- Be able to apply the elements and principles of design to original art work.
- Be able to apply visual arts concepts that are basic to many forms and fields of art and design in visual, oral, and written communication.
- Be able to analyze historical, contemporary, peer, and personal visual artwork that range in modes of artistic expression.
- Be able to demonstrate in oral, written, and studio work familiarity with the history of western art.

- Be proficient in a variety of visual art techniques and tools using them to explore a range of subjects, media, styles, and formats.
- Create independent original work in the area of their focus demonstrating basic professional practices.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

FAA Aircraft Dispatcher (Certificate E0408)

Technology and Health Division

Certificate E0408

Mt. San Antonio College maintains a Federal Aviation Administration (FAA) approved Aircraft Dispatcher (AD) Program. This program prepares students to enter employment as a certified aircraft dispatcher in the airline industry, air-medical industry, corporate aircraft operators, and aviation weather service companies. Completion of this program leads to a Certificate. Successful completion of this program enables students to take the FAA written, oral, and practical tests for the FAA Aircraft Dispatcher Certificate.

Aeronautics Website (<http://www.mtsac.edu/aeronautics/>)

Required Courses

Course Prefix	Course Name	Units
AERO 254	Aircraft Dispatcher Operations	4
AERO 258	Large Aircraft Systems	3
Total Units		7

Aeronautics Website (<http://www.mtsac.edu/aeronautics/>)

Program Learning Outcomes

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Fashion Computer-Aided Design (Certificate E0383)

Business Division

Certificate E0383

The Fashion Computer-Aided Design Certificate consists of apparel design courses that offer students a basic understanding of clothing construction, patternmaking, technical design, and patternmaking software. Students prepare for careers in apparel manufacturing, production, and technical design.

Required Courses

Course Prefix	Course Name	Units
FASH 23	Patternmaking II	3
FASH 24	Fashion Patternmaking by Computer	3
FASH 25	Fashion Digital Illustration and Design	3
Required Electives		
Select one of the following		3
FASH 57	Fashion Retailing and Production Technologies	
FASH 66	Visual Merchandising Display	
Total Units		12

Fashion Website (<http://www.mtsac.edu/fashion/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Create an apparel collection including textile designs and flats (technical drawings) pursuant to apparel industry standards.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Fashion Design - Level I (Certificate N0482)

Business Division

Certificate N0482

The Fashion Design Level I Certificate consists of basic apparel design courses that prepare students for entry level work in the fields of apparel manufacturing, production, and technical design. Upon completion of the certificate, students will have a basic understanding of clothing construction and patternmaking. In addition, students will develop CAD skills for technical drawing and computerized patternmaking.

Required Courses

Course Prefix	Course Name	Units
FASH 10	Clothing Construction I	3
FASH 12	Clothing Construction II	3
FASH 17	Textiles	3
FASH 21	Patternmaking I	3
FASH 24	Fashion Patternmaking by Computer	3
FASH 25	Fashion Digital Illustration and Design	3
Total Units		18

Fashion Website (<http://www.mtsac.edu/fashion/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate understanding of the fashion industry trend research process.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Fashion Design - Level II (Certificate N0483)

Business Division

Certificate N0483

The Fashion Design Level II Certificate builds upon the Level I Certificate to provide students with intermediate skills that will enhance their Fashion Design careers. In addition to clothing construction, patternmaking, and Computer-Aided Design (CAD) technical drawing skills, students will be able to create apparel patterns using various draping techniques. Furthermore, students will be able to create sportswear collections and develop professional apparel design portfolios to strengthen career perspectives.

Required Courses

Course Prefix	Course Name	Units
Completion of the Fashion Design - Level I coursework		18
PLUS		
Completion of the Fashion Design - Level II coursework		6
Total Units		24

Course Prefix	Course Name	Units
Fashion Design - Level I Coursework		
FASH 10	Clothing Construction I	3
FASH 12	Clothing Construction II	3
FASH 17	Textiles	3
FASH 21	Patternmaking I	3
FASH 24	Fashion Patternmaking by Computer	3
FASH 25	Fashion Digital Illustration and Design	3
Total Units		18

Course Prefix	Course Name	Units
Fashion Design - Level II Coursework		
FASH 22	Fashion Design By Draping	3
FASH 23	Patternmaking II	3
Total Units		6

Fashion Website (<http://www.mtsac.edu/fashion/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate their understanding of the fashion industry trend research process.
- Create apparel patterns using CAD patternmaking industry software pursuant to apparel industry standards.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Fashion Historical Costuming (Certificate M0674)

Business Division

This certificate is appropriate for those who want to prepare for a career in fashion and costume design. Upon completion of the courses, you will be prepared for entry-level employment in costume, entertainment and fashion careers. Entry level positions include wardrobe design assistants, corset specialists, costume design assistants, costume attendants, gaming industry costume development, and other fashion and entertainment-related employment opportunities.

Required Courses

Course Prefix	Course Name	Units
FASH 9	History of Fashion	3
FASH 10	Clothing Construction I	3
FASH 16	Corset Construction	3
FASH 21	Patternmaking I	3
THTR 19	Theatrical Costuming	3
Total Units		15

Fashion Merchandising - Level I (Certificate N0484)

Business Division

Certificate N0484

The certificate in Fashion Merchandising offers students courses specializing in apparel retailing, advertising, textiles, and CAD technical drawing. The courses emphasize the business of fashion, wholesale merchandise planning, apparel technology, retailing, and fashion branding targeting specific markets. Upon completion of the certificate, students will be able to develop marketing strategies, create promotional campaigns, understand the buying process, and analyze retail businesses.

Required Courses

Course Prefix	Course Name	Units
FASH 8	Introduction to Fashion	3
FASH 17	Textiles	3
FASH 25	Fashion Digital Illustration and Design	3
FASH 59	Fashion Retailing	3
FASH 62	Retail Buying and Merchandising	4
FASH 63	Fashion Promotion	3
Total Units		19

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate their understanding of the fashion industry trend research process.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Fashion Merchandising - Level II (Certificate N0485)

Business Division

Certificate N0485

The Fashion Merchandising Level II Certificate is designated to build upon the Fashion Merchandising Level I Certificate to provide students with proven business and management tools that will increase their practical understanding of merchandising and marketing. Students will be exposed to projects and visual display simulations that will enhance their merchandising and management career potential.

Required Courses

Course Prefix	Course Name	Units
Completion of the Fashion Merchandising - Level I coursework		19
PLUS		
Completion of the Fashion Merchandising - Level II coursework		6
Total Units		25

Course Prefix	Course Name	Units
Fashion Merchandising - Level I Coursework		
FASH 8	Introduction to Fashion	3
FASH 17	Textiles	3
FASH 25	Fashion Digital Illustration and Design	3
FASH 59	Fashion Retailing	3
FASH 62	Retail Buying and Merchandising	4

FASH 63	Fashion Promotion	3
Total Units		19

Course Prefix	Course Name	Units
Fashion Merchandising - Level II Coursework		
FASH 9	History of Fashion	3
or FASH 57	Fashion Retailing and Production Technologies	
FASH 10	Clothing Construction I	3
Total Units		6

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate their understanding of the fashion industry trend research process.
- Analyze the marketing and promotional techniques of fashion and apparel companies.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Fashion Retailing Fundamentals Online(Certificate M0676)

Business Division

The Fashion Retailing Fundamentals Online certificate offers coursework to provide students with foundational knowledge of the fashion industry. The courses emphasize the business of fashion, fashion retailing, fashion buying and merchandise math concepts, and fashion branding targeting specific markets thereby providing students with business and management tools that will increase their practical understanding of fashion merchandising and marketing. Students will be exposed to projects and industry scenario simulations that will enhance their merchandising and management career potential.

Required Courses

Course Prefix	Course Name	Units
FASH 8	Introduction to Fashion	3
FASH 59	Fashion Retailing	3
FASH 62	Retail Buying and Merchandising	4
FASH 63	Fashion Promotion	3
Total Units		13

Fire Officer Certification (Certificate E0381)

Technology and Health Division

Certificate E0381

The Fire Officer Certificate is intended for in-service firefighters preparing for promotion. It meets the prerequisite educational requirements for fire officer promotional exams.

Required Courses

Course Prefix	Course Name	Units
FIRE 100	Company Officer 2C: Fire Inspections and Investigations	2
FIRE 101	Company Officer 2D: All Risk Command Operations	2

FIRE 102	Company Officer 2B: General Administrative Functions	1
FIRE 103	Company Officer 2E: Wildland Incident Operations	2
FIRE 104	Instructional Methodology	2
FIRE 107	Company Officer 2A: Human Resource Management for Company Officers	2
FIRE 108	ICS 300: Advance Incident Command	1
Total Units		12

The Fire Officer Certification program is a Regionally Accredited Training Program (ARTP). The Office of the State Fire Marshall (OSFM) has a responsibility for accreditation of ARTP's throughout the State of California. An ARTP shall provide the following delivery components:

1. California Fire Service Training and Education System (CFSTES)
2. California Fire Service Training and Education Program (FSTEP)
3. Fire Incident Command Certification System (CICCS)
4. California Community College Chancellor's Office Standard Fire Technology Degree Core Program

Contact:

Office of the State Fire Marshall
1131 S. Street
Sacramento, CA 95811
(916) 445-8200

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Fire Technology (Certificate N0486)

Technology and Health Division

Certificate N0486

The Fire Science Certificate has been developed to offer pre-employment education for the undergraduate who desires to enter the field of fire science. It also provides the employed firefighter an opportunity for a professional education. Students intending to pursue a Bachelor's Degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
FIRE 1	Fire Protection Organization	3
FIRE 2	Fire Prevention Technology	3
FIRE 3	Fire Protection Equipment and Systems	3
FIRE 4	Building Construction for Fire Protection	3
FIRE 5	Fire Behavior and Combustion	3
FIRE 13	Principles of Fire and Emergency Services Safety and Survival	3
Choose two courses from the following:		5.5-19
FIRE 6	Hazardous Materials/ICS	
FIRE 7	Fire Fighting Tactics and Strategy	
FIRE 8	Fire Company Organization and Management	
FIRE 9	Fire Hydraulics	
FIRE 10	Arson and Fire Investigation	
FIRE 11	Fire Apparatus and Equipment	
FIRE 12	Wildland Fire Control	
FIRE 86	Basic Fire Academy	

KINF 53	Physical Training for the Basic Fire Academy
Total Units	23.5-37

The Fire Technology program is a Regionally Accredited Training Program (ARTP). The Office of the State Fire Marshall (OSFM) has a responsibility for accreditation of ARTP's throughout the State of California. An ARTP shall provide the following delivery components:

1. California Fire Service Training and Education System (CFSTES)
2. California Fire Service Training and Education Program (FSTEP)
3. Fire Incident Command Certification System (CICCS)
4. California Community College Chancellor's Office Standard Fire Technology Degree Core Program

Contact:

Office of the State Fire Marshall
1131 S. Street
Sacramento, CA 95811
(916) 445-8200

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Define fire department organization, culture, and methods of communication of entry level fire department personnel.
- Analyze and assess firefighter hazards, and demonstrate safe practices by using minimum standard safety procedures.
- Demonstrate knowledge of fire prevention efforts and a resulting reduction of life and property loss.
- Demonstrate knowledge of strategy and tactics required for the proper selection and safe use of firefighting methods, techniques, tools, and equipment.
- Identify fire chemistry and behavior for the purpose of predicting fire dynamics and flame spread characteristics.
- Identify components of built-in and portable fire protections systems and alarm and notification devices.
- Demonstrate knowledge of the 5 basic types of construction. Identify the components and hazards related to each type.
- Demonstrate knowledge of Leadership and Management concepts as they relate to emergency and non-emergency situations.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Fitness Specialist/Personal Trainer (Certificate E0808)

Certificate E0808

The Fitness Specialist/Personal Trainer Certificate prepares students for careers as personal trainers, health/fitness professionals in corporate fitness facilities, wellness centers and public/private health clubs. The Fitness Specialist/Personal Trainer Certificate curriculum is designed to prepare students who wish to take exams offered by the American Council on Exercise (ACE), the American College of Sports Medicine (ACSM) and other nationally recognized organizations. Technical skills necessary for implementation of a safe, effective and motivational physical fitness program are presented.

Required Courses

Course Prefix	Course Name	Units
KIN 15	Administration of Fitness Programs	2
KIN 24	Applied Kinesiology	2
KIN 38	Physiology of Exercise for Fitness	3
KIN 39	Techniques of Fitness Testing	2
KIN 40	Techniques of Strength Training and Conditioning	3
KIN 85	Fitness Specialist Work Experience	1
Choose one course from the following		3
NF 10	Nutrition for Health and Wellness	
NF 12	Sports Nutrition	
NF 25	Introduction to Nutrition Science	
or NF 25H	Introduction to Nutrition Science - Honors	
Total Units		16

Recommended Electives

Course Prefix	Course Name	Units
DNCE 39	Pilates Fundamentals	0.5-1
KINF 25	Core Performance and Foundation Movement	1-2

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Design a 6-12 month exercise program based on clients current fitness level and abilities and their current fitness goals.
- Demonstrate a knowledge of the structure and function of exercising muscle.
- Demonstrate a working knowledge and practical application of General principles of training as applied to, Resistance training programs, Aerobic and anaerobic power training programs.
- Demonstrate the ability to assess muscular strength, aerobic fitness anaerobic power using safe and accepted protocols.
- Describe primary functions and movement patterns of muscles joints during specific exercises in order to give appropriate feedback as to the proper execution of an exercise.
- Use appropriate verbal and nonverbal communication to coach and motivate individuals in their exercise program.
- Describe basic nutrition concepts as they relate to performance, sport and a healthy lifestyle.
- Demonstrate the ability to monitor client's safety in a gym environment and respond to potential risks and or hazards.
- Demonstrate a knowledge of ethical and legal issues faced by a personal trainer.
- Demonstrate a knowledge of various types of cardiovascular disease and the pathology it has on the body. Understand how exercise can be used to prevent a disease and obesity to better quality of life for an individual.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Forensics Competition Management (Certificate N0848)

Humanities and Social Science Division

The Certificate of Achievement in Forensics Competition Management will be awarded to students for the completion of a series of courses related to public speaking and forensics. Students completing these

courses will acquire performance skills in forensics and hands-on experience by assisting faculty in the management of a forensics tournament.

Required Courses

Course Prefix	Course Name	Units
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
or SPCH 2	Survey of Communication Studies	
or SPCH 8	Professional and Organizational Speaking	
or SPCH 8H	Professional and Organizational Speaking - Honors	
SPCH 4	Performance of Literature	3
or SPCH 15	Forensics: Fundamentals of Contest Speech and Debate	
or SPCH 20	Argumentation and Debate	
or SPCH 20H	Argumentation and Debate - Honors	
SPCH 16	Forensics: Individual Event Team	3
SPCH 17	Forensics: Debate Team	3
SPCH 18	Forensics: Reader's Theater Team	3
SPCH 99	Special Projects in Speech	0.5
Total Units		15.5 - 16.5

Communication Website (<http://www.mtsac.edu/communication/>)

Geographic Information Systems (GIS) (Certificate N0850)

Humanities and Social Science Division

Geospatial technologies, including Geographic Information Systems (GIS), Remote Sensing (RS), and Global Positioning System (GPS), are used to capture, store, manage, analyze and visualize geospatial information related to locations on Earth's surface. These technologies are used to combine various types of geospatial information in a digital environment and are widely used in our daily life, government agencies, in almost every industry. Through this program students will develop an understanding of the theoretical underpinnings of geospatial technologies and gain the skills needed to construct high-quality applications.

Required Courses

Course Prefix	Course Name	Units
GEOG 9	Geospatial Concepts	3
GEOG 10	Introduction to Geographic Information Systems	3
GEOG 12	Cartography	2
GEOG 13	Geospatial Data Acquisition and Management	3
GEOG 14	Spatial Analysis	3
GEOG 15	Raster Methods	3
GEOG 16	GIS Capstone Portfolio	3
Total Units		20

Geotech (Certificate T0677)

Natural Sciences Division

Students who obtain the Geotech Certificate will be qualified for entry-level employment opportunities with local government agencies, private firms, and utilities specializing in water resources and water quality, engineering geology, petroleum resources, environmental hazards and remediation and other geotechnical services. Certificate earners will receive hands-on training in field and lab skills necessary for a variety of

geotechnical careers. There are no prerequisite skills for the certificate and enrollment will be limited only by available space in the core classes.

The Geotech Certificate will allow students to qualify for positions in the geotechnical sector prior to or without obtaining a 4-year degree.

Required Courses

Course Prefix	Course Name	Units
AGOR 50	Soil Science and Management	3
AGOR 71	Construction Fundamentals	3
CHEM 9	Chemistry of Everyday Life	3
or CHEM 10	Chemistry for Allied Health Majors	
or CHEM 40	Introduction to General Chemistry	
CISB 15	Microcomputer Applications	3.5
GEOG 10	Introduction to Geographic Information Systems	3
GEOL 1	Physical Geology	4
GEOL 9	Environmental Geology	3
GEOL 9L	Environmental Geology Laboratory	1
GEOL 24	Geologic Field Studies: Central California	4
or GEOL 25	Geologic Field Studies: Southern California	
or GEOL 29	Special Topics in Field Geology	
GEOL 31	Geotechnical Methods for Geotech	1
GEOL 32	Work Experience in Geotechnician/Environmental Technician Skills	1
GEOL 33	Geotechnical Methods for Geotech 2	1
MATH 51	Elementary Algebra	4
or MATH 71	Intermediate Algebra	
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
Total Units		37.5-41.5

Graphic Design Level I (Certificate N0487)

Arts Division

Certificate N0487

This multi-level certificate program is designed to prepare students for careers in the Graphic Design field of Communication Art. Students are given creative design and technology skills necessary to develop successful graphic design for print, web, and other media. This Graphic Design Level I certificate offers the essential skills required for entry-level employment opportunities as a production or layout artist, interface or content designer, publication artist, print advertising artist, or desktop publisher. The production software reflects industry standards and course content is driven by industry needs.

Required Courses

Course Prefix	Course Name	Units
ARTC 100	Fundamentals of Graphic Design	3
ARTC 120	Print Design and Advertising	3
ARTC 140	Vector Design and Illustration	3
ARTC 160	Typography	3
ARTD 20	Design: Two-Dimensional	3
PHOT 58	Photography & Video Social Media Marketing	3
Total Units		18

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Graphic Design - Level 2 - Generalist (Certificate T0683)

Arts Division

Certificate T0683

This multi-level certificate program is designed to prepare students for careers in the Graphic Design field of Communication Art. In this Level 2 Generalist emphasis, students are given a balanced blend of creative, design, and technology skills necessary to develop successful graphic design for print and web. The production software reflects industry standards and course content is driven by industry needs.

Required Courses

Course Prefix	Course Name	Units
Completion of the Graphic Design Level 1 Coursework (18 units)		18
PLUS		
Completion of the Graphic Design - Level 2 - Generalist coursework		15
Total Units		33

Course Prefix	Course Name	Units
Graphic Design - Level 1 Coursework		
ARTC 100	Fundamentals of Graphic Design	3
ARTC 120	Print Design and Advertising	3
ARTC 140	Vector Design and Illustration	3
ARTC 160	Typography	3
ARTD 20	Design: Two-Dimensional	3
PHOT 58	Photography & Video Social Media Marketing	3
Total Units		18

Course Prefix	Course Name	Units
Graphic Design - Level 2 - Generalist Coursework		
ARTC 200	Web Design	3
ARTC 210	Corporate Identity and Branding	3
ARTC 220	Creative Design and Compositing	3
ARTC 290	Portfolio	3
ARTD 15A	Drawing: Beginning	3
or ANIM 104	Drawing Fundamentals	
Total Units		15

Graphic Design - Level 2 - Marketing (Certificate T0684)

Arts Division

Certificate T0684

This multi-level certificate program is designed to prepare students for careers in the Graphic Design field of Communication Art. In this Level 2 - Marketing emphasis, students are given the creative, design, technology, business, and marketing skills necessary to design, develop, and execute successful advertising, marketing, and branding strategies. The production software reflects industry standards and course content is driven by industry needs.

Required courses

Course Prefix	Course Name	Units
Completion of the Graphic Design Level 1 Coursework		18
PLUS		

Completion of the Graphic Design - Level 2 - Marketing Coursework	15
Total Units	33

Course Prefix	Course Name	Units
Graphic Design - Level 1 Coursework		
ARTC 100	Fundamentals of Graphic Design	3
ARTC 120	Print Design and Advertising	3
ARTC 140	Vector Design and Illustration	3
ARTC 160	Typography	3
ARTD 20	Design: Two-Dimensional	3
PHOT 58	Photography & Video Social Media Marketing	3
Total Units		18

Course Prefix	Course Name	Units
Completion of the Graphic Design - Level 2 - Marketing Coursework		
ARTC 200	Web Design	3
ARTC 210	Corporate Identity and Branding	3
ARTC 290	Portfolio	3
BUSM 20	Principles of Business	3
BUSS 36	Principles of Marketing	3
Total Units		15

Graphic Design - Level 2 - Motion Graphics (Certificate T0685)

Arts Division

Certificate T0685

This multi-level certificate program is designed to prepare students for careers in the Graphic Design field of Communication Art. In this Level 2 - Motion Graphics emphasis, students are given the creative, design, and technology skills necessary to design and develop successful video and motion graphics for web, social media and other marketing channels. These skills include the development of commercial-art-related motion graphics, distributed on or through various marketing channels such as YouTube, Vimeo, Facebook, Instagram, LinkedIn, and business websites. The production software reflects industry standards and course content is driven by industry needs.

Required Courses

Course Prefix	Course Name	Units
Completion of the Graphic Design Level 1 Coursework		
PLUS		
Graphic Design - Level 2 - Motion Graphics Coursework		15
Total Units		33

Course Prefix	Course Name	Units
Graphic Design - Level 1 Coursework		
ARTC 100	Fundamentals of Graphic Design	3
ARTC 120	Print Design and Advertising	3
ARTC 140	Vector Design and Illustration	3
ARTC 160	Typography	3
ARTD 20	Design: Two-Dimensional	3
PHOT 58	Photography & Video Social Media Marketing	3
Total Units		18

Course Prefix	Course Name	Units
Completion of the Graphic Design - Level 2 - Motion Graphics Coursework		

ARTC 200	Web Design	3
ARTC 220	Creative Design and Compositing	3
ARTC 272	Motion Graphics, Compositing and Visual Effects	3
ARTC 290	Portfolio	3
R-TV 19A	Beginning Video Production	3
Total Units		15

Graphic Design - Level 2 - Web Design (Certificate T0686)

Arts Division

Certificate T0686

This multi-level certificate program is designed to prepare students for careers in the Graphic Design field of Communication Art. In this Level 2 - Web Design emphasis, students are given the creative, design, and technology skills necessary to design and develop successful websites and apps for desktop and smart devices. These skills include user interaction, user experience, responsive design, client-side markup and programming, servers, and server-side programming. Employment opportunities include working as a graphic/web designer in a small business, graphic design studio, print shop, advertising agency, web development studio, or as a freelancer. The production software reflects industry standards and course content is driven by industry needs.

Required Courses

Course Prefix	Course Name	Units
Completion of the Graphic Design Level 1 Coursework		
PLUS		
Completion of the Graphic Design - Level 2 - Web Design Coursework		15
Total Units		33

Course Prefix	Course Name	Units
Graphic Design - Level 1 Coursework		
ARTC 100	Fundamentals of Graphic Design	3
ARTC 120	Print Design and Advertising	3
ARTC 140	Vector Design and Illustration	3
ARTC 160	Typography	3
ARTD 20	Design: Two-Dimensional	3
PHOT 58	Photography & Video Social Media Marketing	3
Total Units		18

Course Prefix	Course Name	Units
Completion of the Graphic Design - Level 2 - Web Design Coursework		
ARTC 200	Web Design	3
ARTC 230	Web Design II	3
ARTC 290	Portfolio	3
CISW 17	HTML, CSS, and JavaScript Programming	3
CISW 21	Secure Web Programming with ASP.NET	3
Total Units		15

Horse Ranch Management - Level I (Certificate M0869)

Natural Sciences Division

Certificate M0869

The Horse Ranch Management Level I certificate focuses on equine production, management, and nutrition. The curriculum combines a combination of technical knowledge and practical skills utilizing a hands-

on approach to instruction. Upon completion, students will have basic skills for entry-level employment opportunities in the equine industry. All courses are applicable for degree requirements in Horse Ranch Management and Animal Science.

Required Courses

Course Prefix	Course Name	Units
ASCI 2	Animal Nutrition	3
ASCI 16	Horse Production and Management	4
ASCI 18	Horse Ranch Management	4
Total Units		11

Animal Sciences Website (<http://www.mtsac.edu/animal/>)

Program Learning Outcomes

Upon successful completion of this program, a student:

- completing the Horse Ranch Management certificate will demonstrate professional conduct in the industry.
- will design a production/business plan for a horse-related activity.
- completing a certificate in Horse Ranch Management will be able to address animal welfare requirements when designing and implementing an equine management system.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Horse Ranch Management - Level II (Certificate N0488)

Natural Sciences Division Certificate N0488

The Horse Ranch Management Level II certificate focuses on equine husbandry, production, management, nutrition, anatomy and physiology, and breeding. The curriculum combines a combination of technical knowledge and practical skills utilizing a hands-on approach to instruction. Upon completion of this certificate, students will have intermediate skills and may be able to gain entry-level employment in the equine industry. All courses are applicable for degree requirements in Horse Ranch Management and Animal Science.

Required Courses

Course Prefix	Course Name	Units
Completion of the Horse Ranch Management - Level I coursework		11
PLUS		
Completion of the Horse Ranch Management - Level II coursework		7 - 9
Total Units		18-20

Course Prefix	Course Name	Units
Horse Ranch Management - Level I coursework		
ASCI 2	Animal Nutrition	3
ASCI 16	Horse Production and Management	4
ASCI 18	Horse Ranch Management	4
Total Units		11

Course Prefix	Course Name	Units
Horse Ranch Management - Level II coursework		
ASCI 59	Work Experience in Agriculture of ASCI 59	1-3

*Complete 1 - 3 units

ASCI 94	Animal Breeding	3
ASCI 96	Animal Sanitation and Disease Control	3
Total Units		7-9

Animal Sciences Website (<http://www.mtsac.edu/animal/>)

Program Learning Outcomes

Upon successful completion of this program, a student:

- completing the Horse Ranch Management certificate will demonstrate professional conduct in the industry
- will design a production/business plan for a horse-related activity
- completing a certificate in Horse Ranch Management will be able to address animal welfare requirements when designing and implementing an equine management system

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Horticulture Science (Certificate N0489)

Natural Sciences Division Certificate N0489

This certificate is designed to give students basic knowledge and skills pertaining to horticulture science.

Required Courses

Course Prefix	Course Name	Units
AGOR 1	Horticultural Science	3
AGOR 24	Integrated Pest Management	3
AGOR 29	Ornamental Plants - Herbaceous	3
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3
AGOR 39	Turf Grass Production and Management	3
AGOR 50	Soil Science and Management	3
Total Units		18

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- explain the binomial method of plant nomenclature
- evaluate the soil conditions at an existing site and make specific recommendations for the immediate and long-term correction of all problems
- give a professional quality oral presentation

Review Student Learning Outcomes (SLOs) for this program.

Hospitality: Event Planning and Catering (Certificate E0379)

Business Division Certificate E0379

The Event Planning and Catering Certificate prepares students for entry-level positions in event planning and catering companies, banquets facilities, hotels, convention centers, and fair grounds. Students gain practical and management training in: food safety and sanitation, food production, menu development, developing catering business plans, client meeting techniques, contract creation and banquet event order development. Students who successfully complete the requirements for

this certificate will also earn the Food Protection Manager Certification from the National Restaurant Association upon passing the ServSafe Exam.

Required Courses

Course Prefix	Course Name	Units
CUL 102	Professional Cooking I	3
HRM 52	Food Safety and Sanitation	2
HRM 61	Menu Planning	3
HRM 62	Event Planning and Catering	3
Total Units		11

Guided Pathways of Study Suggested Course Sequence (<https://www.mtsac.edu/guided-pathways/pathway-results.html?pthwyvar=E0379&desc=Hospitality%3A+Event+Planning+%26+Catering%2C+Certificate+E0379>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Develop a business plan for a catering business and understand the enormity of planning for and opening a small business.
- Plan a food production schedule and assemble the tools, equipment, and ingredients required to produce a recipe in an organized and efficient manner.
- Analyze the popularity and profitability of a menu.
- Meet with prospective clients and plan all elements of a special event.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Hospitality: Food Services (Certificate E1390)

Business Division

Certificate E1390

This certificate prepares the holder to enter the food service field as a skilled food service worker in either food preparation or service.

Required Courses

Course Prefix	Course Name	Units
HRM 51	Introduction to Hospitality	3
HRM 52	Food Safety and Sanitation	2
HRM 59	Introduction to Food and Beverage Management	3
Total Units		8

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Utilize acquired classroom knowledge and skills to explore job opportunities in the hospitality industry and develop a career portfolio.
- Identify and Determine the presence of foodborne-illnesses causing outbreaks.
- Differentiate between the various styles of service including: American (Pre-plated), English (Family), Russian (Platter), French (Gueridon).

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Hospitality: Hospitality Management - Level I (Certificate E1332)

Business Division

Certificate E1332

The Hospitality: Hospitality Management - Level I Certificate prepares students for entry-level positions in the hospitality industry. Students receive training in dining room service management and lodging operations. Students who successfully complete the requirements for this certificate will also be required to complete a minimum of 60 non-paid or 75 paid hours of work experience in the hospitality industry.

Required Courses

Course Prefix	Course Name	Units
HRM 51	Introduction to Hospitality	3
HRM 59	Introduction to Food and Beverage Management	3
HRM 70	Introduction to Lodging	3
HRM 91	Hospitality Work Experience	1
Total Units		10

Program Learning Outcomes:

Upon successful completion of this program, a student will be able to:

- Utilize acquired classroom knowledge and skills to explore job opportunities in the hospitality industry and develop a career portfolio.
- Differentiate between the various styles of service including: American (Pre-plated), English (Family), Russian (Platter), French (Gueridon).
- Identify staffing needs for a hotel Front Desk based on occupancy, level of activity, and budget constraints.
- Establish room rates based on desired profits using the Hubbart formula.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Hospitality: Hospitality Management - Level II (Certificate N0490)

Business Division

Certificate N0490

The Hospitality Management - Level II Certificate prepares students for mid-level or Manager-In-Training positions in the hospitality industry. Students gain practical and management training in: dining room service management, supervision, financial accounting, lodging management, and hospitality law. Students who successfully complete the requirements for this certificate will also be required to complete a minimum of 60 non-paid or 75 paid hours of work experience in the hospitality industry.

Required Courses

Course Prefix	Course Name	Units
	Completion of the Hospitality: Hospitality Management - Level I coursework	10
	PLUS	

Completion of the Hospitality: Hospitality Management - Level II coursework 9

Total Units 19

Course Prefix Course Name Units

Hospitality: Hospitality Management - Level I Coursework

HRM 51 Introduction to Hospitality 3

HRM 59 Introduction to Food and Beverage Management 3

HRM 70 Introduction to Lodging 3

HRM 91 Hospitality Work Experience 1

Total Units 10

Course Prefix Course Name Units

Hospitality: Hospitality Management - Level II Coursework

HRM 56 Hospitality Supervision 3

HRM 64 Hospitality Financial Accounting 3

HRM 66 Hospitality Law 3

Total Units 9

Program Learning Outcomes:

Upon successful completion of this program, a student will be able to:

- Utilize acquired classroom knowledge and skills to explore job opportunities in the hospitality industry and develop a career portfolio.
- Differentiate between the various styles of service including: American (Pre-plated), English (Family), Russian (Platter), French (Gueridon).
- Identify staffing needs for a hotel Front Desk based on occupancy, level of activity, and budget constraints.
- Establish room rates based on desired profits using the Hubbart formula.
- Conduct an employee: interview, performance evaluation, and apply effective discipline techniques.
- Develop an Income (P&L) Statement for a hospitality operation.
- Analyze a civil case related to the hospitality industry and determine the facts, elements of negligence, possible consequences, and outcomes.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Hospitality: Restaurant Management - Level I (Certificate E1333)

Business Division

Certificate E1333

The Hospitality: Restaurant Management - Level I Certificate prepares the holder for an entry-level position within a restaurant.

Required Courses

Course Prefix Course Name Units

CUL 114 Dining Room Service Management 3

HRM 51 Introduction to Hospitality 3

HRM 52 Food Safety and Sanitation 2

HRM 91 Hospitality Work Experience 1

Total Units 9

Program Learning Outcomes:

Upon successful completion of this program, a student will be able to:

- Utilize acquired classroom knowledge and skills to explore job opportunities in the hospitality industry and develop a career portfolio.
- Identify and Determine the presence of foodborne-illnesses causing outbreaks.
- Differentiate between the various styles of service including: American (Pre-plated), English (Family), Russian (Platter), French (Gueridon).
- Develop measurable skill-based learning objectives, which student will attain at the end of their work experience period.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Hospitality: Restaurant Management - Level II (Certificate E0343)

Business Division

Certificate E0343

The Restaurant Management - Level II Certificate prepares students for mid-level or Manager-In-Training positions in restaurants, catering, hotel food and beverage outlets, theme parks and other food service businesses. Students gain practical and management training in: food safety and sanitation, food production, dining room service management, menu development and cost volume analysis. Students who successfully complete the requirements for this certificate will also earn the Food Protection Manager Certification from the National Restaurant Association upon passing the ServSafe Exam.

Required Courses

Course Prefix Course Name Units

Completion of the Hospitality: Restaurant Management - Level I coursework 9

PLUS

Completion of the Hospitality: Restaurant Management - Level II coursework 9

Total Units 18

Course Prefix Course Name Units

Hospitality: Restaurant Management - Level I Coursework

CUL 114 Dining Room Service Management 3

HRM 51 Introduction to Hospitality 3

HRM 52 Food Safety and Sanitation 2

HRM 91 Hospitality Work Experience 1

Total Units 9

Course Prefix Course Name Units

Hospitality: Restaurant Management - Level II Coursework

CUL 102 Professional Cooking I 3

HRM 57 Hospitality Cost Control 3

HRM 61 Menu Planning 3

Total Units 9

Program Learning Outcomes:

Upon successful completion of this program, a student will be able to:

- Utilize acquired classroom knowledge and skills to explore job opportunities in the hospitality industry and develop a career portfolio.
- Identify and Determine the presence of foodborne-illnesses causing outbreaks.
- Differentiate between the various styles of service including: American (Pre-plated), English (Family), Russian (Platter), French (Gueridon).
- Develop measurable skill-based learning objectives, which student will attain at the end of their work experience period.
- Plan a food production schedule and assemble the tools, equipment, and ingredients required to produce a recipe in an organized and efficient manner.
- Analyze the popularity and profitability of a menu.
- Conduct break-even analysis on a food & beverage facility and conduct cost volume analysis to determine number of customers required to attain desired profits.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Human Prosection (Certificate N0450)

Natural Sciences Certificate N0450

The Certificate of Achievement in Human Prosection will be awarded to students for the completion of a two-year series of courses culminating in a year-long experience prosecting human cadavers for use as anatomical specimens in our general anatomy courses. Students completing these courses will acquire a unique set of skills in planning and performing careful dissection of specific assigned regions, and advanced knowledge of the human body, its anatomical structure, and the organization and relationship of organs, tissues, and organ systems.

Required Courses

Course Prefix	Course Name	Units
ANAT 35	Human Anatomy	5
ANAT 36	Human Physiology	5
ANAT 40A	Human Prosection	2
ANAT 40B	Human Prosection	2
BIOL 1	General Biology	4
or BIOL 4	Biology for Majors	
or BIOL 4H	Biology for Majors - Honors	
Total Units		18

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Industrial Design Engineering - Level I (Certificate N0651)

Technology and Health Division Certificate N0651

This program is designed to prepare the student for a career in a wide range of industries including product and industrial design firms and fabrication and manufacturing companies. Students are introduced to

product development from design through prototyping and fabrication for manufacturing. Portfolio or prototype development is required on each of the semester levels.

Required Courses

Course Prefix	Course Name	Units
IDE 110	Design Foundation-Visual Literacy	3
IDE 120	Introduction to CAD	3
IDE 130	Introduction to Shop Processes	3
IDE 150	Design Foundation II	3
IDE 160	Intermediate CAD	3
IDE 170	Introduction to Prototyping	3
Total Units		18

Recommended Electives

Course Prefix	Course Name	Units
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 81	Laboratory Studies in Electronics Technology	1-2
MATH 51	Elementary Algebra	4
PHYS 1	Physics	4
WELD 30	Metal Sculpture	2
WELD 40	Introduction to Welding	2

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Correction

Local number changed from N0491 to N0651 on 08/14/19.

Industrial Design Engineering - Level II (Certificate N0620)

Technology and Health Division Certificate N0620

This program is designed to prepare the student for a career in a wide range of industries including product and industrial design firms and fabrication and manufacturing companies. Students are introduced to product development from design through prototyping and fabrication for manufacturing. Portfolio or prototype development is required on each of the semester levels.

Required Courses

Course Prefix	Course Name	Units
Completion of the Industrial Design Engineering - Level I coursework		18
PLUS		
Completion of the Industrial Design Engineering - Level II coursework		9
Total Units		27

Course Prefix	Course Name	Units
Industrial Design Engineering - Level I Coursework		
IDE 110	Design Foundation-Visual Literacy	3
IDE 120	Introduction to CAD	3
IDE 130	Introduction to Shop Processes	3
IDE 150	Design Foundation II	3
IDE 160	Intermediate CAD	3
IDE 170	Introduction to Prototyping	3
Total Units		18

Course Prefix	Course Name	Units
Industrial Design Engineering - Level II Coursework		
IDE 210	Advanced Media	3
IDE 220	Advanced CAD	3
IDE 230	Introduction to Mechanical Principles	3
Total Units		9

Recommended Electives

Course Prefix	Course Name	Units
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 81	Laboratory Studies in Electronics Technology	1-2
MATH 51	Elementary Algebra	4
PHYS 1	Physics	4
WELD 30	Metal Sculpture	2
WELD 40	Introduction to Welding	2

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Industrial Design Engineering - Level III (Certificate T0328)

Technology and Health Division Certificate T0328

This program is designed to prepare the student for a career in a wide range of industries including product and industrial design firms and fabrication and manufacturing companies. Students are introduced to product development from design through prototyping and fabrication for manufacturing. Portfolio or prototype development is required on each of the semester levels. In the Level Three certificate, this will culminate in a final "senior project," which is a portfolio that includes two and three-dimensional design, documentation (accountability measures), presentation, and fabrication. This project will demonstrate the student's mastery of the concepts and methodologies learned during the program.

Required Courses

Course Prefix	Course Name	Units
Completion of the Industrial Design Engineering - Level I coursework		18
PLUS		
Completion of the Industrial Design Engineering - Level II coursework		9
PLUS		
Completion of the Industrial Design Engineering - Level III coursework		9
Total Units		36

Course Prefix	Course Name	Units
Industrial Design Engineering - Level I Coursework		
IDE 110	Design Foundation-Visual Literacy	3
IDE 120	Introduction to CAD	3
IDE 130	Introduction to Shop Processes	3
IDE 150	Design Foundation II	3
IDE 160	Intermediate CAD	3
IDE 170	Introduction to Prototyping	3
Total Units		18

Course Prefix	Course Name	Units
Industrial Design Engineering - Level II Coursework		
IDE 210	Advanced Media	3
IDE 220	Advanced CAD	3

IDE 230	Introduction to Mechanical Principles	3
Total Units		9

Course Prefix	Course Name	Units
Industrial Design Engineering - Level III Coursework		
IDE 250	Product Design and Viability	6
IDE 270	Manufacturing Processes and Materials	3
Total Units		9

Recommended Electives

Course Prefix	Course Name	Units
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 81	Laboratory Studies in Electronics Technology	1-2
MATH 51	Elementary Algebra	4
PHYS 1	Physics	4
WELD 30	Metal Sculpture	2
WELD 40	Introduction to Welding	2

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Interior Design - Level I (Certificate E0364)

Business Division

Certificate E0364

Interior Design - Level I Certificate is designed to prepare students with a broad overview and solid foundation in the area of interior design and related fields. This certificate may lead to new opportunities and provide students with the groundwork upon which to build a career.

Required Courses

Course Prefix	Course Name	Units
ID 10	Introduction to Interior Design	2
ID 10L	Introduction to Interior Design Laboratory	1
ID 12	Materials and Products for Interior Design	3
ID 14	History of Furniture and Decorative Arts	3
Total Units		9

Interior Design Website (<http://mtsac.edu/interiordesign/>)

The Interior Design program is accredited by the Interior Design – National Kitchen and Bath Association NKBA.

Contact:

Interior Design – National Kitchen and Bath Association NKBA
687 Willow Grove St
Hackettstown, NJ 07847
1(800) 843-6522

Program Learning Outcomes

Upon successful completion of this program, a student will:

- successfully use critical thinking in the utilization of materials in a space.
- accurately specify materials based on use.
- successfully demonstrate craftsmanship skills in the presentation of materials.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Interior Design - Level II (Certificate T0304)

Business Division Certificate T0304

The Interior Design - Level II Certificate builds upon the Level I coursework to provide students with intermediate skills that will lead to a career in interior design. There is a focus on design process including drawing and presentations skills, model-making, sketching, computer applications, and the planning of space and studio design. Students will prepare professional portfolios to strengthen career perspectives. This certificate may aid in the student's search for an entry-level position as an assistant to a designer, library coordinator, or sales personnel for interior design products.

Required Courses

Course Prefix	Course Name	Units
Completion of the Interior Design - Level I coursework		9
PLUS		
Completion of the Interior Design - Level II coursework		24
Total Units		33

Course Prefix	Course Name	Units
Interior Design - Level I coursework		
ID 10	Introduction to Interior Design	2
ID 10L	Introduction to Interior Design Laboratory	1
ID 12	Materials and Products for Interior Design	3
ID 14	History of Furniture and Decorative Arts	3
Total Units		9

Course Prefix	Course Name	Units
Interior Design - Level II coursework		
ID 20	Color and Design Theory I	3
ID 21	Color and Design Theory II	3
ID 22	Design Drawing for Interior Design	3
ID 23	Computer Aided Drawing for Interior Design I	3
ID 25	Space Planning for Interior Design I	3
ID 26	Space Planning for Interior Design II	3
ID 27	Rapid Visualization	3
ID 29	Interior Design Studio I	3
Total Units		24

Recommended Electives

Course Prefix	Course Name	Units
ID 50	Interior Design Specialized Topics	1
ID 99	Special Projects in Interior Design	1-3

Interior Design Website (<http://mtsac.edu/interiordesign/>)

The Interior Design program is accredited by the Interior Design – National Kitchen and Bath Association NKBA.

Contact:

Interior Design – National Kitchen and Bath Association NKBA
687 Willow Grove St
Hackettstown, NJ 07847

1(800) 843-6522

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Interior Design - Level III (Certificate T0305)

Business Division Certificate T0305

The Interior Design: Level III Certificate builds upon the Level II coursework to provide students with advanced skills that will enhance their Interior Design careers. There is a focus on building systems, lighting, advanced computer applications, business practices and studio design. Students will prepare professional portfolios to strengthen career perspectives. This certificate may aid in the student's search for an intermediate position as an assistant to a designer, library coordinator, or a specialization in the field of interior design.

Required Courses

Course Prefix	Course Name	Units
Completion of the Interior Design - Level I coursework		9
PLUS		
Completion of the Interior Design - Level II coursework		24
PLUS		
Completion of the Interior Design - Level III coursework		17
Total Units		50

Course Prefix	Course Name	Units
Interior Design - Level I coursework		
ID 10	Introduction to Interior Design	2
ID 10L	Introduction to Interior Design Laboratory	1
ID 12	Materials and Products for Interior Design	3
ID 14	History of Furniture and Decorative Arts	3
Total Units		9

Course Prefix	Course Name	Units
Interior Design - Level II coursework		
ID 20	Color and Design Theory I	3
ID 21	Color and Design Theory II	3
ID 22	Design Drawing for Interior Design	3
ID 23	Computer Aided Drawing for Interior Design I	3
ID 25	Space Planning for Interior Design I	3
ID 26	Space Planning for Interior Design II	3
ID 27	Rapid Visualization	3
ID 29	Interior Design Studio I	3
Total Units		24

Course Prefix	Course Name	Units
Interior Design - Level III coursework		
ID 31	Building Systems for Interior Design	3
ID 32	Lighting Design and Theory for Interior Design	3
ID 34	Computer Aided Drawing for Interior Design II	3
ID 36	Portfolio Development for Interior Design	3
or ID 37	Business Practices for Interior Design	
ID 39	Interior Design Studio II	3

Required Electives

Select 2 units from the following courses	2

ID 50	Interior Design Specialized Topics
ID 54	Internship in Interior Design
ID 56	Integrated Drawing Techniques for Interior Design
ID 58	Field Studies in Interior Design
ID 59	Computer Basics for Interior Design
ID 99	Special Projects in Interior Design
Total Units	17

Interior Design Website (<http://mtsac.edu/interiordesign/>)

The Interior Design program is accredited by the Interior Design – National Kitchen and Bath Association NKBA.

Contact:

Interior Design – National Kitchen and Bath Association NKBA
687 Willow Grove St
Hackettstown, NJ 07847
1(800) 843-6522

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Interior Design Kitchen and Bath Specialization (Certificate T0306)

Business Division

Certificate T0306

The Kitchen and Bath Specialization coursework builds upon the Level III Certificate to provide students with specialized skills in the area of Kitchen and Bath Design and is accredited by the national Kitchen and Bath Association. Students will strengthen career perspectives and develop work to incorporate into a professional portfolio. This certificate may aid in the student's search for an intermediate position as an assistant to a Kitchen and Bath Designer. Students completing this certificate and meeting the eligibility requirements will qualify to sit for the academic portion of the Certified Kitchen Designer (CKD) and Certified Bath Designer (CBD) upon graduation to earn the Associate Kitchen and Bath Designer (AKBD) designation.

Required Courses

Course Prefix	Course Name	Units
Completion of the Interior Design - Level I coursework		9
PLUS		
Completion of the Interior Design - Level II coursework		24
PLUS		
Completion of the Interior Design - Level III coursework		15
PLUS		
Completion of Kitchen and Bath Specialization coursework		9
Required Electives		2
Total Units		59
Course Prefix	Course Name	Units
Interior Design - Level I coursework		
ID 10	Introduction to Interior Design	2
ID 10L	Introduction to Interior Design Laboratory	1
ID 12	Materials and Products for Interior Design	3
ID 14	History of Furniture and Decorative Arts	3
Total Units		9

Course Prefix	Course Name	Units
Interior Design - Level II coursework		
ID 20	Color and Design Theory I	3
ID 21	Color and Design Theory II	3
ID 22	Design Drawing for Interior Design	3
ID 23	Computer Aided Drawing for Interior Design I	3
ID 25	Space Planning for Interior Design I	3
ID 26	Space Planning for Interior Design II	3
ID 27	Rapid Visualization	3
ID 29	Interior Design Studio I	3
Total Units		24

Course Prefix	Course Name	Units
Interior Design - Level III coursework		
ID 31	Building Systems for Interior Design	3
ID 32	Lighting Design and Theory for Interior Design	3
ID 34	Computer Aided Drawing for Interior Design II	3
ID 37	Business Practices for Interior Design	3
ID 39	Interior Design Studio II	3
Total Units		15

Course Prefix	Course Name	Units
Kitchen and Bath Specialization coursework		
ID 40	Kitchen and Bath Studio I	3
ID 41	Kitchen and Bath Studio II	3
Variable unit course, 3 units required		3
ID 48	Internship in Kitchen and Bath	
Total Units		9

Course Prefix	Course Name	Units
Required Electives		
2 units required from the courses listed below		2
ID 50	Interior Design Specialized Topics	
ID 54	Internship in Interior Design	
ID 56	Integrated Drawing Techniques for Interior Design	
ID 58	Field Studies in Interior Design	
ID 59	Computer Basics for Interior Design	
ID 99	Special Projects in Interior Design	

Interior Design Website (<http://mtsac.edu/interiordesign/>)

The Interior Design Kitchen and Bath Specialization program is accredited by the Interior Design – National Kitchen and Bath Association NKBA.

Contact:

Interior Design – National Kitchen and Bath Association NKBA
687 Willow Grove St
Hackettstown, NJ 07847
1(800) 843-6522

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Successfully design a kitchen based NKBA standards.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Interior Landscaping (Certificate N0621)

Natural Sciences Division

Certificate N0621

This certificate program is designed to give students basic skills in the design, installation, and maintenance of interior plants that are used in residences, offices, hotels, malls, restaurants, and other locations. All courses are applicable for degree requirements in Ornamental Horticulture, Parks and Sports Turf Management, and Integrated Pest Management.

Required Courses

Course Prefix	Course Name	Units
AGOR 1	Horticultural Science	3
AGOR 15	Interior Landscaping	3
AGOR 24	Integrated Pest Management	3
AGOR 29	Ornamental Plants - Herbaceous	3
AGOR 32	Landscaping and Nursery Management	3
AGOR 64	Irrigation - Drip and Low Volume	3
Total Units		18

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate professional conduct in the industry.
- Demonstrate competency in one on one customer relations.
- Give a professional quality oral presentation.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Introduction to Computer Information Technology (Certificate M0818)

Business Division

Certificate M0818

The Introduction to Computer Information Technology certificate is designed to prepare students for careers that require the understanding and use of computer technology. The certificate offers a balanced set of classes that enables students to become proficient with business software such as Word, Excel and Access; implement security techniques to protect computer systems from malware, maintain a computer using utility programs, and create web sites. Emphasis is placed on developing formatted documents using spreadsheets to enter, calculate and graph data; using a database to store and retrieve data and to create forms, reports and queries; protecting a computer's hardware and software, and using HTML and web page editors to create and publish multimedia web sites. Students will demonstrate the ability to use software to solve business problems and create commercial web sites. Although the completion of this certificate may not qualify a student for a job in the computer industry, it would complement a degree such as business or engineering that requires computer skills.

Required Courses

Course Prefix	Course Name	Units
CISB 11	Computer Information Systems	3.5
CISB 15	Microcomputer Applications	3.5

CISS 11	Practical Computer Security	2
Total Units		9

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Know the four primary operations of a computer and the hardware that performs these operations.
- Be able to define the following internet terms: Internet, World Wide Web, browser, IP address, URL.
- Be able to identify five ways to protect a computer from harmful attacks.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

iOS Programming (Certificate M0664)

Business Division

This curriculum is designed for returning CIS professionals with several years experience or current students who have completed CIS courses. The iOS Programming certificate will give students skills that are necessary to obtain jobs in the area of mobile programming, that is used more and more in the industry. Students will learn different software packages for developing iOS applications as well as general programming skills.

Required Courses

Course Prefix	Course Name	Units
CISP 10	Principles of Object-Oriented Design	2.5
CISP 31	Programming in C++	3
CISP 31L	Programming in C++ Laboratory	0.5
CISP 52	Mobile Device Programming	3
CISP 52L	Mobile Device Programming Laboratory	0.5
CISP 53	iOS Programming	3
CISP 53L	iOS Programming Laboratory	0.5
Total Units		13

Program Learning Outcomes

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Junior Game Designer - Introduction (Certificate E0439)

Arts Division

Certificate E0439

This multi-level certificate program offers skills needed to compete for a junior level creative career in the computer game industry or to transfer to other institutes for a more advanced study in the field. Students learn the core skills of designing games, planning, prototyping, creating art assets, scripting, integrating it all using standard game engines, testing, and other game development methodologies, while also learning to work in close creative collaboration with fellow team members.

Required Courses

Course Prefix	Course Name	Units
ANIM 100	Digital Paint and Ink	3
ANIM 108	Principles of Animation	3
ANIM 115	Storyboarding	3
ANIM 130	Introduction to 3D Modeling	3
ANIM 131	Introduction to Game Design	3
Total Units		15

Animation & Gaming Website (<http://mtsac.edu/animation/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- successfully create a traditional game representative of their skills necessary for their chosen gaming genre.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Junior Game Designer - Foundation (Certificate N0622)

Arts Division

Certificate N0622

This multi-level certificate program offers skills needed to compete for a junior level creative career in the computer game industry or to transfer to other institutes for a more advanced study in the field. Students learn the core skills of designing games, planning, prototyping, creating art assets, scripting, integrating it all using standard game engines, testing, and other game development methodologies while also learning to work in close creative collaboration with fellow team members.

Required Courses

Course Prefix	Course Name	Units
Completion of Junior Game Designer - Introduction coursework		15
PLUS		
Completion of Junior Game Designer - Foundation coursework		12
Total Units		27

Course Prefix	Course Name	Units
Junior Game Designer - Introduction		
ANIM 100	Digital Paint and Ink	3
ANIM 108	Principles of Animation	3
ANIM 115	Storyboarding	3
ANIM 130	Introduction to 3D Modeling	3
ANIM 131	Introduction to Game Design	3
Total Units		15

Course Prefix	Course Name	Units
Junior Game Designer - Foundation		
ANIM 140	Introduction to 3D Animation	3
ANIM 141	Game Level Design	3
ANIM 148	Demo Reel	3
ANIM 151	Game Art Development	3
Total Units		12

Recommended Elective

Course Prefix	Course Name	Units
ANIM 137A	Work Experience in New Digital Media	1

Animation & Gaming Website (<http://mtsac.edu/animation/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- successfully create a digital portfolio representative of their skills necessary for their chosen career.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Landscape and Park Maintenance (Certificate N0623)

Natural Sciences Division

Certificate N0623

This certificate program is designed to give students basic skills in the maintenance and landscape of parks. All courses are applicable for degree requirements in Ornamental Horticulture, Parks and Sports Turf Management, and Integrated Pest Management.

Required Courses

Course Prefix	Course Name	Units
AGOR 1	Horticultural Science	3
AGOR 24	Integrated Pest Management	3
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3
AGOR 51	Tractor and Landscape Equipment Operations	3
AGOR 63	Irrigation Systems Management	3
AGOR 75	Urban Arboriculture	3
Total Units		18

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- formulate and implement a complete Integrated Pest Management program for a specific site.
- demonstrate professional conduct in the industry.
- give a professional quality oral presentation.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Landscape Construction (Certificate N0624)

Natural Sciences Division

Certificate N0624

This certificate is designed to give students the necessary skills to be proficient in landscape construction. Students will learn about irrigation systems, construction fundamentals and hardscape applications as well as landscape contract law.

Required Courses

Course Prefix	Course Name	Units
AGOR 51	Tractor and Landscape Equipment Operations	3
AGOR 62	Irrigation Principles and Design	3
AGOR 63	Irrigation Systems Management	3
AGOR 71	Construction Fundamentals	3
AGOR 72	Landscape Hardscape Applications	3
AGOR 73	Landscaping Laws, Contracting, and Estimating	3
Total Units		18

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- prepare and implement a Home Improvement Contract
- evaluate a site and develop a functional design that meets client criteria
- demonstrate fundamentals of operating tractors and equipment covered in class
- identify and correctly use the proper tool needed for landscape projects

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Landscape Design - Level I (Certificate N0625)

Natural Sciences Division

Certificate N0625

This certificate program is designed to give students basic skills needed as a landscape designer. All courses are applicable for degrees in Ornamental Horticulture, Parks and Sports Turf Management, and Integrated Pest Management.

Required Courses

Course Prefix	Course Name	Units
AGOR 1	Horticultural Science	3
AGOR 13	Landscape Design	3
AGOR 29	Ornamental Plants - Herbaceous	3
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3
AGOR 50	Soil Science and Management	3
AGOR 71	Construction Fundamentals	3
Total Units		18

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- evaluate a site and develop a functional design that meets client criteria
- identify and correctly use the proper tool needed for landscape projects.
- explain the binomial method of plant nomenclature.
- give a professional quality oral presentation

- evaluate the soil conditions at an existing site and make specific recommendations for the immediate and long-term correction of all problems

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Landscape Design - Level II (Certificate T0396)

Natural Sciences Division

Certificate T0396

This certificate is designed to give students advanced skills in landscape design, including computer aided drafting and advanced horticultural knowledge. Landscape Design 1 Certificate requirements must be met prior to obtaining this certificate. The courses in Landscape Design II are designed to enable students to prepare for exciting careers in the essential and diverse horticulture profession. Careers in nursery management, retail garden centers, landscape design, installation and maintenance, arboretum and botanic gardens, arboriculture, interior landscaping, education, and research are just some options. This certificate is part of the comprehensive agricultural sciences program. The program is unique in that most courses provide hands-on experience and are designed to give the student a combination of practical skills and technical knowledge.

Required Courses

Course Prefix	Course Name	Units
	Completion of the Landscape Design - Level I coursework	18
	PLUS	
	Landscape Design - Level II coursework	18
Total Units		36

Course Prefix	Course Name	Units
	Landscape Design - Level I Coursework	
AGOR 1	Horticultural Science	3
AGOR 13	Landscape Design	3
AGOR 29	Ornamental Plants - Herbaceous	3
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3
AGOR 50	Soil Science and Management	3
AGOR 71	Construction Fundamentals	3
Total Units		18

Course Prefix	Course Name	Units
	Landscape Design - Level II Coursework	
AGOR 14	Advanced Landscape Design	3
AGOR 24	Integrated Pest Management	3
AGOR 51	Tractor and Landscape Equipment Operations	3
AGOR 62	Irrigation Principles and Design	3
AGOR 72	Landscape Hardscape Applications	3
AGOR 73	Landscaping Laws, Contracting, and Estimating	3
Total Units		18

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- evaluate a site and develop a functional design that meets client criteria.

- identify and correctly use the proper tool needed for landscape projects.
- explain the binomial method of plant nomenclature.
- give a professional quality oral presentation.
- evaluate the soil conditions at an existing site and make specific recommendations for the immediate and long-term correction of all problems.
- make a professional landscape design presentation to a customer.
- be technically proficient at computer aided design (cad).

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Landscape Irrigation (Certificate N0627)

Natural Sciences Division

Certificate N0627

This certificate program is designed to give students basic skills in irrigation design, repair, installation, water management, and troubleshooting. A student could seek employment with a landscape contractor, schools, parks, and cities. All courses are applicable for degree requirements in Ornamental Horticulture, Parks and Sports, Turf Management, and Integrated Pest Management.

Required Courses

Course Prefix	Course Name	Units
AGOR 1	Horticultural Science	3
AGOR 51	Tractor and Landscape Equipment Operations	3
AGOR 62	Irrigation Principles and Design	3
AGOR 63	Irrigation Systems Management	3
AGOR 64	Irrigation - Drip and Low Volume	3
AGOR 71	Construction Fundamentals	3
Total Units		18

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Evaluate a site and develop a functional design that meets client criteria
- Demonstrate professional conduct in the industry
- Give a professional quality oral presentation

Review Student Learning Outcomes (SLOs) for this program.

Livestock Production Management (Certificate M0870)

Natural Sciences Division

Certificate M0870

This Livestock Production Management program is designed to give students basic skills in livestock production management for employment opportunities on farms, ranches, and agriculture sales and services. All courses are applicable for degree requirements.

Required Courses

Course Prefix	Course Name	Units
ASCI 14	Swine Production	3
ASCI 17	Sheep Production	3
ASCI 30	Beef Production	3
ASCI 34	Livestock Judging and Selection	2
ASCI 97	Artificial Insemination of Livestock	3
Total Units		14

Animal Sciences Website (<http://www.mtsac.edu/animal/>)

Program Learning Outcomes

Upon successful completion of this course, a student will:

- be technically proficient.
- be able to design a comprehensive production/business plan for various livestock species.
- address animals welfare requirement when designing and implementing a livestock management system.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

LVN 30-Unit Option – Career Mobility Track (Certificate E1202)

Technology and Health Division

Certificate E1202

In keeping with Section 1429 of the Board of Registered Nursing Rules and Regulations, completion of this certificate program entitles the student to apply for examination for licensure as a Registered Nurse in the State of California. This option is specifically designed for California licensees. Other states do not have this provision in their laws; therefore, endorsement for licensure may not be granted.

A certificate of completion is awarded at the end of the course of study. The student who elects to complete the 30-Unit Option track is not a graduate of the Associate in Science Degree Nursing Program at Mt. San Antonio College. Individuals who complete this track are not eligible to return to the college at a later date to complete a degree in nursing. LVN applicants must declare their educational goal at the time of application (30-Unit or Associate Degree). This decision is not subject to change at a later date.

Prerequisite Courses

Course Prefix	Course Name	Units
	Human Anatomy, including a laboratory component.	4
	Human Physiology, including a laboratory component.	4
	Microbiology, including a laboratory component.	4

Non-course Requirements

- An overall grade point average of 2.5 for the Human Anatomy, Human Physiology and Microbiology prerequisite courses with no grade less than a "C" for each course and no more than one repetition of any one of these courses.
- A cumulative grade point average (GPA) of 2.5 for all college coursework completed.
- Eligibility for MATH 51

- d. High school graduation or GED or academic degree from an accredited college/university in the United States.
- e. Possess a current, active California Licensed Vocational Nurse license.
- f. A physical examination, including specific immunizations is required of all candidates prior to the beginning of nursing classes.
- g. Current Healthcare Provider CPR certification
- h. Criminal background check and drug screening must be completed prior to any patient contact
- i. Nursing 70: Role Transition must be completed with a credit grade prior to entrance into the program. (NURS 70: Role Transition – Due to the clinical component of NURS 70, applicants must submit their names to the Nursing Office for approval prior to enrollment in this course. Applicants must have completed all prerequisite courses prior to taking NURS 70. Applicants must provide proof of current Vocational Nurse License, physical, CPR card, Background Check, and drug testing prior to the start of class.)

- v. All students will need to bring official proof of high school graduation, GED, or college graduation from an accredited institution in the United States.

Students should also be aware that once they have been admitted to the Nursing program and before beginning the clinical portion of the program, they will need to be able to pass both a criminal background check, including a screening by the Office of Inspector General for welfare or Social Security fraud, as well as testing negative for drug use.

ALL APPLICANTS ARE REQUIRED TO MEET THE ESSENTIAL FUNCTIONS FOR SUCCESS IN THE NURSING PROGRAM.

Physical Demands

- Perform prolonged, extensive, or considerable standing/ walking, lifting positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift/carry 50 lbs. or more)
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands

(may be corrected with adaptive device)

- Color vision: ability to distinguish and identify colors
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle emergency or crisis situations
- Subject to many interruptions
- Requires judgment/action which could result in death of a patient
- Exposed to products containing latex

English Language Skills

Although proficiency in English is not a criterion for admission into the Nursing program, students must be able to speak, write and read English to ensure patient safety and to complete classes successfully.

REGARDING LICENSURE

The California Board of Registered Nursing (BRN) protects the consumer by screening applicants for licensure in order to identify potentially unsafe practitioners. The BRN may deny applications for interim permits, temporary licenses, and permanent licensure, if the applicant has been found guilty of dishonesty, fraud or deceit, felony child abuse, sex

Required Courses

Course Prefix	Course Name	Units
NURS 5	Psychiatric Nursing ¹	3
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5
NURS 9	Leadership in Nursing	1
NURS 10	Medical-Surgical Nursing: Integration/Regulation	4
NURS 11	Preceptorship in Nursing	2
Total Units		15

¹ PSYC 1A must be completed prior to entrance into NURS 5.

Nursing Website (<http://www.mtsac.edu/nursing/>)

Selection Process

Students applying for admission to the Nursing Program are required to see either a counselor or educational advisor to verify their eligibility to enter the Nursing program.

Procedure

Students must complete all course prerequisites prior to requesting an appointment for certifying readiness to enter into the Nursing program. Once eligibility has been established and the Admission Assessment Test has been passed, students will enter on a first come first served basis.

- a. Once a student has completed all course prerequisites, they may request an appointment with a counselor or educational advisor.
- b. Students who have completed coursework at other colleges must bring the following information to their eligibility appointment:
 - i. Official transcripts of all college work completed at all colleges.
 - ii. If the prerequisite courses were completed at another college, a course description and a copy of the course syllabus.
 - iii. Students completing college coursework outside of the United States will need to have their transcripts evaluated by an approved international transcript evaluation agency and must bring the final evaluation to their appointment (students may be able to obtain a list of agencies from the Admissions & Records Office).
- iv. Due to specific college deadlines for International Student application, please inform the Counseling/Educational Advisor that this applies to you.

offender crimes, acts involving narcotics, dangerous drugs or devices, assault and/or battery, and other crimes. Applicants who have questions regarding limitations related to licensure, should contact the California Board of Registered Nursing at (916) 322-3350 or access its website at www.rn.ca.gov (<http://www.rn.ca.gov>).

Contact:

California Board of Registered Nursing
1747 North Market Boulevard, Suite 150
Sacramento, CA 95834
(916) 322-3350
www.rn.ca.gov (<http://www.rn.ca.gov>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be technically competent
- Be employed or seeking employment in the field or a related field
- Demonstrate effective geriatric patient education for a neurological / endocrine patient.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Mammography (Certificate E0398)

Technology and Health Division

Certificate E0398

The Mammography certificate program at Mt. SAC is a two semester certificate program available to current Mt. SAC Radiologic Technology (RT) program students. The program provides a complete educational experience for those RT students who wish to expand their skills into the study in the theory and practice of mammography. Students will have the opportunity to learn and develop competence in patient care, communication skills, critical thinking, and technical skills that will prepare the student to become a competent entry level Mammographer. The program curriculum is designed to meet the mammography educational training requirements set forth by the FDA Mammography Quality Standards Act (MQSA), the California Department of Public Health Services- Radiologic Health Branch (RHB), and the American Registry of Radiologic Technologists (ARRT). The educational standards established by the American Society of Radiologic Technologists (ASRT) are also incorporated into the curriculum. Educational activities include lecture, laboratory activities, and hands-on clinical training at a clinical site.

The program includes:

- MQSA and RHB 40 hours of documented training specific to mammography requirement
- ARRT 16 hour structured education requirement
- Eight hours of digital mammography training
- MQSA hands-on clinical experience requirements (25 supervised mammograms)
- Course work in breast anatomy/physiology, patient care, mammography procedures, positioning, compression, interventional procedures, imaging of patients with breast implants, pathology, image evaluation, instrumentation, technique, physics, and quality assurance/quality control

All didactic courses will be offered on campus. Clinical training will be conducted at affiliated healthcare institutions (days and times will vary depending on clinical education site).

Upon completion of the program, the student receives a certificate of completion from Mt. San Antonio College. Current Diagnostic CA Radiologic Technologists (CRT's) will be eligible to sit for the CA state certification in Mammographic Radiologic Technology examination. In addition, the program will prepare the student for the ARRT Mammography certification exam.

Required Courses

Course Prefix	Course Name	Units
RAD 3C	Clinical Experience 3C	7
RAD 4	Clinical Experience 4	4
RAD 40	Mammography Principles and Procedures	3
Total Units		14

Mammography Website (<http://www.mtsac.edu/radiologic/mammography/>)

Admission Requirements

The Mammography Certificate Program has special admission requirements and limited enrollment. Applicants are responsible for ensuring that all admission requirements below are met, and all documents are submitted on time.

1. Applicant must be currently enrolled as a second year student in Mt. SAC's Radiologic Technology (RT) Program.

- If a student withdraws from the RT program for any reason, the student cannot continue in the Mammography program. State law forbids clinical practice in mammography for students who are not currently enrolled in a Diagnostic RT program.

2. Complete and submit a Mammography Program Application. Applications are available on the Mt. SAC Mammography Program website and in the Technology & Health Division Office, Bldg 28A, Room 101E.

3. Provide a current copy of Cardiopulmonary Resuscitation (CPR) certification with program application

- CPR card must be American Heart Association: BLS Healthcare Provider, valid 2 years
- Students must maintain current CPR certification throughout program

4. Submit a copy of RT competency ruler providing evidence of the following with application:

- Competency in 30/40 mandatory procedures
- Competency in 4/9 elective procedures

5. Complete all other clinical site requirements if applicable and submit documentation

6. Deliver your completed application, copy of CPR card, copy of RT ruler, and clinical requirements to the Technology & Health Division Office, Bldg 28A Room 101E or the Radiologic Technology Department, Bldg 67A Room 127A by application deadline. Only complete applications will be considered.

7. Attend a mandatory orientation meeting with the Radiologic Technology Department. You will be contacted with date and time of orientation once you have been admitted.

Selection

Selection of applicants is based upon the completion of admission requirements and the date of application. Only completed applications will be considered for admission.

Program Completion Requirements

All students in the Mammography Program MUST complete all the program course requirements before a certificate documenting completion will be awarded. Applicants must follow program curriculum as defined at the time of acceptance to the program. Once the graduate is certified as a Diagnostic CRT, the graduate will be eligible to sit for the CA state certification in Mammographic Radiologic Technology examination. In addition, the program will prepare the student for the ARRT Mammography certification exam.

Working environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agent, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- May be required to handle emergency or crisis situations
- Subject to many interruptions
- Requires decisions/actions critical to patient safety
- Exposed to products containing latex

Required Skills and Physical Abilities

- a. Transport, move, lift, or transfer patients from a wheelchair or gurney to an x-ray table or to a patient bed.
- b. Lift arms above the head to move the x-ray tube assembly.
- c. Move, adjust, and manipulate portable and fluoroscopic equipment according to established procedures and standards of speed and accuracy while conducting radiographic examinations.
- d. Maneuver well enough to physically protect himself or herself from injury caused by patients exhibiting aggressive behaviors.
- e. Physically place patients in the proper positions for the examination according to established procedures and standards of speed and accuracy.
- f. Rapidly respond to situations involving the health and safety of patients, providing physical and emotional support to the patient during radiographic procedures, providing basic first aid and emergency care in the absence of or until a physician arrives.
- g. Function adequately under stressful situations related to technical and procedural standards of patient care situations.
- h. Hear well enough (average 30 decibels for both ears) to respond to directions or calls for help from individuals remote from the location of the student.
- i. Speak English clearly enough to explain and direct procedural information to patients, and to communicate with physicians, technical staff, and faculty.

- j. Calculate and select proper technical exposure factors according to the individual needs of the patient's condition and requirements of the procedure with speed and accuracy.
- k. View and evaluate the recorded images of a radiograph for the purpose of identifying proper patient positioning, accurate procedural sequencing, proper exposure (and/or "s" number), and other established technical qualities.

English Language Skills

Although proficiency in English is not a criterion for admission into the Radiologic Technology Program, students must be able to speak, write and read English to ensure patient safety and to complete classes successfully.

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Develop workforce readiness skills
- Apply accurate positioning skills and provide appropriate patient care
- Select optimal technical factors
- Utilize appropriate radiation protection and ALARA principles
- Demonstrate academic and technical competence as an entry-level Mammographer
- Communicate effectively with patients, clinical staff, and peers
- Demonstrate effective written and verbal communication skills in didactic and clinical settings
- Use critical thinking skills in both routine and non-routine clinical situations
- Adapt standard procedures for non-routine patients
- Analyze images to determine diagnostic quality and make modifications as needed
- Exhibit professional work ethic, behavior, and attitude
- Abide by the ASRT code of ethics
- Provide compassionate patient care
- Use professional judgment when working with patients and others
- Identify the advantage of belonging to professional organizations
- Understand the need for continued professional development and growth
- Participate in professional development activities
- Pass the California state certification exam in Mammographic Radiologic Technology
- Secure employment as a Mammographer within one year of program completion

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Manufacturing Foundation (Certificate E0421)

Technology and Health Division E0421

This certificate provides a foundation of basic skills for employment in a variety of entry-level manufacturing positions.

Required Courses

Course Prefix	Course Name	Units
MFG 140	Print Reading and Shop Practice	3
MFG 150	Manual Machining I	3
MFG 155	Manual Machining II	2
MFG 160	Introduction to Mechanical Principles	3
Total Units		11

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be technically competent
- Be employed or seeking employment in the field or a related field
- Demonstrate ability perform basic mill and lathe setup and operation and machine a simple industry representative component from a 2D print

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Manufacturing Technology (Certificate T0918)

Technology and Health Division Certificate T0918

The Certificate in Manufacturing Technology is designed to prepare the student for entrance into the manufacturing field in one of the machining occupations such as manual and computer numerical control (CNC) machinists, machinery technicians, or machinist apprentices, computer aided design (CAD) operators, draftsmen, or design engineers, and computer aided manufacturing (CAM) machine programmers. This program provides students with a broad foundation in common manufacturing processes such as injection molding, vacuum forming, sheet metal, casting processes, and laser cutting. Graduates may enter the manufacturing field in areas dealing with production, research and development, tool and die construction, mold making, or computerized manufacturing. Laboratory practice utilizes industrial types of equipment and precision measuring instruments to provide training in the various machining occupations. This certificate covers setup and tooling procedures and part certification upon completion of the metal removing process. It includes instruction on industry-based CAD and CAM methodologies and all types of lathes, mills, grinders, and specialized equipment such as CNC. Supplementary instruction is also provided in mechanical literacy, bench work, layout, inspection process, blueprint reading, metal composition, heat treatment, assembly procedures, jig and fixture design, and construction.

Required Courses

Course Prefix	Course Name	Units
MFG 110	Introduction to CAD	4
MFG 120	CAD for Manufacturing	4
MFG 130	Manufacturing Processes and Materials	3
MFG 140	Print Reading and Shop Practice	3
MFG 150	Manual Machining I	3
MFG 155	Manual Machining II	2
MFG 160	Introduction to Mechanical Principles	3
MFG 210	Advanced CAD	3
MFG 220	Computer Aided Manufacturing II	3
MFG 250	Introduction to CNC Programming	3
MFG 260	CNC Operation	3

Three (3) units of Work Experience	3
EDT 89	Engineering Design Technology Work Experience
Total Units	37

Manufacturing Website (<http://www.mtsac.edu/manufacturing/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be technically competent
- Be employed or seeking employment in the field or a related field
- Demonstrate ability to create a CAD model, 2D print, or fabricate a part from a 2D print using manual or CNC methods

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Marketing Management (Certificate N0626)

Business Division Certificate N0626

Students completing this Marketing Management certificate will have gained practical world business knowledge and experience. In addition, completers of the certificate will have learned to use some of the latest business computer software.

Required Courses

Course Prefix	Course Name	Units
BUSM 20	Principles of Business	3
BUSM 61	Business Organization and Management	3
BUSS 35	Professional Selling	3
BUSS 36	Principles of Marketing	3
BUSS 50	Retail Store Management and Merchandising	3
BUSS 79	Work Experience in Marketing Management	1
BUSS 85	Special Issues in Marketing	2
CISB 15	Microcomputer Applications	3.5
Total Units		21.5

Business Administration Website (<http://www.mtsac.edu/businessadministration/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- List and explain the foundations upon which business is built and the economic challenges facing the United States.
- List the characteristics of a successful salesperson.
- Have developed a working knowledge of marketing terminology.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

MasterCAM (Certificate E0927)

Technology and Health Division Certificate E0927

This certificate provides a strong background in MasterCAM.

Required Courses

Course Prefix	Course Name	Units
EDT 89	Engineering Design Technology Work Experience	1-2
MFG 130	Manufacturing Processes and Materials	3
MFG 220	Computer Aided Manufacturing II	3
Total Units		7-8

Manufacturing Website (<http://www.mtsac.edu/manufacturing/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- be technically competent
- be employed or seeking employment in the field or a related field
- demonstrate ability to create a toolpath for an industry representative part from a 2D print using CAM software

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Mental Health Technology - Psychiatric Technician (Certificate T1279)

Technology and Health Division

Certificate T1279

Upon completion of the required courses, a Certificate in Psychiatric Technician will be awarded. In addition, it prepares the student to take the California State Board Examination for Psychiatric Technicians.

Required Courses

Course Prefix	Course Name	Units
MENT 40	Introduction to Interviewing and Counseling	3
MENT 56	Medical-Surgical Nursing for Psychiatric Technicians	9
MENT 56L	Medical-Surgical Clinical Experience	4
MENT 58D	Advanced Medical-Surgical Nursing and Pharmacology for Psychiatric Technician (PT)	4
MENT 58L	Advanced Medical-Surgical Nursing for Psychiatric Technicians Clinical	1.5
MENT 70	Introduction to Psychiatric Technology	1.5
MENT 70L	Introduction to Psychiatric Technology Clinical	2
MENT 72	Nursing Care of the Developmentally Disabled Person	7
MENT 72L	Nursing Care of the Developmentally Disabled Person - Clinical	5.5
MENT 73L	Psychiatric Nursing for Psychiatric Technicians Clinical	5.5
MENT 73T	Psychiatric Nursing for Psychiatric Technicians	6
PSYC 1A	Introduction to Psychology	3
or PSYC 1AH	Introduction to Psychology - Honors	
Total Units		52

Special Information

To remain in the program, students must maintain a "C" or better grade in all courses. The student will qualify to take the California State Board Examination upon completion of all the above courses.

Mental Health Department Website (<http://www.mtsac.edu/mental-health/>)

Special Information

Additional general education courses needed for completion of the Associate in Science degree requirements are listed in the Mt. San Antonio College Catalog, but are not required to qualify the student for the California State Board Examination.

To remain in the program, students must maintain a "C" or better grade in all courses.

The student will qualify to take the California State Board Examination upon completion of all the above courses.

Entrance Requirements

In addition to meeting Mt. San Antonio College's academic standards for admission, applicants must be in good standing and satisfy the following requirements:

- Be a high school graduate or equivalent. (All students who have taken coursework outside of the United States must have their transcript evaluated. Foreign transcripts will not be accepted without the evaluation.)
- Be 18 years of age.
- File a college application and be accepted as a student at Mt. San Antonio College.
- Submit an electronic application (preferred) for the Mental Health/ Psychiatric Technician Program to techandhealth@mtsac.edu or a paper application to the Health Careers Resource Center (HCRC) (909) 274-4788. All applications are dated upon receipt in the Health Careers Resource Center. A program begins each winter and summer intersession with mandatory orientations each fall and spring. Orientations are unique to each cohort, so if a student does not begin classes the intersession following the orientation, then a new orientation must be attended before starting. Students that do not attend the mandatory orientation will not be eligible to start the following intersession even if an orientation had previously been attended.
- PSYC 1A is a co-requisite for courses within the program. If you have already taken PSYC 1A at Mt. SAC, or an equivalent course at another institution within the past five years this may be waived. If PSYC1A (or equivalent course) was taken at another institution, send an official transcript from the institution where it was taken to Admissions and Records Office at Mt. SAC. An additional set of transcripts (may be unofficial) must be delivered to the Health Careers Resource Center. If there is no previously-approved course deemed as equivalent by the Psychology Department at Mt. SAC, the student will be required to request a variance for the course from the Psychology Department at Mt. SAC.
- Forward official transcripts of all coursework completed (high school, nursing school, other than those courses taken at Mt. San Antonio College) to the Health Careers Resource Center. The Health Careers Resource Center processes applications for multiple programs, therefore indicate in the mailing address the program for which your transcript is being sent.

EXAMPLE:

Mt. San Antonio College
Health Careers Resource Center
Psychiatric Technician Program
1100 North Grand Avenue
Walnut, CA 91789-1399

- g. A physical examination showing proof of specific immunizations (including seasonal influenza as appropriate), and consent/disclaimer for Hepatitis A/B vaccine is required of all candidates prior to beginning classes. Students must provide proof that he/she does not have tuberculosis. These requirements are in accordance with the healthcare agency policy that insure that students are in good health and free from communicable disease and able to perform their training functions. Drug testing may also be required as part of this physical examination. Proof of high school graduation or GED is required. Malpractice insurance may also be required.
 - h. Certain convictions may prevent a candidate from being licensed as a Psychiatric Technician. Certain facilities require Live Scanning (both Department of Justice (DOJ) and Federal Bureau of Investigation (FBI)). Live Scans are unique to each facility. Multiple Live Scans will be required throughout the program. Clinical facilities have the right to exclude students from attending clinical at their site based on Live Scan results. The program cannot guarantee that an alternate clinical site will be available for the student to meet clinical hour obligations.
 - i. All students may be required to pass an additional background check prior to entering the clinical education phase.
- Handle potentially dangerous emergency or crisis situations or patients
 - Subject to many interruptions
 - Requires decisions and actions related to end of life issues
 - Exposed to products containing latex
 - Requires judgment and action which could affect the life or death of a patient.

English Language Skills:

Although proficiency in English is not a criterion for admission into the Mental Health Technology - Psychiatric Technician Program, students must be able to speak, write, and read English to ensure patient safety and to complete classes successfully.

The Mental Health Technology - Psychiatric Technician program is accredited by the Board of Vocational Nursing and Psychiatric Technicians.

Contact:

Board of Vocational Nursing and Psychiatric Technicians, Suite 205
2535 Capital Oaks Drive
Sacramento, CA 95833
(916) 263-7800

bvnpt@dca.ca.gov

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate the ability to provide client care, within scope of practice, to safely practice as an entry-level licensed psychiatric technician.
- Demonstrate nursing skills, within scope of practice, to safely practice as an entry-level licensed psychiatric technician.
- Demonstrate the ability to successfully intervene at all levels of client escalation/de-escalation, within scope of practice, to safely practice as an entry-level licensed psychiatric technician.
- Demonstrate the ability to support client efforts to achieve and maintain optimal mental health, within scope of practice, to successfully practice as an entry-level licensed psychiatric technician.
- Demonstrate the ability to safely administer medications, with scope of practice, to safely practice as an entry-level licensed psychiatric technician.
- Demonstrate the ability to participate in all areas of treatment plan development, within scope of practice, to safely practice as an entry-level licensed psychiatric technician.
- Demonstrate the ability to develop and achieve entry-level professional goals.

Review Student Learning Outcomes (SLOs) for this program.

Selection Procedure

The College will make every effort to notify the applicant of acceptance by mail no less than one month prior to the beginning of the program. All applicants are required to meet the Essential Functions for Success in the Mental Health Technology - Psychiatric Technician Program (listed below).

Essential Functions for Success in the Mental Health Technology-Psychiatric Technician Program:

Physical Demands:

- Perform prolonged, extensive, or considerable standing, walking, lifting positioning, pushing, and transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability to lift and carry at least 125 pounds
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands

- Color vision: ability to distinguish and identify colors (may be corrected with adaptive devices)
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less

Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids, and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances

Microcomputer Productivity Software (Certificate N0660)

Business Division Certificate N0660

The Microcomputer Productivity Software certificate is designed to prepare students for careers that require extensive knowledge of business-related productivity software. The certificate offers a balanced

set of classes that enables students to maintain and troubleshoot a Windows operating system, learn advanced features of Excel, Access and PowerPoint software; and create commercial Web sites. Emphasis is placed on customizing, optimizing and securing a Windows-based computer; developing spreadsheet pivot tables and macros; using Access to create and maintain database tables, forms, reports and queries; creating and manipulating PowerPoint slide shows with multimedia content; and using HTML and web page editors to create and publish Web sites. Students will demonstrate the ability to use software to store and retrieve data, solve business problems and create commercial Web sites. Opportunities available after the completion of this certificate include systems analyst, administrative assistant and office manager.

Required Courses

Course Prefix	Course Name	Units
CISB 15	Microcomputer Applications	3.5
CISB 21	Microsoft Excel	3
CISB 51	Microsoft PowerPoint	3
CISD 11	Database Management - Microsoft Access	3
CISD 11L	Database Management - Microsoft Access Laboratory	0.5
CISN 21	Windows Operating System	3
Total Units		16

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Properly configure Microsoft's operating system to stay secure while interacting with internetworks.
- Effectively use the printer configuration utility to install and test a printing device.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Nursery Management (Certificate N0628)

Natural Sciences Division

Certificate N0628

This certificate program is designed to give students basic skills in production and marketing of plants and dry goods in the wholesale and retail nursery industry. All courses are applicable for degree requirements in Ornamental Horticulture, Park and Sports Turf Management, Equipment Technology, and Integrated Pest Management.

Required Courses

Course Prefix	Course Name	Units
AGOR 1	Horticultural Science	3
AGOR 2	Plant Propagation/Greenhouse Management	3
AGOR 29	Ornamental Plants - Herbaceous	3
AGOR 32	Landscaping and Nursery Management	3
AGOR 50	Soil Science and Management	3
AGOR 64	Irrigation - Drip and Low Volume	3
Total Units		18

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be able to demonstrate professional conduct.
- Be technically proficient.
- Be able to give a professional quality oral presentation.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Nutrition (Certificate N0453)

Business Division

Certificate N0453

This certificate is designed to give students basic knowledge and skills in nutrition science, food science, food preparation, and food safety and sanitation. The courses prepare students for entry-level employment as nutrition assistants, community nutrition workers, and dietary service workers in clinical, community, long-term care, and institutional foodservice worksites.

Required Courses

Course Prefix	Course Name	Units
HRM 52	Food Safety and Sanitation	2
NF 1	Introduction to Nutrition as a Career	2
NF 20	Principles of Food with Laboratory	3
NF 25	Introduction to Nutrition Science	3
or NF 25H	Introduction to Nutrition Science - Honors	
NF 28	Cultural and Ethnic Foods	3
Choose three units from the following:		3
NF 12	Sports Nutrition	
NF 30	Introduction to Food Science Technologies	
NF 81	Cooking for Health and Wellness	
NF 82	Vegetarian Cuisine	
NF 83	Cooking for Athletic and Physical Performance	
NF 91	Work Experience in Nutrition and Dietetics	
Total Units		16

Nutrition and Foods Website (<http://www.mtsac.edu/nutrition/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Demonstrate proficiency in practical skills, such as using kitchen equipment and appropriate technology properly.
- Be able to use acquired knowledge and skills to evaluate potential transfer and internship sites.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Paramedic (Certificate T0425)

Technology and Health Division

Certificate T0425

This Paramedic Program is accredited by CAAHEP (Committee on Accreditation of Allied Health Education Programs) and approved by the Los Angeles County Department of Health Services as meeting and exceeding the minimum standards as specified in Title 22 of the California Code of Regulations and the federal Department of

Transportation national standard curriculum. It is designed to train paramedics to work on ambulances and in the fire service.

The Emergency Medical Technician-Paramedic (EMT-P) is an individual who is educated and trained during an intensive (32-hours per week) didactic program lasting 16 weeks. This is followed by five (5) weeks of Clinical Internship in a hospital (40-hours per week), and then eight (8) weeks of Field Externship as a practicing Paramedic under the guidance and supervision of a Paramedic Field Preceptor.

Required Courses

Course Prefix	Course Name	Units
EMS 10	Paramedic Core Content	11
EMS 40	Emergency Care for Paramedics	4.5
EMS 50	Paramedic Skills Competency	5
EMS 70	Paramedic Clinical Internship	3
EMS 80	Paramedic Field Externship	9
Total Units		32.5

Recommended Electives

Course Prefix	Course Name	Units
ADJU 1	The Administration of Justice System	3
FIRE 1	Fire Protection Organization	3
PSYC 1A	Introduction to Psychology	3
or PSYC 1AH	Introduction to Psychology - Honors	
SOC 1	Introduction to Sociology	3
or SOC 1H	Introduction to Sociology - Honors	

The Emergency Medical Services faculty recommend that you complement your studies with selected elective courses chosen from the list above. You should meet with a professor of Emergency Medical Services to help you determine which of those electives would best suit your career plans.

Special Information

To remain in the program, students must maintain a grade of "C" (80 percent) or better in all courses and receive a grade of "C" (80 percent) or better on all final exams. Before starting in clinical rotations, students must pass a criminal background check. Upon successful completion of the required courses, students are given a certificate documenting completion of the Paramedic program. Students are then eligible for licensure by taking and passing both the National Registry Exam and County Paramedic accreditation exam.

Public Safety Programs Website (<http://www.mtsac.edu/public-safety-programs/>)

Paramedic Program Readmission Policy

If the student fails any of the co-requisite courses, EMS 10 - EMS 60, he/she will be dropped from the program. If the student wishes to repeat the program, a Success Plan and Contract will be developed with the faculty to increase the student's chances of success prior to re-entry. If the student withdraws or is dismissed from the program a second time, he/she will not be allowed to reenter the Paramedic Program at Mt. SAC.

Application Requirements

In addition to meeting Mt. San Antonio College academic standards for admission, applicants must be in good standing and satisfy the following requirements:

- Be an EMT currently certified in California.
- Submit a letter on official stationery from a recognized EMS agency verifying completion of six (6) months of pre-hospital field experience as an EMT (approximately 1,200 hours) within the last 2 years.
- File a College application and be accepted as a student at Mt. San Antonio College.
- Submit an application for the Paramedic Program to the Health Science Programs Office (909) 274-5051. All applications are dated upon receipt in the Health Science Programs Office. The Paramedic Program begins two (2) times per year.
- Successful completion of EMS 1 Paramedic Fundamentals and Selection.
- A physical examination, proof of certain immunizations, a criminal background check, and drug test are required of all candidates after acceptance to the program and before entrance into the clinical setting. Forms and information will be provided upon acceptance into the program.

All applicants are expected to meet the essential functions for success in the paramedic program.

Physical Demands

- Perform prolonged, extensive, or considerable standing/walking, lifting, positioning, pushing, and or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift and carry at least 125 pounds)
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands

- Color vision: ability to distinguish and identify colors (may be corrected with adaptive devices)
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Emergency medical scene and patient management
- Subject to many interruptions
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Requires decisions/actions related to end of life issues
- Exposed to products containing latex

English Language Skills

Although proficiency in English is not a criterion for admission into the EMT-P program, students are encouraged to be able to speak, write and

read English to complete classes successfully and ensure safety for themselves and others.

The Emergency Medical Technician - Paramedic program is accredited by the Committee on Accreditation of Allied Health Education Programs (CAAHEP).

Contact:

Committee on Accreditation of Allied Health Education Programs (CAAHEP)
1361 Park Street
Clearwater, Florida 33756
(727) 210-2350
www.caahep.org (<http://www.caahep.org>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate competence in the assessment, diagnosis, and treatment of both medical and trauma patients in accordance with the EMT level Scope of Practice.
- Be employable and seek employment in the field or a related field.
- Demonstrate EMT basic skills competency at a certification level.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Park Management (Certificate N0629)

Natural Sciences Division

Certificate N0629

This certificate program is designed to give students skills required for entry level positions in park management. Emphasis is placed on positions that are at the city and county level. All courses are applicable for degree requirements.

Required Courses

Course Prefix	Course Name	Units
AGOR 5	Park Facilities	3
AGOR 51	Tractor and Landscape Equipment Operations	3
AGOR 62	Irrigation Principles and Design	3
AGOR 63	Irrigation Systems Management	3
AGOR 73	Landscaping Laws, Contracting, and Estimating	3
AGOR 75	Urban Arboriculture	3
Total Units		18

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student:

- Will be technically proficient
- Will demonstrate professional conduct in the industry
- Will be able to give a professional quality oral presentation

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Pet Science (Certificate N0630)

Natural Sciences Division

Certificate N0630

The Pet Science Certificate focuses on the proper care and management of various pets. This includes: breed identification and characteristics, grooming, showing, nutrition, practical care, behavior, breeding, and housing. Consideration will be given to the economic influence of the pet industry.

Required Courses

Course Prefix	Course Name	Units
ASCI 70	Pet Shop Management	3
ASCI 71	Canine Management	3
ASCI 72	Feline Management	3
ASCI 73	Tropical and Coldwater Fish Management	2
ASCI 74	Reptile Management	2
ASCI 76	Aviculture - Cage and Aviary Birds	3
Total Units		16

Animal Sciences Website (<http://www.mtsac.edu/animal/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Demonstrate knowledge of the various species of pets, pet management systems, and the different industry opportunities associated with the respective species.
- Understand the scientific principles of animal production in relation to genetics, reproduction, nutrition, physiology, and environment.
- Demonstrate competency in the areas of animal health, disease, welfare and handling and understand how these factors influence animal stress and welfare.
- Demonstrate knowledge of the economic influence of the pet industry in today's society.
- Be competent with the use of technology and have abilities in the areas of critical thinking and decision-making. In addition, they must have strong oral and written communication skills, and a sense of the importance of responsibility and work ethic.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Photography - Level I (Certificate N0631)

Arts Division

Certificate N0631

This multi-level certificate program is designed to prepare students for employment in the field of photography. The Photography Level I offers the core skills necessary for employment as an entry-level Photography Assistant.

Required Courses

Course Prefix	Course Name	Units
PHOT 9	Digital Image Editing for Photographers	3
PHOT 10	Basic Digital and Film Photography	3
PHOT 11A	Intermediate Photography	3
PHOT 11B	Digital Capture Workflow	3
PHOT 14	Commercial Lighting	3
PHOT 20	Color Photography	3
Choose one from the following:		3
PHOT 12	Photographic Alternatives	

PHOT 16	Fashion and Editorial Portrait Photography
PHOT 18	Portraiture and Wedding Photography
Total Units	21

Photography Website (<http://www.mtsac.edu/photography/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- know core skills of standard shutter speeds, creative use of shutter, standard apertures, and creative use of aperture.
- use critical thinking skills and be able to analyze and assess photographic situations, solve technical problems, and overcome creative challenges as they arise in the production of high quality still and motion imagery for professional, editorial, commercial, or fine art applications.
- design and construct still and motion imagery that can communicate ideas or narratives effectively for commercial, editorial, or fine art purposes.
- have the knowledge and skills pertinent to the operation of a freelance photography business and sound business practices in the trade.
- usefully participate in the collaborative environment of commercial art fields.
- analyze, discuss, and critique the various technical, aesthetic, conceptual, historical, and cultural aspects of a photograph.

Review Student Learning Outcomes (SLOs) for this program.

Photography - Level II (Certificate T0349)

Arts Division Certificate T0349

This multi-level certificate program is designed to prepare students for employment in the field of photography. This Photography Level II certificate offers additional expertise for students to develop specific skills needed for employment in photography, art, cinema/animation, communications, industrial arts, graphics, and journalism.

Required Courses

Course Prefix	Course Name	Units
Completion of the Photography - Level I coursework		21
PLUS		
Completion of the Photography - Level II coursework		13
Total Units		34

Course Prefix	Course Name	Units
Photography - Level I Coursework		
PHOT 9	Digital Image Editing for Photographers	3
PHOT 10	Basic Digital and Film Photography	3
PHOT 11A	Intermediate Photography	3
PHOT 11B	Digital Capture Workflow	3
PHOT 14	Commercial Lighting	3
PHOT 20	Color Photography	3
Choose one from the following:		3
PHOT 12	Photographic Alternatives	
PHOT 16	Fashion and Editorial Portrait Photography	

PHOT 18	Portraiture and Wedding Photography
Total Units	21

Course Prefix	Course Name	Units
Photography - Level II Coursework		
Choose one from the following:		1
PHOT 1A	Laboratory Studies: Beginning Black and White Photography	
PHOT 1B	Laboratory Studies: Advanced Black and White Photography	
PHOT 1C	Laboratory Studies: Studio Photography	
PHOT 1D	Laboratory Studies: Computer Applications in Photography	
PLUS		
PHOT 17 or PHOT 30	Photocommunication Advertising Photography	3
PHOT 24 or PHOT 26	Advanced Digital Image Editing for Photographers Video for Photographers	3
PHOT 28	Photography Portfolio Development	3
PHOT 29	Studio Business Practices for Commercial Artists	3
Total Units		13

Recommended Electives

Course Prefix	Course Name	Units
AHIS 1 or ARTB 1	Introduction to the Visual Arts and Art History Introduction to the Visual Arts and Art History	3
PHOT 15	History of Photography	3

Photography Website (<http://www.mtsac.edu/photography/>)

Program Learning Outcomes

Review Student Learning Outcomes (SLOs) for this program.

Photography Digital Technician (Certificate N0632)

Arts Division Certificate N0632

This certificate program is designed to give students specific skills to prepare them for employment in the commercial photographic industry as a digital technician, digital assistant, digital imaging specialist, or photography assistant.

Required Courses

Course Prefix	Course Name	Units
PHOT 9	Digital Image Editing for Photographers	3
PHOT 10	Basic Digital and Film Photography	3
PHOT 11A	Intermediate Photography	3
PHOT 11B	Digital Capture Workflow	3
PHOT 14	Commercial Lighting	3
PHOT 20	Color Photography	3
PHOT 24	Advanced Digital Image Editing for Photographers	3
PHOT 26	Video for Photographers	3
Total Units		24

Recommended Elective

Course Prefix	Course Name	Units
PHOT 29	Studio Business Practices for Commercial Artists	3

Photography Website (<http://www.mtsac.edu/photography/>)

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Photography Video Production (Certificate N0633)

Arts Division

Certificate N0633

This certificate integrates still photography and video capture, for the student that is interested in the field of photography coupled with video production. It is designed to prepare students for entry-level employment as both a photographer and videographer. The goals of this certificate are to prepare students to combine still and video to produce quality imagery by working collaboratively using digital camera still and video capture, lighting, composition, storytelling, audio, and image editing and output techniques to produce visuals that effectively communicate ideas or narratives for commercial, editorial, or fine art purposes.

Required Courses

Course Prefix	Course Name	Units
PHOT 9	Digital Image Editing for Photographers	3
or ARTC 100	Fundamentals of Graphic Design	
PHOT 10	Basic Digital and Film Photography	3
PHOT 11A	Intermediate Photography	3
PHOT 14	Commercial Lighting	3
PHOT 26	Video for Photographers	3
R-TV 22	Editing for Film and Television	3
R-TV 29	Introduction to Audio Production for Film and Television	3
Choose one elective from the following:		3
ANIM 172	Motion Graphics, Compositing and Visual Effects	
ARTC 272	Motion Graphics, Compositing and Visual Effects	
PHOT 17	Photocommunication	
PHOT 30	Advertising Photography	
R-TV 14	Media Aesthetics	
Total Units		24

Recommended Electives

Course Prefix	Course Name	Units
PHOT 28	Photography Portfolio Development	3
or ARTC 290	Portfolio	
or ANIM 148	Demo Reel	
PHOT 29	Studio Business Practices for Commercial Artists	3
or R-TV 15	Broadcast Law and Business Practices	

Photography Website (<http://www.mtsac.edu/photography/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Produce quality imagery.
- Understand visual communication
- Understand business practices

- Work as a collaborator
- Discuss and critique imagery

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Pilates Professional Teacher Training: Cadillac, Chair, Auxiliary (Certificate N0665)

Kinesiology Division

The certificate prepares students for careers as Pilates instructors/trainers in professional Pilates studios, dance studios, corporate fitness facilities, wellness centers, public/private health clubs and private training in a home studio. The curriculum meets the industry standards for a comprehensive Pilates teacher training technique course. The program covers Pilates theory, anatomy, pedagogy and the exercise repertoire for the Mat, Reformer, Cadillac, Wunda Chair, Barrels, Ped-a-Pul and accessory equipment. The certificate includes lecture, self-study and practice teaching hours and after completing the certificate, students will be qualified to all levels of the Pilates exercise repertoire in Mat and apparatus, including special populations and remedial programs.

Required Courses

Course Prefix	Course Name	Units
DN-T 27	Theory and Principles of Pilates	3
DN-T 28	Functional Anatomy for Pilates	2
DN-T 29	Teaching Pilates Mat Repertoire	1.5
DN-T 30	Teaching Pilates Reformer Repertoire	1.5
DN-T 32	Teaching Pilates Cadillac and Wunda Chair Repertoire	1.5
DN-T 33	Teaching Pilates Ped-a-Pul, Barrels and Auxiliary Equipment Repertoire	1.5
DN-T 34	Pilates Teaching-Cadillac, Wunda Chair, & Auxiliary Equipment	3
DNCE 39	Pilates Fundamentals	0.5-1
Choose two courses. Must take 1 unit from each course selected		2
DNCE 41	Pilates I	
DNCE 42	Pilates II	
DNCE 43	Pilates III	
Total Units		16.5-17

Kinesiology, Athletics, and Dance Website (<http://www.mtsac.edu/kinesiology/>)

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Pilates Professional Teacher Training: Mat and Reformer (Certificate N0667)

Kinesiology Division

The Pilates Professional Teacher Training Certificate prepares students for careers as Pilates instructors/trainers in professional Pilates studios, dance studios, corporate fitness facilities, wellness centers, public/

private health clubs and private training in a home studio. The certificate meets the industry standards for a Pilates Teacher Training technique course in Mat and Reformer, and includes lecture, self-study, and teaching hours. The program includes Pilates theory, anatomy, the Mat and Reformer repertoire of exercises and after completing the certificate, students will be qualified to teach all levels of the Pilates exercises in Mat and Reformer, including special populations and remedial programs.

Required Courses

Course Prefix	Course Name	Units
DN-T 27	Theory and Principles of Pilates	3
DN-T 28	Functional Anatomy for Pilates	2
DN-T 29	Teaching Pilates Mat Repertoire	1.5
DN-T 30	Teaching Pilates Reformer Repertoire	1.5
DN-T 31	Pilates Teaching-Mat and Reformer	3
DNCE 39	Pilates Fundamentals	0.5-1
DNCE 41	Pilates I	1
KIN 24	Applied Kinesiology	2
Choose two courses. Must take 1 unit from each course selected		2
DNCE 40	Conditioning Through Dance	
DNCE 42	Pilates II	
DNCE 43	Pilates III	
Total Units		16.5-17

Kinesiology, Athletics, and Dance Website (<http://www.mtsac.edu/kinesiology/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Develop a portfolio of lesson plans, a teaching resume, and a personal Pilates brand.
- Teach, with attention to alignment, Pilates exercises while incorporating the Pilates concepts and principles.
- Develop a log of the Pilates mat and Reformer exercises that includes muscular analysis, objectives, cueing, and modifications (approximately 150 exercises).

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Printmaking (Certificate N0653)

Arts Division

This certificate program is designed to prepare students to apply graphic imaging and fine art printing techniques in their preparation for careers in the field of visual communications. Students are given creative, design and printmaking skills necessary to develop successful artworks in the field of fine art, especially for areas of the exhibiting, publishing and collecting of artworks. This Printmaking Certificate offers students interested in building a career as practicing artists the knowledge to produce finished artwork for the fine art and book art markets. The courses in the certificate offer standard printmaking methods whose knowledge is required in applicable areas of the broad field of visual communication.

Required Courses

Course Prefix	Course Name	Units
ARTD 43A	Introduction to Printmaking	3
ARTD 45A	Printmaking: Introduction to Screenprinting	3

ARTD 46A	Printmaking: Introduction to Monotype	3
ARTD 47A	Printmaking: Photo and Alternative Processes	3
ARTD 48A	Letterpress Book Arts	3
Required Electives		3
ARTC 100 or ARTD 20	Fundamentals of Graphic Design Design: Two-Dimensional	
Total Units		18

Programming In C++ (Certificate N0634)

Business Division

The Programming in C++ Certificate prepares students for a career in computer programming. The certificate offers a balanced set of classes that provides students the skills to create business-oriented applications in C++, maintain a Microsoft Access database, and learn the tools and techniques required of a systems analyst. Emphasis is placed on object-oriented programming techniques, creating database tables, forms, reports and queries, and implementing a computer system using the system development life cycle methodology. Students will demonstrate the ability to create business applications, write effective program documentation, demonstrate program troubleshooting skills, and build a computer system using the steps of the system development life cycle. Career opportunities after the completion of this certificate include programmer and systems analyst.

Required Courses

Course Prefix	Course Name	Units
CISB 11	Computer Information Systems	3.5
CISD 11	Database Management - Microsoft Access	3
CISD 11L	Database Management - Microsoft Access Laboratory	0.5
CISM 11	Systems Analysis and Design	3.5
CISN 21	Windows Operating System	3
CISP 31	Programming in C++	3
CISP 31L	Programming in C++ Laboratory	0.5
CISP 34	Advanced C++ Programming	3
CISP 34L	Advanced C++ Programming Laboratory	0.5
Total Units		20.5

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Create event-driven program, using Windows Forms.
- Connect C++ program to the database and incorporate SQL statements into C++ code.

Review [Student Learning Outcomes \(SLOs\)](http://www.mtsac.edu/instruction/outcomes/sloinfo.html) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Public Works/Landscape Management (Certificate M0635)

Natural Sciences Division Certificate M0635

This program is a partnership between Mt. San Antonio College and Citrus College, with course requirements that must be taken at each college (courses in Public Works are offered through Citrus, while

horticulture/landscape courses are offered at Mt. SAC). Upon completion of the requirements, students may apply for and receive a Certificate of Achievement from either of the two colleges.

Required Courses

Course Prefix	Course Name	Units
Offered at Citrus College:		
PUB 150	Public Works I	3
PUB 158	Municipal and Urban Tree Care	3
Offered at Mt. San Antonio College:		
AGOR 1	Horticultural Science	3
AGOR 39	Turf Grass Production and Management	3
Total Units		12

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be able to give a professional quality oral presentation.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Radio Broadcasting: Behind-the-Scenes (Certificate N0636)

Arts Division

Certificate N0636

The Radio Broadcasting Behind-the-Scenes Certificate of Achievement provides expertise in a variety of behind-the-scenes specialties. Students gain practical hands-on-experience in the broadcasting industry through an off-campus internship at a radio station, production studio or other broadcasting facility.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
R-TV 01	Introduction to Electronic Media	3
R-TV 10	Radio Programming and Producer Techniques	3
R-TV 11A	Beginning Radio Production	3
R-TV 11B	Advanced Radio Production	3
R-TV 15	Broadcast Law and Business Practices	3
R-TV 38	Radio Broadcasting Rules and Regulations	1.5
R-TV 96A	Beginning Campus Radio Station Lab: Studio Procedures and Equipment Operations	1
R-TV 96B	Intermediate Campus Radio Station Lab: On-Air and Behind-the-Scenes Skills	1
R-TV 96C	Advanced Campus Radio Station Lab: Program Hosting and Management Skills	1
R-TV 97A	Radio and Entertainment Industry Seminar	1
R-TV 97B	Radio/Entertainment Industry Work Experience	1
Required Electives		
Choose three units from the following:		3
R-TV 05	Radio-TV Newswriting	
R-TV 09	Broadcast Sales and Promotion	
R-TV 17	Introduction to Podcasting	
R-TV 31	History of Radio DJs	
R-TV 32	Social Media in Broadcasting	

R-TV 35	Pop Culture in the Media
R-TV 39	Social Media and Online Ethics
R-TV 99	Special Projects in Broadcasting and Entertainment Industry
R-TV 101	Work Experience in Broadcast Entertainment
Total Units	24.5

Radio Broadcasting Website (<http://www.mtsac.edu/radio/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Work in production, programming, or a variety of other behind-the-scenes positions at a commercial radio station
- Use studio equipment to record and edit a pre-recorded piece
- Operate the studio equipment required to produce a live broadcast
- Use social media during a live radio show to engage with the audience
- Develop and implement ideas for a radio show
- Develop a format for a radio station

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Radio Broadcasting: On-Air (Certificate N0637)

Arts Division

Certificate N0637

The Radio Broadcasting On-Air Certificate of Achievement prepares students for entry level positions in a variety of performance specialties including disc jockey, news anchor, sportscaster, and commercial voice-overs. Students gain practical hands-on experience at the college radio stations as well as through an off-campus internship at a station, studio, or other broadcasting facility.

Required Courses

Course Prefix	Course Name	Units
R-TV 01	Introduction to Electronic Media	3
R-TV 02	On-Air Personality Development	3
R-TV 05	Radio-TV Newswriting	3
R-TV 11A	Beginning Radio Production	3
R-TV 15	Broadcast Law and Business Practices	3
R-TV 36	Beginning Commercial Voice-Overs	3
R-TV 38	Radio Broadcasting Rules and Regulations	1.5
R-TV 96A	Beginning Campus Radio Station Lab: Studio Procedures and Equipment Operations	1
R-TV 96B	Intermediate Campus Radio Station Lab: On-Air and Behind-the-Scenes Skills	1
R-TV 96C	Advanced Campus Radio Station Lab: Program Hosting and Management Skills	1
R-TV 97A	Radio and Entertainment Industry Seminar	1
R-TV 97B	Radio/Entertainment Industry Work Experience	1
Choose 3 units from the following:		3
R-TV 03	Sportscasting and Reporting	
R-TV 04	Broadcast News Field Reporting	
R-TV 06	Broadcast Traffic Reporting	
R-TV 09	Broadcast Sales and Promotion	
R-TV 10	Radio Programming and Producer Techniques	
R-TV 11B	Advanced Radio Production	

R-TV 13	Interview, Talk, and Community Affairs Programming
R-TV 17	Introduction to Podcasting
R-TV 31	History of Radio DJs
R-TV 32	Social Media in Broadcasting
R-TV 35	Pop Culture in the Media
R-TV 37	Advanced Voice-Overs Techniques
R-TV 39	Social Media and Online Ethics
R-TV 99	Special Projects in Broadcasting and Entertainment Industry
R-TV 101	Work Experience in Broadcast Entertainment
Total Units	27.5

Radio Broadcasting Website (<http://www.mtsac.edu/radio/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Work as a DJ or newscaster on a commercial radio station
- Use the studio equipment to record and edit a pre-recorded piece
- Plan, set-up, and perform a radio station remote as an on-air personality
- Use social media during a live radio show to engage with the audience
- Operate the studio equipment required for a live radio broadcast

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Real Estate Broker (Certificate N0638)

Business Division Certificate N0638

Prior to taking the California Real Estate Broker's License Exam, the applicant must have completed five (5) required core courses and three (3) additional elective courses. The Real Estate Broker Certificate contains all eight courses necessary to satisfy the educational requirements to take the California Real Estate Broker Examination.

Required Courses

Course Prefix	Course Name	Units
BUSA 11	Fundamentals of Accounting	3
or BUSR 55	Real Estate Economics	
BUSR 51	Legal Aspects of Real Estate	3
BUSR 52	Real Estate Practice	3
BUSR 53	Real Estate Finance	3
BUSR 81	Appraisal: Principles and Procedures	3.5
Choose three courses from the following:		9
BUSL 18	Business Law	
BUSR 40	Landlord-Tenant Law	
BUSR 50	Real Estate Principles	
BUSR 59	Real Estate Property Management	
BUSR 60	Real Estate Investment Planning	
BUSR 62	Mortgage Loan Brokering and Lending	
BUSR 76	Escrow Procedures I	
Total Units		24.5

Real Estate Website (<https://www.mtsac.edu/realestate/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Have the requisite knowledge to pass the California Real Estate Brokers Exam.
- Meet or exceed the state average for success or passage on the state licensing exam.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Real Estate Sales (Certificate E0342)

Business Division Certificate E0342

Prior to taking the California Real Estate Salespersons Examination, an applicant must complete three (3) college level courses specified by the California Department of Real Estate. Two of these classes are mandated: Real Estate Principles (BUSR 50) and Real Estate Practice (BUSR 52). The third class may be any real estate or real estate related course specified by The California Department of Real Estate. The Real Estate Sales Certificate includes these three classes for a total of 9 units needed to apply for the California Real Estate Salesperson's Examination.

Required Courses

Course Prefix	Course Name	Units
BUSR 50	Real Estate Principles	3
BUSR 52	Real Estate Practice	3
Choose one course from the following:		3
BUSA 11	Fundamentals of Accounting	
BUSL 18	Business Law	
BUSR 40	Landlord-Tenant Law	
BUSR 51	Legal Aspects of Real Estate	
BUSR 53	Real Estate Finance	
BUSR 55	Real Estate Economics	
BUSR 59	Real Estate Property Management	
BUSR 60	Real Estate Investment Planning	
BUSR 62	Mortgage Loan Brokering and Lending	
BUSR 76	Escrow Procedures I	
BUSR 81	Appraisal: Principles and Procedures	
Total Units		9

Real Estate Website (<https://www.mtsac.edu/realestate/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Have the requisite knowledge to pass the California Real Estate Sales Exam.
- Meet or exceed the state average for success or passage on the state licensing exam.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Sign Language/Interpreting (Certificate T0801)

Humanities and Social Sciences Division Certificate T0801

The Mt. San Antonio College Interpreter Training Program is designed to prepare individuals for careers as Sign Language Interpreters. Interpreters are needed wherever communication happens between the hearing community and the Deaf and hard-of-hearing community. There are an endless number of settings in which this communication takes place. Interpreters are employed by school districts, cruiseship companies, corporations, government agencies, hospitals, colleges and universities, and a vast number of other organizations and private businesses.

Program Preparation: Preparation for the program includes fluency in American Sign Language demonstrated by the completion of SIGN 104, (or the equivalent skill) and English fluency demonstrated by the completion of ENGL 1A.

National Certification: There are many specialties within the field of Sign Language Interpreting, but the focus of this program is on preparing the interpreter generalist. Although requiring some type of certification is becoming more common in California, there are still many job opportunities for the precertified interpreter.

Completing the certificate in Sign Language/Interpreting does not make one a "Certified Interpreter"; however, graduates of this program are encouraged to apply for National Interpreting Certification (NIC) through the Registry of Interpreters for the Deaf (RID) at www.rid.org (<http://www.rid.org>).

Required Courses

Course Prefix	Course Name	Units
Core Courses		
SIGN 105	American Sign Language 5	4
SIGN 108	Fingerspelling	2
SIGN 201	Introduction to Deaf Studies	3
SIGN 202	American Deaf Culture	3
SIGN 210	American Sign Language Structure	3
SIGN 220	Translation: American Sign Language and English	4
SIGN 223	Principles of Interpreting	3
SIGN 225	Ethical Decision Making for Interpreters	2
SIGN 227	Cognitive Processing for Interpreters	4
SIGN 231	Interpreting	4
SIGN 232	Advanced Interpreting	4
SIGN 239	Applied Interpreting	2
Required Electives		
Choose three courses from the following:		5-5.5
SIGN 240	Vocabulary Building for Interpreters	
SIGN 250	Interpreting with Classifiers	
SIGN 260	Video Interpreting	
SIGN 299	Special Projects in Sign Language/Interpreting	
Total Units		43-43.5

Sign Language/Interpreting Department Website (<http://www.mtsac.edu/sign-language/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply Demand Control Schema (DC-S) Theory to the field of Sign Language Interpreting.
- Given an English narrative, successfully give a functional equivalent message in ASL in a simultaneous mode.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Sports Turf Management (Certificate N0639)

Natural Sciences Division

Certificate N0639

This certificate program is designed to provide skills required for students interested in employment at golf courses, race tracks, athletic fields and stadiums, and other high use turf areas. All courses are applicable for degree requirements in Ornamental Horticulture, Park and Sports Turf Management, Equipment Technology, and Integrated Pest Management.

Required Courses

Course Prefix	Course Name	Units
AGOR 24	Integrated Pest Management	3
AGOR 39	Turf Grass Production and Management	3
AGOR 40	Sports Turf Management	3
AGOR 50	Soil Science and Management	3
AGOR 62	Irrigation Principles and Design	3
AGOR 63	Irrigation Systems Management	3
Total Units		18

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be able to formulate and propose an all-inclusive management program for a sports turf area.
- Demonstrate professional conduct in the industry.
- Be able to give a professional quality oral presentation.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Supply Chain Management (Certificate M0645)

Business Division

Certificate M0645

The Supply Chain Management Certificate offers a practical, relevant approach to supply chain management and can offer individuals opportunities for a career path with upward mobility options.

Required Courses

Course Prefix	Course Name	Units
BUSM 10	Principles of Continuous Quality Improvement	3
BUSM 51	Principles of International Business	3
BUSM 52	Principles of Exporting and Importing	3
BUSM 53	Supply Chain Management	3
Total Units		12

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Surveying Technology (Certificate N0868)

Natural Sciences N0868 Skills Certificate

The Surveying Technology Certificate provides students with introductory skills that lead to a career in Surveying Technology. There is a focus on the examination and documenting of an area's boundaries and features for the purposes of constructing a map, plan, or description. Students will complete substantial projects to develop a portfolio to aid in their career prospects. This certificate may aid in the student's search for an entry-level position as a surveying technician, computer aided drafting (CAD) technician, field technician or transfer into a surveying technology related program.

Course Prefix	Course Name	Units
ENGR 1	Introduction to Engineering	2
ENGR 18	Introduction to Engineering Graphics	3
ENGR 24	Engineering Graphics	4
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
SURV 1A	Surveying	3
SURV 1B	Surveying	3
Total Units		18-19

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Program Learning Outcomes

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Technical Sales (Certificate N0856)

Natural Sciences Division

The Technical Sales program is designed to prepare the student for a career in a wide range of industries including sales engineering, technical sales and technical customer service. Jobs in technical sales support engineering, science, and pharmaceutical companies; and the products they bring to market through technical buyers.

Correction: Added 'or' between SPCH 1AH and SPCH 8. 8/23/2022

Required Courses

Course Prefix	Course Name	Units
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
or ENGL 1AM	College Composition for Non-Native English Speakers	
or AMLA 1A	College Composition for Non-Native English Speakers	
ENGR 1C	Engineering Critical Thinking	3
ENGT 10A	Foundations of Technical Sales	2
ENGT 10B	Technical Sales Strategies	2
MATH 150	Trigonometry	3
or MATH 160	Precalculus Mathematics	
or MATH 180	Calculus and Analytic Geometry	
SPCH 1A	Public Speaking	4

or SPCH 1AH	Public Speaking - Honors
or SPCH 8	Professional and Organizational Speaking
or SPCH 8H	Professional and Organizational Speaking - Honors
Total Units	17-19

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Technical Theater (Certificate T0446)

Arts Division Certificate T0446

The Technical Theater Certificate will provide students with classwork and practical experience across a broad base of technical theater disciplines, including set construction, set rigging, lighting, and stage management. There is an emphasis on supporting classroom instruction with both practical application and participation in main stage productions. Students will expand their resumes by virtue of their participation on build and running crews. This certificate may aid in the student's search for an entry-level position as a shop technician or running crew in theaters and theme parks. It may also aid in finding short-term work on load-ins and running crews for theatrical events.

Required Courses

Course Prefix	Course Name	Units
THTR 9	Introduction to Theater Arts	3
THTR 21	Introduction to Theater Design	3
Variable unit courses: Repeat each course 4 times at 1 unit each		8
THTR 13	Play Rehearsal and Performance - Technical	
THTR 18	Technical Theater Practicum	
THTR 14	Stagecraft	3
THTR 22	Stage Lighting	3
THTR 26	Sound for Theater	3
THTR 27	Introduction to Stage Management	3
Required Electives		6-7
Choose a total of 6 or 7 units from the electives below		
THTR 11	Principles of Acting I	
THTR 16	Theatrical Make-Up	
THTR 19	Theatrical Costuming	
THTR 28	Directing for the Stage	
THTR 60A	Theater for Young Audiences - Performance	
THTR 60B	Theater for Young Audiences - Design	
THTR 60C	Theater for Young Audiences - Stage Management	
Total Units		32-33

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Television Crew (Certificate N0640)

Arts Division Certificate N0640

The Certificate of Achievement in Television Crew will provide students with experience in a variety of production roles and technologies. This course of study is designed to prepare students for entry level jobs in a variety of areas.

Required Courses

Course Prefix	Course Name	Units
R-TV 19A	Beginning Video Production	3
Choose 16 units from the following:		16
R-TV 19B	Advanced Video Production	
R-TV 20	Beginning TV Studio Production	
R-TV 21	Remote Multicamera Production	
R-TV 22	Editing for Film and Television	
R-TV 23	Reality Show Production	
R-TV 100	Work Experience in Film and TV	
Total Units		19

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Feel that they have an increased possession of the skills required for entry-level work in the entertainment industry.
- Function in three types of production: Narrative (film-style), TV Studio, and live Remote Multicamera production in any role.
- Use communication, artistic, and technical skills to collaboratively create programs as part of a team in any role, from writer to editor.
- Use Avid Media Composer to the level necessary for an editing internship.
- Present an ePortfolio containing video and written work to prospective employers, universities, and scholarship committees.
- Apply aesthetic and technical skills in telling a story visually.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Theater Performance (Certificate N0855)

Arts Division

The Theater Performance certificate will provide students with classwork and practical experience across a broad base of theater performance disciplines, including stage acting, acting for the camera, voice and diction, movement for the stage and performing for children. There is an emphasis on supporting classroom instruction with both practical application and participation in main stage productions. Students will expand their resumes by virtue of their participation as cast members in plays. This certificate is designed to aid in the student's search for work as paid performers in theaters, film, TV, commercials, radio, voice over, children's theater companies, theme parks and as theater teaching artists.

Required Courses

Course Prefix	Course Name	Units
SPCH 3	Voice and Diction	3
THTR 9	Introduction to Theater Arts	3
THTR 11	Principles of Acting I	3
THTR 12	Principles of Acting II	3
THTR 15	Play Rehearsal and Performance - Acting ^{*Complete} 2 units (variable unit course)	2
THTR 20	Introduction to Script Analysis for the Theater	3
THTR 31	Movement for the Stage	3
THTR 60A	Theater for Young Audiences - Performance	2

Required Electives

Choose two courses from the following:		6
THTR 10	History of Theater Arts	
THTR 16	Theatrical Make-Up	
THTR 17	Acting for the Camera	
THTR 19	Theatrical Costuming	
THTR 25	Theatrical Playwriting	
THTR 28	Directing for the Stage	
Total Units		28

Tree Care and Maintenance (Certificate N0641)

Natural Sciences Division

Certificate N0641

This certificate program is designed to give students basic skills in the repair and maintenance of trees. All courses are applicable for degree requirements in Ornamental Horticulture, Park and Sports Turf Management, Equipment Technology, and Integrated Pest Management.

Required Courses

Course Prefix	Course Name	Units
AGOR 1	Horticultural Science	3
AGOR 24	Integrated Pest Management	3
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3
AGOR 50	Soil Science and Management	3
AGOR 51	Tractor and Landscape Equipment Operations	3
AGOR 75	Urban Arboriculture	3
Total Units		18

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be able to identify common landscape trees and woody shrubs.
- Demonstrate professional conduct in the industry.
- Be able to give a professional quality oral presentation.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Unmanned Aircraft Systems (Certificate M0662)

Technology and Health Division

The Unmanned Aircraft Systems (UAS) Certificate program prepares students for careers in the rapidly growing area of unmanned aircraft systems, including piloting, mission planning, data collection and analysis, and other related skills. Students have the opportunity for flight training with multi-rotor and fixed wing unmanned aircraft systems. Through course work, simulation, and flight training, students may achieve the Federal Aviation Administration (FAA) remote pilot operator certificate (FAA Part 107 licensing). Successful completion of this program enables students to take the FAA examination.

Required Courses

Course Prefix	Course Name	Units
AERO 100	Primary Pilot Ground School	4
AERO 160	Unmanned Aircraft Systems Basic	4
AERO 210	Unmanned Aircraft Systems Advanced	4
PHOT 10	Basic Digital and Film Photography	3
Total Units		15

Video Engineering (Certificate N0650)

Arts Division
Certificate N0650

Prepares students for jobs as Video Engineers in remote and studio television production, as well as related applications in film production. Includes training in video production and maintenance engineering as required for video engineers.

Required Courses

Course Prefix	Course Name	Units
CNET 56	Computer Networks	4
ELEC 50A or ELEC 50B	Electronic Circuits - Direct Current (DC) Electronic Circuits (AC)	4
R-TV 19A	Beginning Video Production	3
R-TV 21	Remote Multicamera Production	3
R-TV 41	Video Engineering	3
Total Units		17

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Virtual Reality Designer (Certificate N0644)

Arts Division
Certificate N0644

The Virtual Reality Designer Certificate provides students with entry level skills for a career in the art and design aspects of virtual reality. Through a series of courses that are project-centric, the program exposes the students to current virtual reality (VR) technologies, 3D tools and techniques; and game development techniques and processes. This certificate may aid the student in the search for an entry-level position as a VR designer, VR artist, VR/AR Developer, or VR Technical Artist.

Required Courses

Course Prefix	Course Name	Units
ANIM 100	Digital Paint and Ink	3
ANIM 122	Introduction to Virtual Reality Design and Technology	3
ANIM 130	Introduction to 3D Modeling	3
ANIM 131	Introduction to Game Design	3
ANIM 140	Introduction to 3D Animation	3
ANIM 148	Demo Reel	3
ANIM 151	Game Art Development	3
ANIM 210	Building Worlds in Virtual Reality	3
Required Electives		3

Select one course from the following:

ANIM 108	Principles of Animation
ANIM 115	Storyboarding
ANIM 132	Intermediate 3D Modeling
ANIM 146	Intermediate 3D Animation
MUSA 120	Electronic Music
Total Units	27

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Welder - Automotive Welding, Cutting & Modification (Certificate N0648)

Technology and Health Division

Certificate N0648

Prepares students for entry-level employment as a licensed welder with additional skills development and theory in automotive welding, cutting and modification. Coursework prepares students for industry licensing with emphasis on competencies required for certification in structural steel welding and specialty skills in automotive welding.

Required Courses

Course Prefix	Course Name	Units
WELD 40	Introduction to Welding ¹	2
WELD 50	Oxyacetylene Welding	2
WELD 51	Basic Electric Arc Welding	2
WELD 53A	Welding Metallurgy	3
WELD 60	Print Reading and Computations for Welders	3
WELD 70A	Beginning Arc Welding	3
WELD 70B	Intermediate Arc Welding	3
WELD 70C	Certification for Welders	3
WELD 80	Construction Fabrication and Welding	3
WELD 81	Pipe and Tube Welding	3
WELD 91	Automotive Welding, Cutting and Modification	1
Total Units		28

¹ Note: Any higher level welding courses may be substituted for WELD 40.

Air Conditioning & Welding Website (<http://www.mtsac.edu/airconditioning-welding/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- be employed or seeking employment in the field or a related field.
- be technically competent.
- be able to perform the required practical projects used in GMAW welding and cutting.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program

Welder - Gas Tungsten Arc Welding (Certificate T0932)

Technology and Health Division
Certificate T0932

Prepares students for entry-level employment as a licensed welder with additional skills development and theory in gas tungsten ARC welding. Coursework prepares students for industry licensing with emphasis on competencies required for certification in aluminum, CRES, mild steel and selected exotic metals with specialty skills in gas tungsten ARC welding.

Required Courses

Course Prefix	Course Name	Units
WELD 40	Introduction to Welding ¹	2
WELD 50	Oxyacetylene Welding	2
WELD 51	Basic Electric Arc Welding	2
WELD 53A	Welding Metallurgy	3
WELD 60	Print Reading and Computations for Welders	3
WELD 70A	Beginning Arc Welding	3
WELD 70B	Intermediate Arc Welding	3
WELD 70C	Certification for Welders	3
WELD 80	Construction Fabrication and Welding	3
WELD 81	Pipe and Tube Welding	3
WELD 90A	Gas Tungsten Arc Welding	3
Total Units		30

¹ Note: Any higher level welding courses may be substituted for WELD 40.

Air Conditioning & Welding Website (<http://www.mtsac.edu/airconditioning-welding/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be technically competent.
- Be employed or seeking employment in their area or a related area.
- Solve problems as related to preparing materials prior to welding.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Welder - Licensed (Certificate N0643)

Technology and Health Division

Certificate N0643

This program is designed to prepare students for entry-level employment in the broad field of welding, including manufacturing construction, fabrication and repair. Through theoretical and hand-on skills coursework students prepare for industry licensing with an understanding of current guidelines and standards. Particular emphasis is placed on those competencies required for certification in structural steel welding. Course sequences can be modified to reflect industry experience or other individual needs.

Required Courses

Course Prefix	Course Name	Units
WELD 40	Introduction to Welding ¹	2
WELD 50	Oxyacetylene Welding	2
WELD 51	Basic Electric Arc Welding	2
WELD 53A	Welding Metallurgy	3
WELD 60	Print Reading and Computations for Welders	3
WELD 70A	Beginning Arc Welding	3

WELD 70B	Intermediate Arc Welding	3
WELD 70C	Certification for Welders	3
WELD 80	Construction Fabrication and Welding	3
WELD 81	Pipe and Tube Welding	3
Total Units		27

¹ Note: Any higher level welding courses may be substituted for WELD 40.

Air Conditioning & Welding Website (<http://www.mtsac.edu/airconditioning-welding/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be technically competent.
- Be employed or seeking employment in their area or a related area.
- Identify print views, lines, and dimensioning methods.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Welding (Certificate E0919)

Technology and Health Division

Certificate E0919

This program is designed to prepare the student for employment in the broad field of welding and

- leads to occupations in manufacturing and repair; and
- helps prepare the student for positions in supervision.

Courses in the welding curriculum prepare students for welding certificates. The College is a testing agency for the City of Los Angeles, and is authorized to administer the performance test for the Structural Welding certificate. There is a \$50 charge for students and \$60 for nonstudents to take this test. Topics of the written portion of the test which is administered by the City are reviewed in various welding courses offered by the College.

Required Courses

Course Prefix	Course Name	Units
WELD 40	Introduction to Welding	2
WELD 70A	Beginning Arc Welding ¹	3
WELD 70B	Intermediate Arc Welding	3
Total Units		8

¹ Note: Any higher level welding courses may be substituted for WELD 70A.

Recommended Electives

Course Prefix	Course Name	Units
WELD 60	Print Reading and Computations for Welders	3
WELD 70C	Certification for Welders	3

Air Conditioning & Welding Website (<http://www.mtsac.edu/airconditioning-welding/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be prepared to pass the Los Angeles City Structural Steel Exam.
- Be employed or seeking employment in their area or a related area.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Welding – Semiautomatic Arc Welding (Certificate T0933)

Technology and Health Division

Certificate T0933

Prepares students for entry-level employment as a licensed welder with additional skills development and theory in semiautomatic ARC welding. Coursework prepares students for industry licensing with emphasis on competencies required for certification in structural steel welding and specialty skills in semiautomatic ARC welding.

Required Courses

Course Prefix	Course Name	Units
WELD 40	Introduction to Welding ¹	2
WELD 50	Oxyacetylene Welding	2
WELD 51	Basic Electric Arc Welding	2
WELD 53A	Welding Metallurgy	3
WELD 60	Print Reading and Computations for Welders	3
WELD 70A	Beginning Arc Welding	3
WELD 70B	Intermediate Arc Welding	3
WELD 70C	Certification for Welders	3
WELD 80	Construction Fabrication and Welding	3
WELD 81	Pipe and Tube Welding	3
WELD 90B	Semiautomatic Arc Welding Process	3
Total Units		30

¹ Note: Any higher level welding courses may be substituted for WELD 40.

Air Conditioning & Welding Website (<http://www.mtsac.edu/airconditioning-welding/>)

Program Learning Outcomes

- Students will be employed or seeking employment in the area of study or a related area.
- Students will be technically competent.
- Students will demonstrate safe operation of welding equipment.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

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Accounting (AS Degree S0502)

Business Division

The Accounting Program provides many opportunities for students to design a plan for their individual goals through certificate and degree achievements. The associate degree in accounting is intended to prepare students for employment following graduation. The student will learn basic accounting skills combined with an in-depth training in a variety of accounting concepts, preparing the student for entry-level positions, professional advancement in their current job or transfer to a university to pursue a bachelor's degree in accounting.

Earning an Accounting Associate of Science degree will provide the knowledge and skills necessary for accounting jobs in general accounting, cost accounting, payroll, inventory management, asset management, accounts receivable, accounts payable, budgets and forecasting, financial analysis, etc. Students who wish to transfer and obtain a bachelor's degree should consult with a counselor or advisor to discuss transferability of courses.

This degree requires the completion of General Education (<https://catalog.mtsac.edu/programs/degrees-certificates/#gerequirementstext>) coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
BUSA 8	Principles of Accounting - Managerial	5
BUSA 52	Intermediate Accounting I	3
BUSA 52B	Intermediate Accounting II	3
BUSA 75	QuickBooks for Accounting	3
BUSA 76	Excel for Accounting	3
BUSM 20	Principles of Business	3
Required Electives		
Choose one course from the following:		3-4
BUSA 21	Cost Accounting	
BUSA 58	Federal Income Tax Law	
BUSA 71	Personal Financial Planning	
Total Units		28-29

GPS Site

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- describe the basic accounting system and how it is used to serve business needs,
- interpret accounting statements,
- list and explain the foundations upon which business is built and the economic challenges facing the United States

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Addiction Counseling (AS Degree S0657)

Technology and Health Division Degree S0657

In this program the student integrates theory and practical experience in developing skills necessary to work with persons with addiction disorders, their families, and employers. The curriculum is designed

to meet the credentialing requirements of the California Association of Alcohol/Drug Educators and the California Consortium of Addiction Programs and Professionals. Students who complete this option qualify for employment in a variety of addiction treatment settings.

This degree requires the completion of General Education (<https://catalog.mtsac.edu/programs/degrees-certificates/#gerequirementstext>) coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
AD 1	Alcohol and Drug Dependency	3
AD 2	Physiological Effects of Alcohol and Drugs	3
AD 3	Addiction: Prevention, Intervention, and Recovery	3
AD 4	Issues in Domestic Violence	3
AD 6	Co-Occurring Disorders	3
AD 8	Group Process and Leadership	3
AD 9	Family Counseling	3
AD 10	Case Management and Documentation	3
AD 11	Techniques of Interviewing and Counseling	3
AD 15A	Introduction to Laws and Ethics for Addictions Counselors	1
AD 15B	Law and Ethics for Addictions Counselors	1
Variable Unit Course. Complete 4 units in 2 semesters		4
AD 82	Work Experience in Addiction Counseling	

Required Electives

Select two from the following:		6
CHLD 10	Child Growth and Lifespan Development	
or CHLD 10H	Child Growth and Lifespan Development - Honors	
NF 10	Nutrition for Health and Wellness	
NF 25	Introduction to Nutrition Science	
or NF 25H	Introduction to Nutrition Science - Honors	
PSYC 1A	Introduction to Psychology	
or PSYC 1AH	Introduction to Psychology - Honors	
PSYC 1B	Biological Psychology	
PSYC 14	Developmental Psychology	
or PSYC 14H	Developmental Psychology - Honors	
PSYC 15	Introduction to Child Psychology	
PSYC 17	Introduction to Human Services	
PSYC 19	Abnormal Psychology	
PSYC 20	Introduction to Social Psychology	
PSYC 25	The Psychology of Women	
PSYC 26	Psychology of Sexuality	
PSYC 33	Psychology for Effective Living	
SOC 1	Introduction to Sociology	
or SOC 1H	Introduction to Sociology - Honors	
SOC 2	Contemporary Social Problems	
or SOC 2H	Contemporary Social Problems - Honors	
SOC 4	Introduction to Gerontology	
SOC 5	Introduction to Criminology	
or SOC 5H	Introduction to Criminology - Honors	
SOC 7	Sociology of Religion	
SOC 14	Marriage and the Family	
or SOC 14H	Marriage and the Family - Honors	
SOC 15	Child Development	
SOC 20	Introduction to Race and Ethnicity	
SOC 20H	Introduction to Race and Ethnicity - Honors	

SOC 36	Asian American Communities
SOC 40	Introduction to Sex and Gender Roles
SOC 40H	Introduction to Sex and Gender Roles - Honors

Total Units**39**

Addiction Counseling Website (<https://www.mtsac.edu/mental-health/addictions-counseling/>)

Guided Pathways of Study Suggested Course Sequence (<https://www.mtsac.edu/guided-pathways/pathway-results.html?pthwyvar=S0657&desc=Addictions+Counseling%2C+AS+S0657&status=online>)

Eligibility Requirements:

- File a College application and be accepted as a student at Mt. San Antonio College.

Selection Procedures

- All classes are open to all students who meet admission requirements and course prerequisites.

a) Restricted Electives can be taken in conjunction with core and skills courses

b) Refer to Schedule of Credit Classes for sequence of courses

c) For questions, call the division office at (909) 594-5611, ext.4750

Working environment:

May be exposed to infectious and contagious disease, without prior notification

May be exposed to the risk of blood borne diseases

Exposed to hazardous agents, body fluids and wastes

Exposed to odorous chemicals and specimens

Subject to hazards of flammable, explosive gases

Subject to burns and cuts

Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances

Handle emergency or crisis situations

Subject to many interruptions

Requires decisions/actions related to end of life issues

Exposed to products containing latex

Exposure to a highly charged emotional environment which can be stressful intense

Eligibility Requirements

- File a College application and be accepted as a student at Mt. San Antonio College.

Selection Procedures

- All classes are open to all students who meet admission requirements and course prerequisites.

Special Instructions

- Restricted Electives must be taken prior to enrollment in Field Experience
- Restricted Electives can be taken in conjunction with core and skills courses
- Refer to Schedule of Credit Classes for sequence of courses
- For questions, call the division office at (909) 274-7500, ext.4750

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- May be exposed to the risk of blood borne diseases

- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle emergency or crisis situations
- Subject to many interruptions
- Requires decisions/actions related to end of life issues
- Exposed to products containing latex
- Exposed to highly charged emotional environment which can be stressful intense

English Language Skills

Although proficiency in English is not a criterion for admission, students are encouraged to be able to speak, write and read English to complete classes successfully and to ensure safety for themselves and others.

The Alcohol and Drug Counseling program is accredited by the California Association for Alcohol/Drug Educators and the California Consortium of Addiction Programs and Professionals.

Contact:

California Association for Alcohol/Drug Educators

5230 Clark Avenue, Suite 3

Lakewood, CA 90712

(707) 722-2331

www.caade.org (<http://www.caade.org/>)

California Consortium of Addiction Programs and Professionals

5861 Cherry Avenue, Suite 301

Long Beach, CA 90805

<https://ccapp.us/>

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be technically competent to safely practice as an entry-level alcohol & drug counselor.
- Demonstrate an understanding of ethical & legal requirements for alcohol & drug counselors.
- Demonstrate the ability to develop and achieve entry-level professional goals.
- Demonstrate the ability to develop and achieve entry-level professional goals.
- Demonstrate competency in basic counseling skills commensurate with an entry level practitioner in the addictions counseling field.
- Demonstrate the ability to assess, intervene, and refer clients with co-occurring mental health and substance abuse disorder to appropriate resources.
- Students completing the certificate/associates degree program will demonstrate the ability to prepare and develop professional treatment plans and other clinical documentation.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Administration of Justice (AS Degree S0404)

Technology and Health Division S0404

The A.S. Degree in Administration of Justice program is intended to prepare students for entry-level employment following graduation. Students desiring a bachelor's degree (transfer program) should consult with a counselor or advisor to discuss transfer of courses.

The courses emphasize the modern role of law enforcement and corrections within the criminal justice systems. Written and oral communication skills are a consistent focus. Entry-level employment opportunities available after completion of this program may include law enforcement as peace officers, corrections officers, custodial officers, non-sworn security and investigations, other non-sworn positions in law enforcement, and public service.

This degree requires the completion of General Education (<https://catalog.mtsac.edu/programs/degrees-certificates/#gerequisitestext>) coursework plus the following:

Required Courses

Correction: Added missing courses to required electives: ADJU 9 and ADJU 50. 8/23/2022

Course Prefix	Course Name	Units
ADJU 1	The Administration of Justice System	3
ADJU 2	Principles and Procedures of the Justice System	3
ADJU 3	Concepts of Criminal Law	3
ADJU 4	Legal Aspects of Evidence	3
ADJU 5	Community Relations	3
ADJU 68	Administration of Justice Report Writing	3
Choose four from the following:		12
ADJU 6	Police Patrol Tactics and Strategy	
ADJU 9	Introduction to Homeland Security	
ADJU 10	Introduction to Correctional Sciences	
ADJU 13	Concepts of Traffic Services	
ADJU 20	Principles of Investigation	
ADJU 38	Narcotics Investigation	
ADJU 50	Introduction to Forensics for Criminal Justice	
ADJU 59	Gangs and Corrections	
ADJU 74	Vice Control	
SOC 1	Introduction to Sociology	
or SOC 1H	Introduction to Sociology - Honors	
SOC 5	Introduction to Criminology	
or SOC 5H	Introduction to Criminology - Honors	
Total Units		30

Administration of Justice Website (<http://www.mtsac.edu/justice/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate the principals involved in documenting the investigation of criminal activity.
- Identify and apply legal precedents in field work.
- Demonstrate familiarity with the social factors related to police interaction with communities.

- Demonstrate understanding of how criminal codes are used and how statutory law is practically applied.
- Demonstrate the ability to use technology and other resources to research social and legal aspects of the criminal justice system.
- Demonstrate the ability to present information in diverse circumstances, with various cultures and communities, involving public and media issues.
- Understand professional skills related to court testimony, interview, interrogation, and law enforcement nomenclature.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Administrative Assistant (AS Degree S0514)

Business Division Degree S0514

This program is intended to prepare students for employment following graduation as administrative assistants, executive assistants, office managers, or other clerical and support staff. Training in a variety of computer and clerical skills is emphasized. Students desiring a bachelor's degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

This degree requires the completion of General Education coursework (<https://catalog.mtsac.edu/programs/degrees-certificates/#gerequisitestext>) plus the following:

Required Courses

Course Prefix	Course Name	Units
BUSO 25	Business Communications	3
BUSO 26	Oral Communications for Business	3
CISB 10	Office Skills	3
CISB 15	Microcomputer Applications	3.5
CISB 16	Macintosh Applications	2
CISB 21	Microsoft Excel	3
CISB 31	Microsoft Word	3
CISB 51	Microsoft PowerPoint	3
Choose one from the following:		2-3.5
CISD 11 & 11L	Database Management - Microsoft Access and Database Management - Microsoft Access Laboratory	
CISN 21	Windows Operating System	
CISS 11	Practical Computer Security	
CISW 15	Web Site Development	
Total Units		25.5-27

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Create and present a visual slide presentation to include text, graphic objects, design theme, slide transition, and object animation.
- Create a document in which text, paragraphs, and layout are formatted effectively and efficiently using word processing software (Word).

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Agricultural Science and Technology (AS Degree S0853)

Natural Sciences Division

The A.S. in Agricultural Science and Technology is designed to enable students to prepare for a career in this essential and diverse profession. It is also ideal for those who desire a career in agricultural education. The curriculum is flexible in nature to allow for previous experience and specialization in a given area of agriculture. The program is unique in that most courses provide hands-on experiences designed to give the students a combination of practical skills and technical knowledge. This program is intended to prepare students for employment following graduation or to transfer to a university. Students desiring a bachelor's degree should consult with the department chairperson, counselor or advisor to discuss transferability of courses.

Upon completion of the A.S. in Agricultural Science and Technology degree students will understand the foundations of agriculture, animal production practices, plant production practices, soil science, crop nutrition, crop pest and disease control, and the operation of agricultural equipment. Students will be prepared for careers within a wide variety of specializations in the field of agriculture. This degree also prepares students with the foundational knowledge necessary to pursue baccalaureate degrees in Agriculture, Agricultural and Environmental Plant Sciences, Agricultural Science, Animal Science, Plant Science, Agriculture Education, Agriculture Studies or related majors.

Required Courses

Course Prefix	Course Name	Units
AGAG 1	Food Production, Land Use, and Politics - A Global Perspective	3
AGOR 1	Horticultural Science	3
AGOR 2	Plant Propagation/Greenhouse Management	3
AGOR 50	Soil Science and Management	3
AGOR 51	Tractor and Landscape Equipment Operations	3
ASCI 1	Animal Science	3
ASCI 2	Animal Nutrition	3
ASCI 2L	Animal Nutrition Laboratory	0.5
Choose three from the following:		9
AGOR 13	Landscape Design	
AGOR 24	Integrated Pest Management	
AGOR 32	Landscaping and Nursery Management	
AGOR 39	Turf Grass Production and Management	
AGOR 53	Small Engine Repair I	
AGOR 62	Irrigation Principles and Design	
AGOR 71	Construction Fundamentals	
ASCI 14	Swine Production	
ASCI 16	Horse Production and Management	
ASCI 17	Sheep Production	
ASCI 30	Beef Production	
ASCI 51	Animal Handling and Restraint	
WELD 40	Introduction to Welding	
Total Units		30.5

Animal Science Website (<https://www.mtsac.edu/animal/>)

Agricultural Sciences Website (<https://www.mtsac.edu/agriculture/>)

Horticulture Website

Air Conditioning and Refrigeration (AS Degree S0909)

Technology and Health Division Degree S0909

The Air Conditioning and Refrigeration (AIRC) Degree Program prepares students for entry level employment or for advancement of existing skills/knowledge without requiring any prior knowledge or experience. In addition to exposing students to core topics such as mechanical and electrical fundamentals, the Program includes coursework in heat loads, advanced electrical and mechanical, welding, math, codes and standards, and air properties. Hands-on labs throughout the program expose students to a cross-section of systems and equipment used in the industry.

The Program is designed to prepare the student for employment in the broad field of air conditioning, heating, and refrigeration and leads to occupations in design, manufacturing, operation, sales, distribution, installation, maintenance, repairs, and controls. There are no prerequisites and/or enrollment limitations.

This degree requires the completion of General Education (<https://catalog.mtsac.edu/programs/degrees-certificates/#gerequirementstext>) coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
AIRC 10	Technical Mathematics in Air Conditioning and Refrigeration	2
AIRC 11	Welding for Air Conditioning and Refrigeration	2
AIRC 12	Air Conditioning Codes and Standards	3
AIRC 20	Refrigeration Fundamentals	4
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5
AIRC 26	Gas Heating Fundamentals	2
AIRC 30	Heat Load Calculations and Design	4
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4
AIRC 32A	Air Properties and Measurement	1.5
AIRC 34	Commercial Systems	4
Total Units		31.5

Air Conditioning and Refrigeration Website (<http://www.mtsac.edu/airconditioning/>)

The Air Conditioning and Refrigeration program is accredited by the Partnership for Air-Conditioning, Heating, Refrigeration Accreditation (PAHRA).

Contact:

Partnership for Air-Conditioning, Heating, Refrigeration Accreditation (PAHRA)

2111 Wilson Blvd., Suite 500

Arlington, VA 22201-3001

(703) 524-8800

Contacts:

Warren Lupson (AHRI)

Wanda Wilkinson (AHRI)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Properly handle refrigerants based on Section 608 of the clean air act.
- Evaluate, troubleshoot, and modify the electrical, mechanical and air side operation of an air conditioning or refrigeration system.
- Perform a residential heat load calculation, select the equipment, and size the ductwork based on ACCA's Manual J8 and Manual D.
- Select equipment and components for commercial refrigeration systems.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Airframe and Aircraft Powerplant Maintenance Technology - Day (AS Degree S0911)

Technology and Health Division
Degree S0911

This program prepares students to enter employment as certified airframe and powerplant technicians in the aircraft maintenance industry. Training is given in the overhaul of various airframes, powerplants, and their components. Completion of this degree leads to an Associate in Science Degree or a Certificate. Excellent opportunities for employment exist in this area of training. Certain administrative, quality control, and flight personnel careers require the applicant to hold a valid A & P Certificate.

This program offers a day (full-time) or evening (full-time) program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 65A and AIRM 65B are equivalent to evening program courses AIRM 95A, AIRM 95B, AIRM 96A, AIRM 96B, AIRM 97A, AIRM 97B, AIRM 98A, and AIRM 98B. Day program courses AIRM 66A and AIRM 66B are equivalent to evening program courses AIRM 90A, AIRM 90B, AIRM 91A, AIRM 91B, AIRM 92A, AIRM 92B, AIRM 93A, and AIRM 93B. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

This degree requires the completion of General Education (<https://catalog.mtsac.edu/programs/degrees-certificates/#gerequisitestext>) coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
AIRM 65A	Aircraft Powerplant Theory	13
AIRM 65B	Aircraft Powerplant Systems	13
AIRM 66A	Aircraft Airframe Maintenance Structures	13
AIRM 66B	Aircraft Airframe Maintenance Systems	13
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3
AIRM 71	Aviation Maintenance Science	6
AIRM 72	Aircraft Materials and Processes	2
Total Units		66

Recommended Electives

Course Prefix	Course Name	Units
AIRM 74	Aircraft Maintenance Technology - Work Experience	2
AIRM 80	Laboratory Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4

Aircraft Maintenance Website (<http://www.mtsac.edu/aircraft-maintenance/>)

The Airframe and Aircraft Powerplant Maintenance Technology program is accredited by the Federal Aviation Administration (FAA).

Contact:

Federal Aviation Administration (FAA)

800 Independence Avenue, SW
Washington, DC 20591
1(800) 835-5322
www.faa.gov

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Connect learned theory with real-world problems and develop a logical solution to the problem.
- Locate, interpret, and apply technical data from industry manuals and apply that technical data to a maintenance situation.
- Determine several possible solutions for dealing with a given situation and then decide which solution(s) are ethical and which are not.
- Demonstrate proper use of aircraft repair equipment.
- Apply knowledge of aeronautics, aircraft maintenance, and aviation regulations.
- Inspect an aircraft/aircraft component and determine if the unit conforms to industry established standards.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Airframe and Aircraft Powerplant Maintenance Technology - Evening (AS Degree S0951)

Technology and Health Division
Degree S0951

This program prepares students to enter employment as certified airframe and powerplant technicians in the aircraft maintenance industry. Training is given in the overhaul of various airframes, powerplants, and their components. Completion of this degree leads to an Associate in Science Degree or a Certificate. Excellent opportunities for employment exist in this area of training. Certain administrative, quality control, and flight personnel careers require the applicant to hold a valid A & P Certificate.

This program offers a day (full-time) or evening (full-time) program option. The only difference between the two options is the course numbering and time required to complete the program. Day program

courses AIRM 65A and AIRM 65B are equivalent to evening program courses AIRM 95A, AIRM 95B, AIRM 96A, AIRM 96B, AIRM 97A, AIRM 97B, AIRM 98A, and AIRM 98B. Day program courses AIRM 66A and AIRM 66B are equivalent to evening program courses AIRM 90A, AIRM 90B, AIRM 91A, AIRM 91B, AIRM 92A, AIRM 92B, AIRM 93A, and AIRM 93B. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

This degree requires the completion of General Education (<https://catalog.mtsac.edu/programs/degrees-certificates/#gerequisitestext>) coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3
AIRM 71	Aviation Maintenance Science	6
AIRM 72	Aircraft Materials and Processes	2
AIRM 90A	Airframe Theory	3
AIRM 90B	Airframe Wood, Fabric, and Paint	3
AIRM 91A	Airframe Aluminum Repair and Plastics	3
AIRM 91B	Airframe Composites, Rigging, and Inspection	3
AIRM 92A	Airframe Hydraulics and Pneumatics	3
AIRM 92B	Airframe Fuel and Environmental Systems	3
AIRM 93A	Airframe Warning and Fire Systems	3
AIRM 93B	Aircraft Communication, Navigation, Radar, and Autopilot Systems	3
AIRM 95A	Aircraft Powerplant Theory	3
AIRM 95B	Aircraft Powerplant Inspection and Maintenance	3
AIRM 96A	Aircraft Turbine Engines	3
AIRM 96B	Aircraft Propellers	3
AIRM 97A	Aircraft Powerplant Instrumentation	3
AIRM 97B	Aircraft Powerplant Fuel Systems	3
AIRM 98A	Aircraft Powerplant Ignition Systems	3
AIRM 98B	Aircraft Powerplant Lubricating Systems	3
Total Units		62

Recommended Electives

Course Prefix	Course Name	Units
AIRM 74	Aircraft Maintenance Technology - Work Experience	2
AIRM 80	Laboratory Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4

Aircraft Maintenance Website (<http://www.mtsac.edu/aircraft-maintenance/>)

The Airframe and Aircraft Powerplant Maintenance Technology program is accredited by the Federal Aviation Administration (FAA).

Contact:

Federal Aviation Administration (FAA)
800 Independence Avenue, SW
Washington, DC 20591
1(800) 835-5322
www.faa.gov (<http://www.faa.gov>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Connect learned theory with real-world problems and develop a practical solution to the problem.
- Locate, interpret, and apply technical data from industry manuals and apply that technical data to a maintenance situation.
- Determine several possible solutions for dealing with a given situation and then decide which solution(s) are ethical and which are not.
- Demonstrate proper use of aircraft repair equipment.
- Apply knowledge of aeronautics, aircraft maintenance, and aviation regulations.
- Inspect an aircraft/aircraft component and determine if the unit conforms to industry established standards.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Animal Science (AS Degree S0854)

Natural Sciences Division

The Animal Science Associates Degree focuses on animal behavior, husbandry, production, and services which; are a critical part of animal agriculture and related industries. The curriculum provides a combination of technical knowledge and practical skills utilizing a hands-on approach to instruction. Upon completion of the program students will be prepared for entry level employment opportunities and/or transfer to a four year institution.

Required Courses

Course Prefix	Course Name	Units
ASCI 1	Animal Science	3
ASCI 2	Animal Nutrition	3
ASCI 14	Swine Production	3
ASCI 17	Sheep Production	3
ASCI 30	Beef Production	3
ASCI 59	Work Experience in Agriculture ¹	1-4
ASCI 96	Animal Sanitation and Disease Control	3
ASCI 97	Artificial Insemination of Livestock	3

Required Electives: Choose a minimum of six units **6**

AGOR 51	Tractor and Landscape Equipment Operations
AGOR 53	Small Engine Repair I
AGOR 63	Irrigation Systems Management
ASCI 12	Exotic Animal Management
ASCI 16	Horse Production and Management
ASCI 18	Horse Ranch Management
ASCI 19	Horse Hoof Care
ASCI 20	Horse Behavior and Training
ASCI 34	Livestock Judging and Selection
ASCI 51	Animal Handling and Restraint
ASCI 71	Canine Management
ASCI 72	Feline Management
ASCI 73	Tropical and Coldwater Fish Management
ASCI 74	Reptile Management
ASCI 76	Aviculture - Cage and Aviary Birds
ASCI 94	Animal Breeding
WELD 40	Introduction to Welding

Select one course from the following: **3**

BUSM 20	Principles of Business
BUSM 66	Small Business Management

BUSS 35	Professional Selling
BUSS 36	Principles of Marketing
Total Units	31-34

¹ Complete one to four units of ASCI 59

Animal Sciences Website (<http://www.mtsac.edu/animal/>)

Animation (AS Degree S1006)

Arts Division

Degree S1006

The Animation Program offers an integrated/interdisciplinary approach to prepare students to meet current and future job market demands. The student will be given a balanced blend of art and technology-based skills essential for today's careers in animation. The program offers both an A.S. degree and certificates. Course content is driven by industry needs in order to provide the student with the best possible preparation for a career in animation or for transfer to an institution of higher learning. This Animation AS Degree provides expertise leading to employment opportunities as junior animators, character designers, storyboard artists, 3D modelers and game designers.

This degree requires the completion of General Education (<https://catalog.mtsac.edu/programs/degrees-certificates/#gerequisitestext>) coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Core Courses		
ANIM 100	Digital Paint and Ink	3
ANIM 101A	Drawing - Gesture and Figure	3
ANIM 108	Principles of Animation	3
ANIM 110	Animal Drawing	3
ANIM 115	Storyboarding	3
ANIM 116	Character Development	1.5
Required Electives		
Choose one of the following specializations:		21-25
Animation		
ANIM 130	Introduction to 3D Modeling	
ANIM 132	Intermediate 3D Modeling	
ANIM 140	Introduction to 3D Animation	
ANIM 146	Intermediate 3D Animation	
ANIM 148	Demo Reel	
ANIM 172	Motion Graphics, Compositing and Visual Effects	
ANIM 175	Digital Animation	
Gaming		
ANIM 122	Introduction to Virtual Reality Design and Technology	
ANIM 130	Introduction to 3D Modeling	
ANIM 131	Introduction to Game Design	
ANIM 140	Introduction to 3D Animation	
ANIM 141	Game Level Design	
ANIM 148	Demo Reel	
Choose two courses from the following (6-7 units):		
ANIM 151	Game Art Development	
ANIM 210	Building Worlds in Virtual Reality	
CSCI 110	Fundamentals of Computer Science	
Total Units		37.5-41.5

Animation & Gaming Website (<http://mtsac.edu/animation/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be able to plan, produce, collaborate on, and create 2D art and animation assets for use in games and animation productions.
- Be able to plan, produce, collaborate on, and create 3D models of objects and environments that can be used in games, and animation productions.
- Be able to plan, develop, and collaborate on storyboards for short animation and game productions.
- Be able to design, collaborate on, work with external developers and produce board games, and digital games.
- Create a portfolio demonstrating a clear understanding of selecting and organizing to present their art portfolio to animation and game studios.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Applied Laboratory Science Technology (ALST) (AS Degree S0307)

Natural Sciences Division

Degree S0307

This program provides theoretical and technical training to prepare students for employment as entry-level chemical technicians in fields such as chemical quality control, chemical process control, analytical chemistry, water quality, and research and development. The program includes a broad-based overview of workforce options and emphasizes development of analytical skills, instrument proficiency, critical thinking, and troubleshooting of experimental designs and outcomes.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
BUSM 10	Principles of Continuous Quality Improvement	3
CHEM 20	Introductory Organic and Biochemistry	5
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
CHEM 51	General Chemistry II	5
Choose six or seven units from the following:		6-7
MICR 22	Microbiology	
PHIL 12	Introduction to Ethics	
or PHIL 12H	Introduction to Ethics - Honors	
SPCH 26	Interpersonal Communication	
or SPCH 26H	Interpersonal Communication - Honors	
Total Units		24-25

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- use critical thinking to analyze and solve problems.
- troubleshoot experimental designs and outcomes.

- perform entry-level chemical technician duties such as chemical quality control, chemical process control, water quality, and R&D.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Architectural Design Concentration (AS Degree S0390)

Technology and Health Division Degree S0390

This program prepares students to enter the field of architecture and related areas. The student is provided with an option of direct employment into the field or preparation for transfer to a professional school of architecture. The Design Concentration focuses upon studio-based design projects, drawing, and presentation skills. The student will develop a portfolio of work relevant to their concentration.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
ARCH 101	Design I - Elements of Design	4
ARCH 102	Design II - Architectural Design	4
ARCH 121	CADD and Digital Design Media Level I	4
ARCH 122	Architectural Presentations	4
ARCH 142	Architectural Materials and Specifications	4
ARCH 180	Science Concepts for Sustainable Design and Environmental Control	3
ARCH 201	Design III - Environmental Design	4
ARCH 202	Design IV - Sustainable Design Advanced Project	4
ARCH 221	Architectural Rendering and Illustration	3
ARCH 222	Advanced Digital Media, Generative, and Algorithmic Design and Illustration	3
ARCH 280	Structural Design Level I	3
Total Units		40

ENGL 1C, MATH 150, and PHYS 2AG are typically required for transfer to a professional school of architecture. Verify all requirements with the transfer institution.

Architecture Website (<http://www.mtsac.edu/architecture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Successfully transfer to a four year university in a related major.
- Be employed or seeking employment in the field or in a related area.
- Present and evaluate the pros and cons of particular architectural design alternative solution.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Architectural Technology Concentration (AS Degree S0392)

Technology and Health Division Degree S0392

This program prepares students to enter the field of architecture and related areas. The student is provided with an option of direct employment into the field or preparation for transfer to a professional school of architecture. The Technology Concentration focuses upon building and construction technology, documentation, codes, and computer applications. Current technology and computer (CAD) skills are integrated into the program.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
ARCH 101	Design I - Elements of Design	4
ARCH 121	CADD and Digital Design Media Level I	4
ARCH 141	Design Drawing and Communication	4
ARCH 142	Architectural Materials and Specifications	4
ARCH 145	Building and Zoning Codes	3
ARCH 146	Architectural Drawings and Fabrications	3
ARCH 147	Architectural CAD and BIM	3
ARCH 247	Architectural CAD Working Drawings	3
ECT 26	Civil Engineering Technology and CADD	3
ECT 70	Elements of Construction Management	3
ECT 71	Construction Estimating	3
Total Units		37

An advanced MATH course and PHYS 2AG typically are required for transfer to a professional school of architecture. Verify all requirements with the transfer institution.

Architecture Website (<http://www.mtsac.edu/architecture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be employed or actively seeking employment in the field or a related field.
- Create design development and working drawing sets reflecting refined job skills in architectural CAD.
- Transfer to a 4 year university in a related major.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Artificial Intelligence for Business (AS Degree S0844)

Business Division

The A.S. Degree in Artificial Intelligence for Business is designed for returning CIS, business, marketing, and data analytics professionals with industry experience or students who have completed CIS courses. The degree offers a balanced set of classes that provides students with the knowledge and skills to obtain jobs in the areas of data science, data analysis, data mining, text mining, business intelligence, machine learning, deep learning, natural language processing, and artificial intelligence research. Students will learn how to make business decisions using different machine learning algorithms and deep learning prediction models of different complexities. Students will learn how to

use natural language processing to better understand customer intent through sentiment analysis and gather market intelligence.

Required Courses

Course Prefix	Course Name	Units
CISB 11	Computer Information Systems	3.5
CISB 60	Machine Learning in Business	3.5
CISB 62	Deep Learning in Business	3.5
CISB 63	Natural Language Processing in Business	3.5
CISP 71	Programming in Python	3
CISP 71L	Programming in Python Laboratory	0.5
MATH 110	Elementary Statistics	3
or MATH 110H	Elementary Statistics - Honors	
Choose one of the following options:		3.5
CISD 21	Database Management - Microsoft SQL Server	
CISD 21L	Database Management - Microsoft SQL Server Laboratory	
or		
CISD 31	Database Management - Oracle	
CISD 31L	Database Management - Oracle Laboratory	
Total Units		24

Audio Arts (AS Degree S0434)

Arts Division

The Audio Arts degree provides students with conceptual, technical, and creative skills necessary for employment in audio-related positions in a variety of industries. These industries include, but are not limited to, music, film, TV, radio, animation, gaming, theater, event management, theme parks, commercial installations, and integrated systems. The program provides training in audio production, engineering, and business for recordings, live events, and multimedia.

Students who successfully complete the Associate's of Science program will be able to:

- Collaborate effectively in the development of high-quality audio productions.
- Lead and manage complex audio productions.
- Develop audio productions for a specified purpose in a variety of settings.
- Analyze and critique audio productions in their historical and cultural context.
- Analyze emerging technology and industry developments to make strategic decisions.
- Operate advanced audio systems in recording, live, and multimedia settings.
- Apply technical knowledge and skills to the development of high-quality audio productions.
- Apply creative audio techniques to the development of effective audio productions.

While the audio job market is competitive and position placement is in no way guaranteed, successful graduates will gain competitive skills necessary for pursuing entry-level employment as a (n):

- Producer or director
- Studio, mix, or live sound engineer

- Sound designer or arranger
- Sound editor
- Entertainer or performer
- Audio and video equipment technician
- Media and communication worker
- Communication equipment operator

Required Courses

Course Prefix	Course Name	Units
MUSA 100	Fundamentals of Audio Technology	3
MUSA 110	Acoustics for Audio Production	3
MUSA 120	Electronic Music	3
MUSA 130	Business of Audio Production	3
MUSA 150	Audio Recording	3
MUSA 160	Live Sound Engineering	3
MUSA 200	Audio Production	3
MUSA 210	Audio for Multimedia	3
MUSA 220	Sound Design for Live Performance	3
MUSA 250	Audio Capstone	3

Required Electives

Select 6 units from the following		6
BUSM 66	Small Business Management	
ELEC 50A	Electronic Circuits - Direct Current (DC)	
ELEC 50B	Electronic Circuits (AC)	
MUS 110A	Music Fundamentals for Musicians	
MUSA 230	Songwriting	
MUSA 299	Work Experience in Audio Arts	
R-TV 01	Introduction to Electronic Media	
R-TV 11A	Beginning Radio Production	
THTR 14	Stagecraft	
Total Units		36

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Aviation Science (AS Degree S0910)

Technology and Health Division

Degree S0910

This curriculum meets the requirements of the Federal Aviation Administration Air Traffic Collegiate Training Initiative (AT-CTI). Under an educational partnership agreement with the FAA, this CTI program prepares students for broad-based aviation careers. Students completing this CTI program may be recommended by the college for hiring by the FAA as air traffic controllers. There are no prerequisites or enrollment limitations.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Core Courses		
AERO 100	Primary Pilot Ground School	4
AERO 102	Aviation Weather	3
AERO 104	Federal Aviation Regulations	3
AERO 152	Air Transportation	3
AERO 200	Aviation Safety and Human Factors	3

AERO 250	Navigation	3
AERO 252	Instrument Ground School	3
AIRT 151	Aircraft Recognition and Performance	3
AIRT 201	Terminal Air Traffic Control	3
AIRT 203	Enroute Air Traffic Control	3
AIRT 251	Air Traffic Control Team Skills	1.5
Total Units		32.5

Recommended Electives

Course Prefix	Course Name	Units
AERO 150	Commercial Pilot Ground School	3
AERO 202	Aircraft and Engines	3
BUSM 60	Human Relations in Business	3

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be familiar with how the National Airspace System has evolved into today's complex airspace environment; understand current air traffic control separation standards and procedures for both terminal and en route operations; apply those separation standards, procedures, and techniques in a computer simulated environment while being aware of emerging air traffic control technologies and automation.
- Recognize, identify, and remember a wide variety of aircraft including the manufacturer, Federal Aviation Administration identification code, aircraft performance characteristics, and how those characteristics are applied to meet en route and terminal separation standards in a computer driven simulated environment.
- Understand the importance of teamwork among co-workers, the various stages of team development, coping and performing techniques and how to apply them in a scenario-based working environment; recognize a variety of personality types and team behaviors toward becoming a skilled team player as applied to today's intense air traffic control working environment.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Baking and Pastry (AS Degree S0456)

Business Division Degree S0456

The Baking and Pastry Degree program prepares students for career opportunities in bakeries, restaurants, catering, hotels, and other food service businesses. Students gain practical training in the use of commercial equipment and acquire the skills necessary to be successful in the field of baking such as: production baking, candy making, specialty cakes, plated desserts and artisan breads, menu development, portion control, and cost control. Students who successfully complete the requirements for this degree will earn the Food Production Manager Certification. The program combines management theory and practical application of skills and abilities, preparing them to meet the needs of employers.

Required Courses

Course Prefix	Course Name	Units
CUL 101	Professional Cooking Foundations	3
CUL 102	Professional Cooking I	3

CUL 105	Baking and Pastry I	3
CUL 106	Baking and Pastry II	3
CUL 116	World Baking	3
CUL 117	Artisan Bread	3
HRM 52	Food Safety and Sanitation	2
HRM 56	Hospitality Supervision	3
HRM 57	Hospitality Cost Control	3
HRM 61	Menu Planning	3

Restaurant Series

CUL 91	Culinary Work Experience	5
CUL 114	Dining Room Service Management	3
CUL 115	Restaurant Operations	3

Required Electives

Choose 3 units from the following:		3
CUL 111	Exploring Beverages	
CUL 118	Specialty Cakes	
HRM 62	Event Planning and Catering	
HRM 72	Hospitality Purchasing and Procurement	

Total Units	43

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Big Data Analytics (AS Degree S0845)

Business Division

The A.S. Degree in Big Data Analytics for Business is designed for returning CIS, business, marketing, and data analytics professionals with industry experience or students who have completed CIS courses. The degree offers a balanced set of classes that provides students with the knowledge and skills to obtain jobs in the areas of data science, data analysis, big data and data mining. Students will learn how to make business decisions based upon the analysis of large amounts of data. Students will learn about processing, integrating, modeling, mining, and analytics related to big data. Students will use frameworks, tools, services, and programming languages to analyze data.

Required Courses

Course Prefix	Course Name	Units
CISB 11	Computer Information Systems	3.5
CISD 41	Introduction to Data Science	3.5
CISD 42	Big Data Integration and Processing	3.5
CISD 43	Big Data Modeling and Analysis	3.5
CISP 71	Programming in Python	3
CISP 71L	Programming in Python Laboratory	0.5
MATH 110	Elementary Statistics	3
or MATH 110H	Elementary Statistics - Honors	
Choose two of the following options:		3.5
CISD 21	Database Management - Microsoft SQL Server	
CISD 21L	Database Management - Microsoft SQL Server Laboratory	

or

CISD 31	Database Management - Oracle	

CISD 31L

Database Management - Oracle Laboratory

Total Units 24

Biology (AS Degree S0652)

Natural Sciences Division

The A.S. Biology degree offers the student a flexible way to earn a Biology Associate degree. After completing a one-year general biology sequence, the student chooses one of three tracks, biodiversity, cell and molecular biology, or pre-health professions, and takes three additional courses in biology based on those interests. The biodiversity track is for students interested in ecology, field biology, zoology, botany, and similar fields. The cell and molecular biology track is for students interested in molecular biology, genetics, cell biology, and biochemistry. The pre-health professions track is for students interested in medicine, dentistry, and veterinary medicine. This degree may facilitate transfer to baccalaureate majors in biology, and in many cases may facilitate transfer to more specialized majors such as Botany, Ecology, Environmental Science, Genetics, Molecular biology, Microbiology, or Zoology. Students desiring transfer should see a counselor.

Required Courses

Course Prefix	Course Name	Units
BIOL 2	Plant and Animal Biology	4
BIOL 4	Biology for Majors	4
or BIOL 4H	Biology for Majors - Honors	
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
CHEM 51	General Chemistry II	5
or CHEM 51H	General Chemistry II - Honors	
MATH 180	Calculus and Analytic Geometry	4
Only required for Cell and Molecular Biology track		0-4
BIOL 8	Cell and Molecular Biology	

Required Electives 11

Biodiversity track electives

BIOL 3	Ecology and Field Biology
BIOL 20	Marine Biology
BIOL 21	Marine Biology Laboratory
BIOL 25	Conservation Biology
BIOL 34	Fundamentals of Genetics
BIOL 34L	Fundamentals of Genetics Laboratory
BTNY 3	Plant Structures, Functions, and Diversity
MICR 1	Principles of Microbiology
MICR 22	Microbiology
ZOOL 3	Fundamentals of Zoology

OR

Cell and Molecular Biology track electives

BIOL 34	Fundamentals of Genetics
BIOL 34L	Fundamentals of Genetics Laboratory
CHEM 80	Organic Chemistry I
CHEM 81	Organic Chemistry II
MICR 1	Principles of Microbiology
MICR 22	Microbiology
MICR 26	Introduction to Immunology

Or

Pre-Health Professions track electives

ANAT 35	Human Anatomy
ANAT 36	Human Physiology

ANAT 38

Pathophysiology

BIOL 8

Cell and Molecular Biology

BIOL 34

Fundamentals of Genetics

BIOL 34L

Fundamentals of Genetics Laboratory

MICR 1

Principles of Microbiology

MICR 22

Microbiology

Recommended Electives

PHYS 2AG

General Physics

PHYS 2BG

General Physics

Or

PHYS 6A

General Physics with Calculus

PHYS 6B

General Physics with Calculus

Total Units**33-37**

Building Automation (AS Degree S0308)

Technology and Health Division

Degree S0308

This program is designed to prepare students for a career in the fields of Building Automation, Energy Management, and Green Building Technologies. Students desiring a bachelor's degree (transfer program) should consult with a counselor to discuss transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
AIRC 20	Refrigeration Fundamentals	4
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4
AIRC 34	Commercial Systems	4
AIRC 61	Building Automation Fundamentals	4
AIRC 65	Building Automation Networks and Programming	4
AIRC 67	Energy Management	4
CNET 56	Computer Networks	4

Total Units**33**

Building Automation Website (<http://www.mtsac.edu/buildingautomation/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Identify the startup and operational sequence of a chiller plant.
- Understand the purpose and function of chiller plant economizers.
- Demonstrate the use and application of controlled devices.
- Develop programming strategies for a chiller plant.
- Evaluate the energy usage of a multi-story commercial building.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Business: Management (AS Degree S0506)

Business Division

Degree S0506

This program is intended to prepare students for employment following graduation. Students wishing a bachelor's degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
BUSM 10	Principles of Continuous Quality Improvement	3
BUSM 20	Principles of Business	3
BUSM 51	Principles of International Business	3
BUSM 60	Human Relations in Business	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
BUSS 36	Principles of Marketing	3
CISB 15	Microcomputer Applications	3.5
Total Units		29.5

Recommended Electives

Course Prefix	Course Name	Units
BUSM 81	Work Experience in Business	1-4
BUSM 85	Special Issues in Business	2
BUSS 85	Special Issues in Marketing	2

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- List and explain the foundations upon which business is built and the economic challenges facing the United States.
- Identify how governments influence trade.
- Apply management concepts and functions.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Small Business Management (AS S0508)

Business Division

This program is intended to prepare students for employment following graduation. Students wishing a bachelor's degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
BUSM 10	Principles of Continuous Quality Improvement	3
BUSM 20	Principles of Business	3

BUSM 60	Human Relations in Business	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
BUSM 66	Small Business Management	3
BUSS 36	Principles of Marketing	3
CISB 15	Microcomputer Applications	3.5
Total Units		29.5

Recommended Electives

Course Prefix	Course Name	Units
BUSM 81	Work Experience in Business	1-4
BUSM 85	Special Issues in Business	2
BUSS 85	Special Issues in Marketing	2

The Small Business Management faculty recommends that students complement their studies with selected elective courses chosen from the list above. Students should meet with a professor of Small Business Management to help them determine which electives would best suit their career plans.

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Define and outline the key principles of continuous quality management.
- Describe business planning for small business.
- Develop a working knowledge of marketing terminology.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business: Retail Management (AS Degree S0509)

Business Division

Degree S0509

This program exposes students to the business world and the role of retail distribution. Students become familiar with careers in retail management as well as the latest trends in this fast changing field. Completion of this program aids the student's search for an entry-level job in retail management.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
or BUSA 72	Bookkeeping - Accounting	
BUSA 11	Fundamentals of Accounting	3
BUSM 60	Human Relations in Business	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
BUSO 25	Business Communications	3
BUSO 26	Oral Communications for Business	3
BUSS 36	Principles of Marketing	3
BUSO 50	Retail Store Management and Merchandising	3

CISB 15	Microcomputer Applications	3.5
Total Units		32.5

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Define organizational culture, socialization, and mentoring.
- Apply management concepts and functions.
- Explain theory and practical application of Equal Employment Opportunity current employment laws.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

This Guided Pathways for Success (GPS) is a suggested sequence of coursework needed for program completion. It is not an official educational plan. Schedule an appointment (<https://esars2012.mtsac.edu/appointments/counseling/eSARS.asp?WCI=Init&WCE=Settings>) with a counselor or advisor as soon as possible to create an individualized Mountie Academic Plan (MAP) specific to your goals and needs. Looking for guidance? A counselor can help.

Course	Title	Units
Fall Term 1		
BUSS 50	Retail Store Management and Merchandising	3
BUSM 60	Human Relations in Business	3
BUSM 61	Business Organization and Management	3
ENGL 1A	Freshman Composition	4
Units		13
Winter Term 1		
SPCH 1A	Public Speaking	4
Units		4
Spring Term 1		
BUSO 25	Business Communications	3
BUSM 62	Human Resource Management	3
AA/S KINES	Phys Ed (KIN) Activity Course	1
AA/S MATH	Meet AA/AS Math Comptcy Req	5
Certificate: Retail Management E0500 ⁰		
Submit petition to Admissions Records		Submit petition to Admissions Records
Units		12
Summer Term 1		
AA/S BEHAV	Area D-2 Elective Course	3
AA/S USHIS	Area D-1 Hist/Pol Sc Course	3
Units		6
Fall Term 2		
AA/S ARTS	Area C-1 Arts Course	3
AA/S HUM	Area C-2 Humanities Course	4
CHIN I or any Area C-2 Humanities ²		
Units		7
Winter Term 2		
AA/S LIFE	Area E Lifelong Undrstg Course	3

CISB 15	Microcomputer Applications	3.5
Units		6.5

Spring Term 2

BUSA 11	Fundamentals of Accounting	3
BUSO 26	Oral Communications for Business	3
BUSS 36	Principles of Marketing	3
AA/S SCNCE	Area B-1 or B-2 Science Course	3

Certificates: Retail Management L2-3 N0474/T0521¹

Retail Management, AS S0509⁹

Submit petitions to Admissions Records Submit petitions to Admissions Records

Units		12
Total Units		60.5

Child Development (AS Degree S1315)

Business Division Degree S1315

This program provides a theoretical framework and practical experience developing skills necessary to work directly in preschool classrooms. Graduates can be employed at the teacher or master teacher level. The program develops students' skills and abilities in observation and assessing, planning and executing activities, and classroom management based on developmentally appropriate practices. Degree requirements exceed the identified eight (8) courses for transfer by requiring additional practical experience and curriculum courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
CHLD 1	Child, Family, School and Community	3
CHLD 5	Principles and Practices in Child Development Programs ²	3
CHLD 6	Introduction to Child Development Curriculum ²	3
CHLD 11	Child and Adolescent Development ²	3
CHLD 64	Health, Safety, and Nutrition of Children	3
CHLD 66	Early Childhood Development Observation and Assessment ¹	2
CHLD 66L	Early Childhood Development Observation and Assessment Laboratory ¹	1
CHLD 68	Introduction to Children With Special Needs ²	3
CHLD 69	Early Childhood Development Field Work Seminar	2
CHLD 91	Early Childhood Development Field Work ¹	1
CHLD 84	Guidance and Discipline in Child Development Settings	3
Choose one of the following sequences:		3
CHLD 67	Early Childhood Education Practicum ¹	
CHLD 67L	Early Childhood Education Practicum Laboratory ¹	
OR		
CHLD 86	Infant Toddler Practicum Seminar	
CHLD 87	Infant Toddler Practicum Field Work Experience ¹	
Total Units		30

Note: These courses are acceptable for the Child Development requirements leading to the Child Development Permit.

¹ Students must provide documentation of influenza, pertussis (TDap), and measles immunization, as well as TB clearance, as required by SB792 prior to being permitted to enroll in this class. Instructions on submitting documentation are available at Child Development Center (<https://www.mtsac.edu/cdc/immunization/>).

² Documentation of tuberculosis (TB) clearance is required.

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Understand and use a wide array of developmentally appropriate approaches, instructional strategies, and tools to connect with children and families and positively influence each child's development and learning.
- Be able to evaluate Early care and Education Program regulations, standards, and policies according to Title 22 California.
- Be grounded in Child Development knowledge (theory) and use their understanding of young children and their needs to create environments that are healthy, respectful, supportive, and challenging for each child.
- Understand that successful programs depend upon partnerships with children's families and communities. They use this understanding to create respectful, reciprocal relationships that support and empower families and to involve all families in their children's development and learning.
- Understand that child observation, documentation, and other forms of assessment are central to the practices of all early childhood professionals. Students use systematic observations, documentation, and other effective assessment strategies to positively influence the development of every child.
- Understand the importance of developmental domains and academic content areas. Students use their knowledge and other resources to design, implement, and evaluate meaningful challenging curriculum.
- Be able to identify and conduct themselves as members of the early childhood profession. They know ethical guidelines and other professional standards related to early childhood practices. They know ethical guidelines and other professional standards related to early childhood education.
- Be able to apply effective guidance and interaction strategies that support all children's social learning, identity, and self-confidence.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Commercial Flight (AS Degree S0912)

Technology and Health Division Degree S0912

The Commercial Flight curriculum prepares students for careers as aircraft pilots as well as related ground occupations in aviation. Students have the opportunity for optional flight training with commensurate college credit. The pilot license is not required for graduation but it is desirable for career advancement.

This program prepares students for military and civilian aviation careers through transfer programs to bachelor's degree aviation curricula throughout the nation. With concurrent flight training, students may achieve the commercial pilot certificate and instrument rating simultaneously with the A.S. degree.

Aeronautics Website (<http://www.mtsac.edu/aeronautics/>)

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Core Courses		
AERO 100	Primary Pilot Ground School	4
AERO 102	Aviation Weather	3
AERO 104	Federal Aviation Regulations	3
AERO 150	Commercial Pilot Ground School	3
AERO 152	Air Transportation	3
AERO 200	Aviation Safety and Human Factors	3
AERO 202	Aircraft and Engines	3
AERO 250	Navigation	3
AERO 252	Instrument Ground School	3
Total Units		28

Recommended Electives

Course Prefix	Course Name	Units
AIRT 151	Aircraft Recognition and Performance	3

Note: The Commercial Flight faculty recommend that students complement their studies with selected elective courses chosen from the list above. Students should meet with a professor of commercial flight to help them determine which electives would best suit their career plans.

Aeronautics Website (<http://www.mtsac.edu/aeronautics/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Recognize and comprehend terms and vocabulary associated with piloting and air traffic control; early federal legislation that was influential in shaping the aviation industry; the function of government in regulating the aviation industry; airline economics and demand; and career planning skills and resources.
- Recognize and comprehend physiology limitations humans experience in flight; comprehend the skills, techniques, and procedures of advanced crew resource management (ACRM), and applying ACRM principles in problem-solving scenarios; analyze aircraft accident case-studies and identify key factors leading to aircraft accidents.
- Identify and determine the characteristics of North American continental and worldwide weather systems; encode and decode hourly surface weather observations and pilot reports; encode and decode aviation weather forecasts and meteorological advisories; and summarize aviation weather conditions and forecasts using a variety of charts, observations, and forecasts with the goal of demonstrating good decision-making and problem-solving skills.
- Comprehend the skills, techniques, and procedures for safely operating aircraft in primary, instrument, and commercial flight operations. Students will be able to explain the principles of flight and aerodynamics as they relate to airplanes, helicopters, and other high-

performance aircraft; analyze aircraft performance data necessary for takeoff and landing and evaluate problem-solving scenarios for “go” and “no-go” decisions; analyze and apply weight and balance principles in problem-solving scenarios.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Computer - Database Management Systems (AS Degree S0706)

Business Division Degree S0706

The A.S. Degree in Database Management Systems is a two-year program designed to prepare students for careers in database management systems. The degree offers a balanced catalog of classes that prepares students to work with both small and enterprise-level computer databases required by industry. Emphasis is placed on current techniques used in relational database management systems, including creating and maintaining table data, setting appropriate relationships between tables, querying needed information, creating additional objects needed for the dissemination of information from the database and setting properties to help ensure the security of data. In addition, VBA (Visual Basic for Applications) programming is covered. The enterprise level also concentrates in SQL development. In addition, the degree covers the theory of database design, including normalization and other current database topics. Students wishing a bachelor's degree (transfer program) should meet with a counselor or advisor to discuss transferability of courses. Opportunities that are available after completion of this degree include, but are not limited to, database administrators, designers and developers, and database systems analysts.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
CISB 11	Computer Information Systems	3.5
CISB 15	Microcomputer Applications	3.5
CISD 40	Database Design	3
CISM 11	Systems Analysis and Design	3.5
Choose one from the following:		3-3.5
BUSA 7 or BUSM 20	Principles of Accounting - Financial Principles of Business	3-5
CISN 21	Windows Operating System	
CISN 31 & 31L	Linux Operating System and Linux Operating System Laboratory	
Choose two lecture-lab combinations from the following:		7
CISD 11 & 11L	Database Management - Microsoft Access and Database Management - Microsoft Access Laboratory	
CISD 14 & 14L	VBA for Excel and Access and Visual Basic for Applications (VBA) Excel and Access Laboratory	
CISD 21 & 21L	Database Management - Microsoft SQL Server and Database Management - Microsoft SQL Server Laboratory	

CISD 31 & 31L	Database Management - Oracle and Database Management - Oracle Laboratory	
Total Units		26.5-29

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply normalization rules to database design.
- Create a program using script and stored procedure.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Computer and Networking Technology (AS Degree S0725)

Technology and Health Division Degree S0725

The Computer and Networking Technology program prepares students to become computer and networking service technicians. The program provides foundations in basic electricity and electronics, operating systems, computer service and troubleshooting, and customer relations, as well as more advanced training in networks, servers, and security. Students learn to install, configure, maintain, troubleshoot, and repair computers and networks. Students will become fully prepared to take the A+, Network+, Server+, and Security+ certification tests sponsored by CompTIA and offered at testing centers throughout the country. These industry certifications are recognized worldwide as benchmarks for the computer and networking technician. Further, students will have requisite skills upon which to seek additional I.T. certifications available for the computer and networking fields. Two certificate programs in Computer and Networking Technology are also available. Please see the “Certificates” section of the college catalog for descriptions and course requirements.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
CNET 50	Personal Computer (PC) Servicing	4
CNET 52	PC Operating Systems	4
CNET 54	PC Troubleshooting	4
CNET 56	Computer Networks	4
CNET 58	Server Systems	4
CNET 60	A+ Certification Preparation	2
CNET 62	Network+ Certification Preparation	2
CNET 64	Server+ Certification Preparation	2
CNET 66	Security+ Certification Preparation	2
ELEC 11 or CISB 15	Technical Applications in Microcomputers Microcomputer Applications	3-3.5
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 56	Digital Electronics	4
TECH 60	Customer Relations for the Technician	2
Total Units		45-45.5

Recommended Electives

Course Prefix	Course Name	Units
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 74	Microcontroller Systems	4

Electronics and Computer Technology Website (<https://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply knowledge of fundamental electronics principles, including voltage, current, and signal levels, to the analysis and troubleshooting of computers and data-communications networks.
- Apply knowledge of computers and their components to the development and implementation of interconnected systems of computers.
- Apply knowledge of computer technology, with an emphasis on hardware, to the development and deployment of complete computer networks.
- Demonstrate an understanding of the physical and logical characteristics needed to support and secure network and server environments.
- Function effectively as a member of a technical team including documenting work, writing clearly and appropriately in an Information Technology context, respecting user data, and considering the ethical consequences of decisions.
- Articulate knowledge of the CompTIA certification processes, including potential exam content, philosophy, and test taking and study strategies.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Computer Network Administration and Security Management (AS Degree S0701)

Business Division

Degree S0701

Computer Network Administration and Security Management is a two-year program leading to the Associate in Science (A.S.) degree. It prepares individuals for employment in the computer/information technology field in such areas as network administrator and security management administrator.

The curriculum is intended to help students develop skills to design, administer and manage the heterogeneous corporate network with security emphasis. The courses examine and illustrate network security with various industry-leading network operating systems. Individual courses will assist students in preparing for related industry certification exams.

The main objective of the degree is to prepare students for employment following graduation. Students wishing a bachelor's degree should meet with a counselor or advisor for choices to transfer to available CSU joint degree programs.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Core Courses		
CISN 11	Telecommunications Networking	3
CISN 11L	Telecommunications/Networking Laboratory	0.5
CISN 24	Window Server Network and Security Administration	3
CISN 24L	Window Server Network and Security Administration Laboratory	0.5
CISN 51	Cisco CCNA Networking and Routing	3
CISN 51L	Cisco CCNA Networking and Routing Laboratory	0.5
CISS 21	Network Vulnerabilities and Countermeasures	3
CISS 21L	Network Vulnerabilities and Countermeasures Laboratory	0.5
CISS 23	Network Analysis, Intrusion Detection/Prevention Systems	3
CISS 23L	Network Analysis, Intrusion Detection/Prevention Systems Laboratory	0.5
CISS 25	Network Security and Firewalls	3
CISS 25L	Network Security and Firewalls Laboratory	0.5
CISS 29	CNASM Service Learning	1
Required Electives		
Choose one lecture or one combination lecture/lab course from the following:		1-4
CISB 11	Computer Information Systems	
CISN 21	Windows Operating System	
CISN 31 & 31L	Linux Operating System and Linux Operating System Laboratory	
CISN 34 & 34L	Linux Networking and Security and Linux Networking and Security Laboratory	
CISP 11 & 11L	Programming in Visual Basic and Programming in Visual Basic Laboratory	
CISP 21 & 21L	Programming in Java and Programming in Java Laboratory	
CISP 31 & 31L	Programming in C++ and Programming in C++ Laboratory	
CISP 41 & 41L	Programming in C# and Programming in C# Laboratory	
CISS 13	Principles of Information Systems Security	
CISS 15	Operating Systems Security	
CISS 27	Cyber Defense	
CISS 31	Computer System Forensics	
Total Units		23-26

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Configure and install a firewall.
- Implement a secured translation for service hosting through firewall.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Computer Programming (AS Degree S7302)

Business Division

Degree S7302

The A.S. Degree in Computer Programming is designed to prepare students for a career in computer programming. The degree offers a balanced set of classes that provides students with client, server and database programming skills required by the industry. Emphasis is placed on object-oriented programming applications, configuring servers, creating and navigating databases, and reusable software components. Students will demonstrate the ability to design and implement business environment applications that will contain the front end user interface and back end database. Student in this program select one of the following three programming language concentrations: C++, Visual Basic.NET or Java. Career opportunities available after the completion of this degree include programming for systems, mobile devices, device drivers and software engineering. Students wishing a bachelor's degree (transfer program) should meet with a counselor or advisor to discuss transferability of courses.

This degree requires the completion of General Education (<https://catalog.mtsac.edu/programs/degrees-certificates/#gerequisitestext>) coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Core Courses		
CISB 11	Computer Information Systems	3.5
CISB 15	Microcomputer Applications	3.5
CISM 11	Systems Analysis and Design	3.5
CISN 21	Windows Operating System	3 - 3.5
or CISN 31 & 31L	Linux Operating System and Linux Operating System Laboratory	
CISP 10	Principles of Object-Oriented Design	2.5
Choose from one of the following groups:		3.5
CISD 11 & 11L	Database Management - Microsoft Access and Database Management - Microsoft Access Laboratory	
Or		
CISD 21 & 21L	Database Management - Microsoft SQL Server and Database Management - Microsoft SQL Server Laboratory	
Or		
CISD 31 & 31L	Database Management - Oracle and Database Management - Oracle Laboratory	
Required Electives		
Choose one of the following concentrations:		6.5 - 10.5
C++		
CISP 31	Programming in C++	
CISP 31L	Programming in C++ Laboratory	
CISP 34	Advanced C++ Programming	
CISP 34L	Advanced C++ Programming Laboratory	
Java		
CISP 21	Programming in Java	
CISP 21L	Programming in Java Laboratory	
CISP 24	Advanced Java Programming	
CISP 24L	Advanced Java Laboratory	
Mobile		

CISP 52	Mobile Device Programming
CISP 52L	Mobile Device Programming Laboratory
CISP 53	iOS Programming
CISP 53L	iOS Programming Laboratory
CISP 54	Programming for Android Devices
CISP 54L	Android Programming Laboratory
Web	
CISW 17	HTML, CSS, and JavaScript Programming
And choose one from the following options:	
CISW 21	Secure Web Programming with ASP.NET
CISW 21L	Secure Web Programming with ASP.NET Laboratory
Or	
CISW 24	Secure Web Server Programming in Python
CISW 24L	Secure Web Server Programming in Python Laboratory
Or	
CISW 31	Secure Web Server Programming in PHP
CISW 31L	Secure Web Server Programming in PHP Laboratory

Total Units

26-30.5

CIS Program Website (<http://www.mtsac.edu/cis/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Display data from related database tables.
- Update a SQL Server database.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Culinary Arts Management (AS Degree S0448)

Business Division

Degree S0448

The program prepares students for career opportunities in restaurants, catering, hotels, theme parks and other food service businesses. Students gain practical training in the use of commercial equipment and acquire the skills necessary to be successful in the field of culinary arts such as: knife skills, food production, presentation, menu development, portion control, cost control, menu planning and nutrition. Students who successfully complete the requirements for this degree will also earn the Food Protection Manager Certification.

Required Courses

Course Prefix	Course Name	Units
CUL 101	Professional Cooking Foundations	3
CUL 102	Professional Cooking I	3
CUL 103	Professional Cooking II	3
CUL 104	Garde Manger	3
CUL 105	Baking and Pastry I	3
CUL 111	Exploring Beverages	3
HRM 52	Food Safety and Sanitation	2
HRM 56	Hospitality Supervision	3
HRM 57	Hospitality Cost Control	3

HRM 61	Menu Planning	3
Restaurant Operations (Must be taken together)		
CUL 91	Culinary Work Experience	5
CUL 114	Dining Room Service Management	3
CUL 115	Restaurant Operations	3
Required Electives		3
Select one from the following:		
CUL 106	Baking and Pastry II	
CUL 107	World Cuisines	
CUL 108	Cooking for Special Diets	
CUL 109	Butchery & Charcuterie	
CUL 110	Street Foods	
CUL 112	Sustainability in Culinary Arts	
HRM 62	Event Planning and Catering	
HRM 72	Hospitality Purchasing and Procurement	
Total Units		43

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Drone Camera Operator (AS Degree S0449)

Arts Division Degree S0449

This degree is designed for students who want to specialize as drone camera imaging operators for multiple career applications in commercial photography, cinematography, construction, surveying, inspection, and public safety.

Required Courses

Course Prefix	Course Name	Units
AERO 160	Unmanned Aircraft Systems Basic	4
AERO 210	Unmanned Aircraft Systems Advanced	4
PHOT 10	Basic Digital and Film Photography	3
PHOT 11B	Digital Capture Workflow	3
PHOT 26	Video for Photographers	3
PHOT 50	Drone Basic Still and Motion Camera Operator	3
PHOT 51	Drone Advanced Still and Motion Camera Operator	3
PHOT 55	Drone Photogrammetry and Mapping	3
PHOT 56	Drone Inspection and Thermal Imaging	3
Recommended Electives		
ANIM 130	Introduction to 3D Modeling	
ANIM 172	Motion Graphics, Compositing and Visual Effects	
ARTC 272	Motion Graphics, Compositing and Visual Effects	
ECT 87	Fundamentals of Construction Inspection	
GEOG 10	Introduction to Geographic Information Systems	
PHOT 9	Digital Image Editing for Photographers	
PHOT 24	Advanced Digital Image Editing for Photographers	
PHOT 28	Photography Portfolio Development	
R-TV 04	Broadcast News Field Reporting	
R-TV 06	Broadcast Traffic Reporting	
R-TV 19A	Beginning Video Production	
R-TV 19B	Advanced Video Production	

R-TV 22	Editing for Film and Television	
Total Units		29

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Educational Paraprofessional (Instructional Assistant) (AS Degree S0375)

Business Division Degree S0375

This degree program prepares paraprofessionals to work with children in a variety of ways that enhance learning. Graduates will be able to assist classroom teachers in working with K-12 students, including students with special needs. This associate degree certifies that paraprofessionals are "highly qualified" as specified by federal legislation.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Core Courses		
CHLD 1	Child, Family, School and Community	3
Choose one from the following:		
CHLD 10	Child Growth and Lifespan Development ¹	3
CHLD 10H	Child Growth and Lifespan Development - Honors ¹	
CHLD 11	Child and Adolescent Development ¹	
PSYC 14	Developmental Psychology	
PSYC 15	Introduction to Child Psychology	
CHLD 68	Introduction to Children With Special Needs ¹	3
EDUC 10	Introduction to Education	3
EDUC 16	Aspects and Issues in Teaching	3
Required Electives		
Choose one course from the following:		
CHLD 51	Early Literacy in Child Development	
CHLD 64	Health, Safety, and Nutrition of Children	
ENGL 81	Language Acquisition	
KIN 3	First Aid and CPR	
LIT 40	Children's Literature	
Total Units		18

¹ Documentation of tuberculosis (TB) clearance is required.

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Identify a variety of effective teaching strategies.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Electronics and Computer Engineering Technology (AS Degree S0906)

Technology and Health Division Degree S0906

The Electronics and Computer Engineering Technology (ECET) certificate program prepares individuals either for initial employment or for enhancement of existing skills in the electronics field, or for transfer into B.S. programs in Electronics Technology or Industrial Technology offered in the CSU system. Required courses for the certificate — many of which articulate directly to their equivalents at the CSUs are the same as for the ECET A.S. degree program except for the college General Education requirement. In addition to exposing students to core topics such as components and circuits, the program includes coursework in advanced areas including microcontrollers and interfacing, communications, and industrial electronic controls. Nearly all laboratories have new, state-of-the-art equipment to provide students with quality, hands-on learning experiences.

Students completing the ECET certificate program possess ample skills to make them versatile employees. Typical technician-level job classifications include field service technician, field engineer, computer service technician, customer service technician, communications technician, maintenance technician, and electronics technician. All students completing the certificate program are automatically eligible to receive, without further examination, the 4th class technician license from the National Association of Radio and Telecommunications Engineers (N.A.R.T.E.).

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
ELEC 11	Technical Applications in Microcomputers	3
ELEC 12	Computer Simulation and Troubleshooting	2
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 53	Communications Systems	4
ELEC 54A	Industrial Electronics	4
ELEC 54B	Industrial Electronic Systems	3
ELEC 55	Microwave Communications	4
ELEC 56	Digital Electronics	4
ELEC 61	Electronic Assembly and Fabrication	3
ELEC 74	Microcontroller Systems	4
TECH 60	Customer Relations for the Technician	2
Total Units		45

Recommended Electives

Course Prefix	Course Name	Units
CISP 11	Programming in Visual Basic	3
CNET 56	Computer Networks	4
ELEC 62	Advanced Surface Mount Assembly and Rework	2
ELEC 76	FCC General Radiotelephone Operator License Preparation	2
ELEC 10	Introduction to Mechatronics	2

Electronics and Computer Technology Website (<http://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply knowledge of electronic principles to the areas of communications, industrial electronics, and microcontrollers.
- Demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- Quantitatively determine unknown electrical parameters from given or measured values and use these results to assess or troubleshoot faults in circuit and system operation.
- Communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.
- In advanced courses, connect concepts learned in introductory courses to more general principles applicable in the employment context.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Electronics Engineering Technology (AS Degree S0681)

Technology and Health Division

This A.S. Degree in Electronics Engineering Technology combines core courses in Electronics Technology plus additional math and science support courses. This degree is ideal for students who want the flexibility of receiving a skills based vocational degree that can immediately be applied to the job market, or for transfer towards a 4 year degree in Electronics Engineering Technology or Electronic Systems Engineering Technology at a four year university. This degree aims at maximizing the number of courses that meet the lower division requirements of the four year programs at local universities. Topics in core courses focus on direct and alternating current, electronic devices, digital and industrial electronics, as well as the electronic assembly and fabrication. Students completing this degree will be prepared with the necessary knowledge to make them versatile employees. Typical technician-level job classifications include electronics technician, electronics drafter, calibration technologist, field service technician, field engineer, customer service technician, and maintenance technician.

Required Courses

Course Prefix	Course Name	Units
CISP 31	Programming in C++	3
CISP 31 L	Programming in C++ Laboratory	0.5
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 54B	Industrial Electronic Systems	3
ELEC 56	Digital Electronics	4
ELEC 61	Electronic Assembly and Fabrication	3
MATH 150	Trigonometry	3

PHYS 2AG	General Physics	4
PHYS 2BG	General Physics	4
Total Units		36.5

Emergency Medical Services - Paramedic (AS Degree S1210)

Technology and Health Division

Degree S1210

Students who complete the required courses listed below for the Paramedic Certificate and who also complete the graduation requirements of Mt. San Antonio College will be awarded the Associate in Science degree in Emergency Medical Services.

This Paramedic Program is accredited by the Committee on Accreditation of Allied Health Education Programs (CAAHEP) and approved by the Los Angeles County Emergency Medical Services Agency as meeting and exceeding the minimum standards as specified in Title 22 of the California Code of Regulations and the National Highway Traffic Safety Administration national standard curriculum. It is designed to train paramedics to work on ambulances and in the fire service.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
EMS 10	Paramedic Core Content	11
EMS 40	Emergency Care for Paramedics	4.5
EMS 50	Paramedic Skills Competency	5
EMS 70	Paramedic Clinical Internship	3
EMS 80	Paramedic Field Externship	9
Total Units		32.5

Recommended Electives

Course Prefix	Course Name	Units
ANAT 10A	Introductory Human Anatomy	4
FIRE 1	Fire Protection Organization	3
PSYC 1A	Introduction to Psychology	3
or PSYC 1AH	Introduction to Psychology - Honors	
SOC 1	Introduction to Sociology	3
or SOC 1H	Introduction to Sociology - Honors	

The Emergency Medical Services faculty recommends that students complement their studies with selected elective courses chosen from the list above. Students should meet with a professor of Emergency Medical Services to help them determine which electives would best suit their career plans.

Special Information

To remain in the program, students must maintain a grade of "B" (80%) or better in all courses, per state regulations. Before starting clinical rotations, students must pass a criminal background check. Upon successful completion of the required courses, students are granted a certificate documenting completion of the Paramedic Program. Students are then eligible for licensure by taking and passing both the National Registry Exam and County Paramedic accreditation exam.

Public Safety Programs Website (<http://www.mtsac.edu/public-safety-programs/>)

Paramedic Program Readmission Policy

If the student fails any of the co-requisite courses, EMS 10 - EMS 60, he/she will be dropped from the program. If the student wishes to repeat the program, a Success Plan and Contract will be developed with the faculty to increase the student's chances of success prior to re-entry. If the student withdraws or is dismissed from the program a second time, he/she will not be allowed to reenter the Paramedic Program at Mt. SAC.

Application Requirements

In addition to meeting Mt. San Antonio College academic standards for admission, applicants must be in good standing and satisfy the following requirements:

- Be an EMT currently certified in California.
- Submit a letter on official stationery from a recognized EMS agency verifying completion of six (6) months of pre-hospital field experience as an EMT (approximately 1,200 hours) within the last 2 years.
- File a College application and be accepted as a student at Mt. San Antonio College.
- Submit an application for the Paramedic Program to the Health Science Programs Office (909) 274-5051. All applications are dated upon receipt in the Health Science Programs Office. The Paramedic Program begins two (2) times per year.
- Successful completion of EMS 1 Paramedic Fundamentals and Selection.
- A physical examination, proof of certain immunizations, a criminal background check, and drug test are required of all candidates after acceptance to the program and before entrance into the clinical setting. Forms and information will be provided upon acceptance into the program.

All applicants are expected to meet the essential functions for success in the paramedic program.

Physical Demands

- Perform prolonged, extensive, or considerable standing/walking, lifting, positioning, pushing, and or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift and carry at least 125 pounds)
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands

- Color vision: ability to distinguish and identify colors (may be corrected with adaptive devices)
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases

- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Emergency medical scene and patient management
- Subject to many interruptions
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Requires decisions/actions related to end of life issues
- Exposed to products containing latex

English Language Skills

Although proficiency in English is not a criterion for admission into the EMT-P program, students are encouraged to be able to speak, write and read English to complete classes successfully and ensure safety for themselves and others.

The Emergency Medical Services program is accredited by the Committee on Accreditation of Allied Health Education Programs (CAAHEP).

Contact:

Committee on Accreditation of Allied Health Education Programs (CAAHEP)

1361 Park Street

Clearwater, Florida 33756

(727) 210-2350

www.caahep.org (<https://www.caahep.org/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate competence in the following areas: patient assessment skills, scene management, knowledge of the laws governing Paramedic scope of practice, knowledge of the functions of cells, tissues, organs and organ systems as they relate to paramedic practices and patient care, the ability to utilize appropriate communications skills and demeanor with patients, family members, and field/hospital staff as well as display assertiveness in emergency situations as evidenced by proper assessment and selection of interventions.
- Demonstrate competence in the assessment and treatment of the following: Cardiovascular emergencies, Neurological emergencies, Respiratory emergencies, Abdominal emergencies, Diabetic emergencies, Endocrine/renal emergencies, Behavioral emergencies, Traumatic emergencies, Environmental emergencies, Obstetrical emergencies, and Pediatric emergencies.
- Be employable/seeking employment in the field of paramedicine or a related field.
- Have demonstrated skills competency to State & National standards.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Engineering and Construction Technology (AS Degree S0430)

Technology and Health Division
S0430

This degree is intended to prepare students for employment in the engineering and construction field. An understanding of building materials and architectural specifications in construction, building and zoning codes, permits, and architectural CAD and BIM will be developed. The development of these skills is critical for direct employment in the fields of construction, general or civil engineering technology, building inspection or construction management. Students desiring a Bachelor's Degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
ARCH 142	Architectural Materials and Specifications	4
ARCH 145	Building and Zoning Codes	3
ECT 16	CADD and Digital Design Media Level I	4
ECT 17	Legal Aspects of Construction	3
ECT 26	Civil Engineering Technology and CADD	3
ECT 67	Reading Construction Drawings	3
ECT 70	Elements of Construction Management	3
ECT 71	Construction Estimating	3
ECT 87	Fundamentals of Construction Inspection	3
Total Units		29

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Be technically competent.
- Be employed or seeking employment in the field or a related field.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Engineering with Emphasis in Chemical and Materials Engineering Applications (AS Degree S0829)

Natural Science Division

The Engineering with Emphasis in Chemical and materials Engineering Applications AS degree is designed to incorporate the engineering, science, and communication skills needed to prepare students for multiple entry-level positions in the chemical and materials engineering field. This degree may facilitate transfer to a 4-year institution.

Correction: Required Core units corrected from 18 to 26-27. Total required units for major 38-39. 8/23/2022

Course Prefix	Course Name	Units
Required Core		26-27
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
or ENGR 7	Programming Applications for Engineers	

CHEM 55	Chemistry for Engineers	5
or CHEM 50	General Chemistry I	
or CHEM 50H	General Chemistry I - Honors	
ENGR 8	Properties of Materials	4
MATH 160	Precalculus Mathematics	4
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4-5
or PHYS 4A	Engineering Physics	
Required Electives		
Choose a minimum of 12 units		12
CHEM 51	General Chemistry II	
or CHEM 51H	General Chemistry II - Honors	
CHEM 80	Organic Chemistry I	
CHEM 81	Organic Chemistry II	
ENGR 40	Statics	
ENGR 40T	Applied Statics	
ENGR 50A	Robotics Team Project Development	
ENGR 50B	Intermediate Robotics Team Project Development	
ENGR 285	Differential Equations and Linear Algebra for Engineers	
PHYS 2BG	General Physics	
PHYS 4B	Engineering Physics	
Total Units		38-39

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Civil Engineering Applications (AS Degree S0832)

Natural Science Division

Engineering with Emphasis in Civil Engineering Applications program prepares the students for an entry-level career working as a technician under the direction of civil engineers, surveyors, contractors and architects through project-based learning activities. This degree program is for job seekers interested in civil engineering and civil engineering technology; as well as students interested in university programs in civil engineering and civil engineering technology.

Engineering with Emphasis in Civil Engineering Applications degree incorporates the engineering, science, and communications skills needed by an entry-level civil engineering technology employee. Completion of this degree will prepare graduates for multiple terminal technologist positions, including engineering technician, civil engineering technician, project engineer, engineering assistant, and designer. Through this program students will develop proficiency with mechanical systems, Microsoft Excel, oral communication, functional analysis, project management, developing presentations, laboratory analysis, land surveying, mapping, computer aided design, geometric dimensioning and tolerances, programming, numerical methods and technical reporting. Completion of this degree may facilitate transfer into B.S. programs into Civil Engineering, Construction Engineering, and Construction Engineering Management related programs.

Required Courses

Course Prefix	Course Name	Units
Required Core		36 - 37
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
or ENGR 7	Programming Applications for Engineers	
ENGR 8	Properties of Materials	4
ENGR 24	Engineering Graphics	4
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
MATH 180	Calculus and Analytic Geometry	4
or MATH 181	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
or PHYS 4A	Engineering Physics	
SURV 1A	Surveying	3
SURV 1B	Surveying	3
Required Electives		
Choose a minimum of 10 units		10
ENGR 18	Introduction to Engineering Graphics	
ENGR 40	Statics	
ENGR 40T	Applied Statics	
ENGR 41	Dynamics	
ENGR 42	Mechanics of Materials	
ENGR 50A	Robotics Team Project Development	
ENGR 50B	Intermediate Robotics Team Project Development	
ENGR 285	Differential Equations and Linear Algebra for Engineers	
PHYS 2BG	General Physics	
PHYS 4B	Engineering Physics	
Total Units		46 - 47

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Electrical Engineering Applications (AS Degree S0835)

Natural Sciences Division

The Engineering with Emphasis in Electrical Engineering Applications AS degree is designed to incorporate the engineering, science, and communication skills needed to prepare students for multiple entry-level positions in the electrical engineering field. This degree may facilitate transfer to 4-year institutions.

Required Courses

Course Prefix	Course Name	Units
Required Core		
ENGR 1	Introduction to Engineering	2
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4

ENGR 16	Introduction to Digital Electronics with FPGA Programming	4
ENGR 44	Electrical Engineering	4
ENGR 285	Differential Equations and Linear Algebra for Engineers	4
MATH 180	Calculus and Analytic Geometry	4
MATH 181	Calculus and Analytic Geometry	4
MATH 280	Calculus and Analytic Geometry	5
PHYS 4A	Engineering Physics	5
PHYS 4B	Engineering Physics	5
Total Units		41

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Mechanical Engineering Applications (AS Degree S0838)

Natural Science Division

The Engineering with Emphasis in Mechanical Engineering Applications AS degree prepares graduates for career and transfer. Relevant positions include engineering technician, CAD technician, maintenance technician, facilities manager, manufacturing technician, operations technician, lab technician, technical sales and other endeavors related to mechanical components and systems. The program emphasizes how things work, and the role technicians can play in design, development, testing, and manufacturing of mechanical devices. Completion of this degree may facilitate transfer into B.S. programs in Electromechanical Systems Engineering Technology or other related Mechanical Engineering Technology programs.

Required Courses

Course Prefix	Course Name	Units
Required Core		29 -30
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
or ENGR 7	Programming Applications for Engineers	
ENGR 8	Properties of Materials	4
ENGR 18	Introduction to Engineering Graphics	3
ENGR 24	Engineering Graphics	4
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
PHYS 2AG	General Physics	4
or PHYS 4A	Engineering Physics	
Required Electives		
Choose at least 7 units		7
ENGR 40	Statics	
ENGR 40T	Applied Statics	
ENGR 41	Dynamics	
ENGR 42	Mechanics of Materials	
ENGR 44	Electrical Engineering	

ENGR 50A	Robotics Team Project Development	
ENGR 50B	Intermediate Robotics Team Project Development	
ENGR 285	Differential Equations and Linear Algebra for Engineers	
PHYS 2BG	General Physics	
PHYS 4B	Engineering Physics	
Total Units		36 -37

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Engineering with Emphasis in Software Engineering Applications (AS Degree S0841)

Natural Science Division

Engineering with Emphasis in Software Engineering Applications AS degree program concentrates on the design of complex computing systems through the application of computing languages, contextualized problem-solving, control systems, and applied mathematics. This degree program is for job seekers interested in electrical software engineering and software engineering technology; as well as students interested in university programs in software engineering and software engineering technology.

Engineering with Emphasis in Software Engineering Applications AS degree incorporates the engineering, science, and communications skills needed by an entry-level software engineering technology employee. Completion of this degree will prepare graduates for multiple terminal technologist positions, including engineering technician, software engineering technician, application developer, assistant engineer, technical sales, technical consultant and other endeavors related to electrical systems. Through this program, students will develop proficiency with electrical systems, mechanical systems, Microsoft Excel, oral communication, functional analysis, project management, developing presentations, laboratory analysis, programming, numerical methods, software development, and hardware interface tools. Completion of this degree may facilitate transfer into B.S. programs in Engineering Technology, Software Engineering or Computer Science related degree programs.

Required Courses

Course Prefix	Course Name	Units
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
ENGR 16	Introduction to Digital Electronics with FPGA Programming	4
CSCI 110	Fundamentals of Computer Science	3.5
CSCI 150	Assembly Language/Machine Architecture	3.5
CSCI 220	Data Structures I	3.5
or CSCI 240	Data Structures and Algorithms	
MATH 160	Precalculus Mathematics	4
or MATH 180	Calculus and Analytic Geometry	
Total Units		27.5 -29

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Fashion Design and Technologies (AS Degree S1320)

Business Division Degree S1320

The Fashion Design and Technologies Degree consists of apparel design courses that prepare students for careers in apparel manufacturing, production, and technical design. This program emphasizes technology used in the apparel industry and technical design. Upon completion of the program, students will be proficient in technical drawing, computer patternmaking, and apparel-related software. Students will gain hands-on experience in using industry-related software and develop advanced technical design and production skills.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
FASH 8	Introduction to Fashion	3
FASH 10	Clothing Construction I	3
FASH 12	Clothing Construction II	3
FASH 14	Dress, Culture, and Identity	3
FASH 17	Textiles	3
FASH 21	Patternmaking I	3
FASH 22	Fashion Design By Draping	3
FASH 23	Patternmaking II	3
FASH 24	Fashion Patternmaking by Computer	3
FASH 25	Fashion Digital Illustration and Design	3
Total Units		30

Student Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Create an apparel collection including textile designs and flats (technical drawings) pursuant to apparel industry standards.
- Demonstrate their understanding of the fashion industry trend research process.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Fashion Merchandising (AS Degree S1308)

Business Division Degree S1308

The Associates Degree in Fashion Merchandising is designed to prepare students for entry-level careers in the apparel industry in Southern California. This Associate's Degree program also offers student's courses specializing in apparel retailing, fashion marketing, textiles, technical drawing, and merchandising. The courses emphasize the business of fashion, wholesale merchandise planning, product development, pricing, and apparel branding targeting specific markets. Upon completion of

the program, students will be able to develop marketing strategies, create promotional campaigns, understand the buying process, and analyze retail businesses. Entry-level employment opportunities available after completion of this program may include retail sales, small store merchandising, and wholesaling.

Required Courses

Course Prefix	Course Name	Units
FASH 8	Introduction to Fashion	3
FASH 9	History of Fashion	3
or FASH 57	Fashion Retailing and Production Technologies	
FASH 10	Clothing Construction I	3
FASH 14	Dress, Culture, and Identity	3
FASH 17	Textiles	3
FASH 25	Fashion Digital Illustration and Design	3
FASH 59	Fashion Retailing	3
FASH 62	Retail Buying and Merchandising	4
FASH 63	Fashion Promotion	3
Total Units		28

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Analyze the marketing and promotional techniques of fashion and apparel companies.
- Demonstrate their understanding of the fashion industry trend research process.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Fire Technology (AS Degree S2105)

Technology and Health Division Degree S2105

The Fire Science major has been developed to offer pre-employment education for the undergraduate who desires to enter the field of fire science. It also provides the employed firefighter an opportunity for a professional education. Students intending to pursue a bachelor's degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Core Courses		
FIRE 1	Fire Protection Organization	3
FIRE 2	Fire Prevention Technology	3
FIRE 3	Fire Protection Equipment and Systems	3
FIRE 4	Building Construction for Fire Protection	3
FIRE 5	Fire Behavior and Combustion	3
FIRE 13	Principles of Fire and Emergency Services Safety and Survival	3
Required Electives		
Choose two courses from the following:		5.5-22.5
FIRE 6	Hazardous Materials/ICS	
FIRE 7	Fire Fighting Tactics and Strategy	
FIRE 8	Fire Company Organization and Management	

FIRE 9	Fire Hydraulics
FIRE 10	Arson and Fire Investigation
FIRE 11	Fire Apparatus and Equipment
FIRE 12	Wildland Fire Control
FIRE 86	Basic Fire Academy
KINF 53	Physical Training for the Basic Fire Academy

Total Units **23.5-40.5**

The Fire Technology program is a Regionally Accredited Training Program (ARTP). The Office of the State Fire Marshall (OSFM) has a responsibility for accreditation of ARTP's throughout the State of California. An ARTP shall provide the following delivery components:

1. California Fire Service Training and Education System (CFSTES)
2. California Fire Service Training and Education Program (FSTEP)
3. Fire Incident Command Certification System (CICCS)
4. California Community College Chancellor's Office Standard Fire Technology Degree Core Program

Contact:

Office of the State Fire Marshall
1131 S. Street
Sacramento, CA 95811
(916) 445-8200

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Define fire department organization, culture, and methods of communication of entry level fire department personnel.
- Analyze and assess firefighter hazards, and demonstrate safe practices by using minimum standard safety procedures.
- Demonstrate knowledge of fire prevention efforts and a resulting reduction of life and property loss.
- Demonstrate knowledge of strategy and tactics required for the proper selection and safe use of firefighting methods, techniques, tools, and equipment.
- Identify fire chemistry and behavior for the purpose of predicting fire dynamics and flame spread characteristics.
- Identify components of built-in and portable fire protections systems and alarm and notification devices.
- Demonstrate knowledge of the 5 basic types of construction. Identify the components and hazards related to each type.
- Demonstrate knowledge of Leadership and Management concepts as they relate to emergency and non-emergency situations.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

General Business (AS Degree S0501)

Business Division

Degree S0501

This program is intended to prepare students for employment following graduation. Students wishing a bachelor's degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
or BUSA 72	Bookkeeping - Accounting	
BUSL 18	Business Law	3
BUSM 10	Principles of Continuous Quality Improvement	3
BUSM 20	Principles of Business	3
BUSM 60	Human Relations in Business	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
BUSO 5	Business English	3
BUSO 25	Business Communications	3
BUSS 36	Principles of Marketing	3
CISB 15	Microcomputer Applications	3.5
Choose six units from the following:		6
BUSA	Business: Accounting	
BUSC	Business: Economics	
BUSL	Business: Law	
BUSM	Business: Management	
BUSS	Business: Sales, Merchandising and Marketing	
CISB	Computer Information Systems Beginning	
Total Units		41.5

Business Administration Website (<http://www.mtsac.edu/businessadministration/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Describe the basic accounting system and how it is used to serve business needs.
- List and explain the foundations upon which business is built and the economic challenges facing the United States.
- Apply management concepts and functions.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Geographic Information Systems (GIS) (AS Degree S0851)

Humanities and Social Sciences Division

Geospatial technologies, including Geographic Information Systems (GIS), Remote Sensing (RS), and Global Positioning System (GPS), are used to capture, store, manage, analyze and visualize geospatial information related to locations on Earth's surface. These technologies are used to combine various types of geospatial information in a digital environment and are widely used in our daily life, government agencies, in almost every industry. Through this program students will develop an understanding of the theoretical underpinnings of geospatial technologies and gain the skills needed to construct high-quality applications.

Required Courses

Course Prefix	Course Name	Units
GEOG 9	Geospatial Concepts	3
GEOG 10	Introduction to Geographic Information Systems	3

GEOG 12	Cartography	2
GEOG 13	Geospatial Data Acquisition and Management	3
GEOG 14	Spatial Analysis	3
GEOG 15	Raster Methods	3
GEOG 16	GIS Capstone Portfolio	3
Total Units		20

Histologic Technician Training (AS Degree S1211)

Natural Sciences Division Degree S1211

This program provides on-campus and on-site technical training in the field of histotechnology, focusing on routine tissue sample preparation, special stains and techniques such as immunohistochemistry, and in situ hybridization. Training on campus will utilize samples routinely prepared in both clinical and research facilities. As part of their formal training, students of histotechnology will work through study guides provided by the American Society of Clinical Pathologists (ASCP) for its certification examination. Partnerships with local facilities will allow for work experience and internship sites, required for certification of histotechnology graduates, and will provide further training for those interested in research and/or careers in the private sector.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Choose one course from the following:		3-5
ANAT 10B	Introductory Human Physiology	
ANAT 36	Human Physiology	
MICR 26	Introduction to Immunology	
Choose one course from the following:		5
CHEM 10	Chemistry for Allied Health Majors	
CHEM 40	Introduction to General Chemistry	
CHEM 50	General Chemistry I	
CHEM 50H	General Chemistry I - Honors	
ANAT 35	Human Anatomy	5
HT 1	Introduction to Histotechnology	1
HT 2	Scientific Basics for Histotechnicians	3
HT 10	Histology	3
HT 12	Beginning Histotechniques	5
HT 14	Advanced Histotechniques	5
HT 16	Histochemistry and Immunohistochemistry	4
HT 17	Work Experience in Histotechnology	4
MICR 1 or MICR 22	Principles of Microbiology Microbiology	4-5
Total Units		42-45

The Histologic Technician Training program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

Contact:

National Accrediting Agency for Clinical Laboratory Sciences
5600 N. River Rd., Suite 720
Rosemont, IL 60018-5119
(773) 714-8880
(773) 714-8886 (fax)

info@naaccls.org
http://naaccls.org/

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- successfully pass the Histotechnician American Society for Clinical Pathology Exam (ASCP)
- be employed as a histotechnician
- demonstrate superior technical skills

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Horse Ranch Management (AS Degree S0102)

Natural Sciences Division Degree S0102

The Horse Ranch Management degree is molded around a core of equine science, including husbandry, production, management, training, and breeding as well as business and general education courses. The curriculum combines a combination of technical knowledge and practical skills utilizing a hands-on approach to instruction and is intended to prepare students for employment following graduation. Upon completion, students will have intermediate skills for a variety of employment opportunities in the equine industry. Students desiring a Bachelor's Degree (transfer) program should consult with a counselor or advisor to discuss transferability of courses.

This degree requires the completion of General Education (p. 53) coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Required Electives		
ASCI 2	Animal Nutrition	3
ASCI 16	Horse Production and Management	4
ASCI 18	Horse Ranch Management	4
ASCI 19	Horse Hoof Care	2
ASCI 20	Horse Behavior and Training	2
ASCI 59	Work Experience in Agriculture of ASCI 59	*Complete 3 - 4 units 3-4
ASCI 94	Animal Breeding	3
ASCI 96	Animal Sanitation and Disease Control	3
ASCI 97	Artificial Insemination of Livestock	3
Choose a minimum of six units from the following:		6
AGOR 51	Tractor and Landscape Equipment Operations	
AGOR 53	Small Engine Repair I	
AGOR 71	Construction Fundamentals	
BUSM 20	Principles of Business	
BUSM 66	Small Business Management	
WELD 40	Introduction to Welding	
Total Units		33-34

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be able to design a comprehensive production/business plan for various horse-related activities.
- Demonstrate professional conduct in the industry.

- Be able to obtain an entry-level position in the horse industry.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Hospitality and Restaurant Management (AS Degree S1307)

Business Division Degree S1307

This Associate of Science in Hospitality and Restaurant Management prepares students for mid-level or Manager-In-Training position in the hospitality industry. Students gain practical and management training in: food safety and sanitation, food production, dining room service management, supervision, cost control, financial accounting, lodging management, and hospitality law. Students who successfully complete the requirements for this degree will also earn the Food Protection Manager Certification from the National Restaurant Association upon passing the ServSafe Exam. This program is designed to articulate with the Collins College of Hospitality Management at Cal Poly Pomona as well as other universities. Students planning to transfer should consult with Hospitality Management Coordinator and Counseling to discuss transfer options.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
CUL 102	Professional Cooking I	3
HRM 51	Introduction to Hospitality	3
HRM 52	Food Safety and Sanitation	2
HRM 56	Hospitality Supervision	3
HRM 57	Hospitality Cost Control	3
HRM 59	Introduction to Food and Beverage Management	3
HRM 64	Hospitality Financial Accounting	3
HRM 66	Hospitality Law	3
HRM 70	Introduction to Lodging	3
Choose one course from the following:		3
HRM 61	Menu Planning	
HRM 62	Event Planning and Catering	
HRM 74	Introduction to Tourism	
HRM 91	Hospitality Work Experience ¹	
Total Units		29

¹ This is a variable unit course. Three units are required.

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Locate a current hospitality job, write a report on the prospective employer, write a cover letter and resume.
- Identify a recognized hospitality leader and accurately describing type of leadership style adopted by this leader and the characteristics that made them successful.
- Determine the presence of foodborne-illness outbreak.
- Identify foodborne pathogen, their sources, and resulting illnesses, and symptoms.

- Differentiate between the various styles of service including: American (Pre-plated), English (Family), Russian (Platter), French (Gueridon).
- Identify food safety and sanitation practices within a food service establishment.
- Plan a food production schedule and assemble the tools, equipment, and ingredients required to produce a recipe in an organized and efficient manner.
- Recipe knowledge, accuracy and execution: Follow recipe procedures to produce food at the appropriate temperature, consistency, texture, flavor, and in a timely manner.
- Identify leadership styles and recognize successful motivational techniques.
- Analyze the operational and cost control performance of a restaurant.
- Conduct break-even analysis on a food & beverage facility and conduct cost volume analysis to determine number of customers required to attain desired profits.
- Calculate the recipe cost of an entire menu.
- Analyze the popularity and profitability of a menu.
- Develop a business plan for a catering business and understand the enormity of planning for and opening a small business.
- Students will be able to meet with prospective clients and plan all elements of a special event.
- Develop an Income Statement (P&L) for a hospitality operation.
- Develop a Balance Sheet for a hospitality operation.
- Identify and differentiate the four sources of law
- Analyze a hospitality civil case and determine the facts, elements of negligence, possible consequences, and outcomes.
- Identify staffing needs for a hotel Front Desk based on occupancy, level of activity, and budget constraints.
- Establish room rates based on desired profits using the Hubbart formula.
- Develop measurable skill-based learning objectives, which they will attain at the end of their work experience period.
- Demonstrate proficiency of skills specified in the measurable objectives.

Review Student Learning Outcomes (SLOs) for this program.

Human Resource Management (AS Degree S0530)

Business Division Degree S0530

The Human Resource Management degree is intended to prepare students to enter the business world in the dynamic environment of human resources. Students become familiar with various approaches to business organization and the strategic nature of human resource management. Studies in human resource law, compensation systems, training, and development will provide the student a solid foundation from which to build a career in human resource management. Transfer students will gain a strong human resource management business elective base initiating further study in a variety of fields. Students active in the work arena will acquire new skills that are highly desirable in a fast-paced work force.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
ANTH 5	Cultural Anthropology	3
BUSA 70	Payroll and Tax Accounting	3
BUSL 19	Advanced Business Law	3
BUSM 20	Principles of Business	3
BUSM 60	Human Relations in Business	3
BUSM 61	Business Organization and Management	3
BUSM 62	Human Resource Management	3
BUSO 25	Business Communications	3
CISB 15	Microcomputer Applications	3.5
Total Units		27.5

Business Administration Website (<http://www.mtsac.edu/businessadministration/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Apply management concepts and functions
- Explain theory and practical application of Equal Employment Opportunity current employment laws
- Compose an appropriate, effective letter presenting good news, bad news, sales, or persuasive content

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Industrial Design Engineering (AS Degree S0331)

Technology and Health Division Degree S0331

This program is designed to prepare the student for a career in a wide range of industries including product and industrial design firms and fabrication and manufacturing companies. Students are introduced to product development from design through prototyping and fabrication for manufacturing.

Portfolio or prototype development is required on each of the semester levels. In the Level Three certificate and AS Degree course work, this will culminate in a final "senior project," which is a portfolio that includes two and three-dimensional design, documentation (accountability measures), presentation, and fabrication. This project will demonstrate the student's mastery of the concepts and methodologies learned during the program.

Students desiring a Bachelor's Degree should consult with a counselor or an educational advisor to discuss transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
IDE 110	Design Foundation-Visual Literacy	3
IDE 120	Introduction to CAD	3
IDE 130	Introduction to Shop Processes	3

IDE 150	Design Foundation II	3
IDE 160	Intermediate CAD	3
IDE 170	Introduction to Prototyping	3
IDE 210	Advanced Media	3
IDE 220	Advanced CAD	3
IDE 230	Introduction to Mechanical Principles	3
IDE 250	Product Design and Viability	6
IDE 270	Manufacturing Processes and Materials	3
Total Units		36

Recommended Electives

Course Prefix	Course Name	Units
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 81	Laboratory Studies in Electronics Technology	1-2
MATH 51	Elementary Algebra	4
PHYS 1	Physics	4
WELD 30	Metal Sculpture	2
WELD 40	Introduction to Welding	2

Guided Pathways of Study Suggested Course Sequence (<https://www.mtsac.edu/guided-pathways/pathway-results.html?pthwyvar=S0331&desc=Industrial+Design+Engineering%2C+AS+S0331>)

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Integrated Pest Management (AS Degree S0311)

Natural Sciences Division Degree S0311

The Integrated Pest Management Program is part of the Agricultural Science Program and prepares students to design and implement comprehensive integrated pest management programs for private or public entities. It qualifies students to take the Pest Control Advisor (PCA) exam administered by the California Department of Pesticide Regulation. Pest Control Advisers provide written recommendations for the application of pesticides. Students learn how to design, install, and manage irrigation systems, set up and implement fertilizer and pest management programs, and properly identify and maintain trees, shrubs, and turf grasses. Students also learn personal management and budgeting skills. Most courses in the program provide hands-on experiences designed to give students a combination of practical skills and technical knowledge. Students who intend to transfer should meet with a counselor to review lower-division requirements of the college or university they plan to attend.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
AGOR 1	Horticultural Science	3
AGOR 24	Integrated Pest Management	3
AGOR 29	Ornamental Plants - Herbaceous	3
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3
AGOR 39	Turf Grass Production and Management	3
AGOR 50	Soil Science and Management	3
AGOR 62	Irrigation Principles and Design	3

AGOR 63	Irrigation Systems Management	3
AGOR 91	Work Experience in Horticulture	3
Choose at least six units from the following:		6
BIOL 1	General Biology	
BIOL 2	Plant and Animal Biology	
BIOL 3	Ecology and Field Biology	
BIOL 4	Biology for Majors	
or BIOL 4H	Biology for Majors - Honors	
BIOL 8	Cell and Molecular Biology	
BIOL 20	Marine Biology	
BIOL 21	Marine Biology Laboratory	
BIOL 34	Fundamentals of Genetics	
BTNY 3	Plant Structures, Functions, and Diversity	
CHEM 10	Chemistry for Allied Health Majors	
CHEM 20	Introductory Organic and Biochemistry	
CHEM 40	Introduction to General Chemistry	
CHEM 50	General Chemistry I	
or CHEM 50H	General Chemistry I - Honors	
CHEM 51	General Chemistry II	
CHEM 80	Organic Chemistry I	
CHEM 81	Organic Chemistry II	
Choose nine units from the following:		9
AGOR 2	Plant Propagation/Greenhouse Management	
AGOR 15	Interior Landscaping	
AGOR 32	Landscaping and Nursery Management	
AGOR 35	Ornamental Plants for Southwest Climates	
AGOR 40	Sports Turf Management	
AGOR 75	Urban Arboriculture	
Total Units		42

Program Learning Outcomes

Upon successful completion of this program, a student will:

- be technically proficient
- demonstrate professional conduct in the industry
- be able to give a professional quality oral presentation
- be able to formulate and implement a complete Integrated Pest Management program for a specific site

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Interior Design (AS Degree S1301)

Business Division Degree S1301

The Interior Design A.S. degree provides students with an excellent foundation for a successful career in interior design. Students will obtain the skill set necessary to obtain a variety of positions in the design field.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
ID 10	Introduction to Interior Design	2
ID 10L	Introduction to Interior Design Laboratory	1
ID 12	Materials and Products for Interior Design	3
ID 14	History of Furniture and Decorative Arts	3
ID 20	Color and Design Theory I	3

ID 21	Color and Design Theory II	3
ID 22	Design Drawing for Interior Design	3
ID 23	Computer Aided Drawing for Interior Design I	3
ID 25	Space Planning for Interior Design I	3
ID 26	Space Planning for Interior Design II	3
ID 27	Rapid Visualization	3
ID 29	Interior Design Studio I	3
ID 31	Building Systems for Interior Design	3
ID 32	Lighting Design and Theory for Interior Design	3
ID 34	Computer Aided Drawing for Interior Design II	3
ID 36	Portfolio Development for Interior Design	3
or ID 37	Business Practices for Interior Design	
ID 39	Interior Design Studio II	3
Required Electives		2
Select two from the following		
ID 50	Interior Design Specialized Topics	
ID 54	Internship in Interior Design	
ID 56	Integrated Drawing Techniques for Interior Design	
ID 58	Field Studies in Interior Design	
ID 59	Computer Basics for Interior Design	
ID 99	Special Projects in Interior Design	
Total Units		50

Recommended Electives

Course Prefix	Course Name	Units
ARCH 122	Architectural Presentations	

Interior Design Website (<http://mtsac.edu/interiordesign/>)

The Interior Design program is accredited from the Interior Design - National Kitchen and Bath Association NKBA.

Contact:

Interior Design - National Kitchen and Bath Association NKBA
687 Willow Grove St
Hackettstown, NJ 07847
1(800) 843-6522

Program Learning Outcomes:

Upon successful completion of this program, a student will be able to:

- Successfully design a space based on a concept.
- Successfully meet program requirements.
- Successfully demonstrate craftsmanship skills in the presentation of a space.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Interior Design - Kitchen and Bath (AS Degree S1302)

Business Division Degree S1302

The Interior Design: Kitchen and Bath Design A.S. degree provides students with specialized skills in the area of Kitchen and Bath Design and is accredited by the National Kitchen and Bath Association. Students will strengthen career perspectives and develop work to incorporate into a professional portfolio. This certificate may aid in the student's search for an intermediate position as an assistant to a kitchen and

bath designer. Students completing this program and meeting the eligibility requirements will qualify to sit for the academic portion of the Certified Kitchen Designer (CKD) and Certified Bath Designer (CBD) upon graduation to earn the Associate Kitchen and Bath Designer (AKBD) designation.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
ID 10	Introduction to Interior Design	2
ID 10L	Introduction to Interior Design Laboratory	1
ID 12	Materials and Products for Interior Design	3
ID 14	History of Furniture and Decorative Arts	3
ID 20	Color and Design Theory I	3
ID 21	Color and Design Theory II	3
ID 22	Design Drawing for Interior Design	3
ID 23	Computer Aided Drawing for Interior Design I	3
ID 25	Space Planning for Interior Design I	3
ID 26	Space Planning for Interior Design II	3
ID 27	Rapid Visualization	3
ID 29	Interior Design Studio I	3
ID 31	Building Systems for Interior Design	3
ID 32	Lighting Design and Theory for Interior Design	3
ID 34	Computer Aided Drawing for Interior Design II	3
ID 37	Business Practices for Interior Design	3
ID 39	Interior Design Studio II	3
Completion of Interior Design - Kitchen and Bath Coursework		6
ID 40	Kitchen and Bath Studio I	
ID 41	Kitchen and Bath Studio II	
1-3 variable unit course. 3 units required		3
ID 48	Internship in Kitchen and Bath	
Required Electives		
Select courses from the following (2 units required)		2
ID 50	Interior Design Specialized Topics	
ID 54	Internship in Interior Design	
ID 56	Integrated Drawing Techniques for Interior Design	
ID 58	Field Studies in Interior Design	
ID 59	Computer Basics for Interior Design	
ID 99	Special Projects in Interior Design	
Total Units		59

Interior Design Website (<http://mtsac.edu/interiordesign/>)

The Interior Design - Kitchen and Bath program is accredited by the Interior Design - National Kitchen and Bath Association NKBA.

Contact:

Interior Design - National Kitchen and Bath Association NKBA
687 Willow Grove St
Hackettstown, NJ 07847
1(800) 843-6522

Program Learning Outcomes:

Upon successful completion of this program, a student will be able to:

- Successfully design a kitchen based on NKBA standards.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

International Business (AS Degree S0507)

Business Division Degree S0507

This program is intended to prepare students for an international business career following graduation. Students wishing a bachelor's degree (transfer program) should consult with a counselor to discuss transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
BUSM 20	Principles of Business	3
BUSM 50	World Culture: A Business Perspective	3
BUSM 51	Principles of International Business	3
BUSM 52	Principles of Exporting and Importing	3
BUSM 53	Supply Chain Management	3
BUSM 61	Business Organization and Management	3
BUSM 66	Small Business Management	3
BUSS 36	Principles of Marketing	3
Choose one from the following:		4
ARAB 1	Elementary Arabic	
CHIN 1	Elementary Chinese	
FRCH 1	Elementary French	
GERM 1	Elementary German	
ITAL 1	Elementary Italian	
JAPN 1	Elementary Japanese	
KORE 1	Elementary Korean	
SPAN 1	Elementary Spanish	
SPAN 1S	Spanish for the Spanish Speaking	
Total Units		28

Recommended Electives

Course Prefix	Course Name	Units
BUSM 81	Work Experience in Business	1-4
BUSM 85	Special Issues in Business	2
BUSS 85	Special Issues in Marketing	2

Business Management Website (<http://www.mtsac.edu/management/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Identify how governments influence trade.
- Explain how a small business can prepare to conduct export operations.
- Describe business planning for small business.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Licensed Vocational Nurse to RN (AS Degree S1201)

Technology and Health Division

Degree S1201

The Mt. San Antonio College Nursing Program, approved by the California Board of Registered Nursing, is a two-year program designed to prepare men and women to give direct nursing care to clients in various practice settings. The program consists of course work in nursing, science, general education, and clinical nursing practice at local hospitals and health agencies. Graduates of the program receive an Associate in Science Degree in Nursing and are eligible to take the NCLEX-RN examination leading to licensure as a Registered Nurse.

The Licensed Vocational Nurse is provided career mobility in the Nursing Program. The Licensed Vocational Nurse may choose between earning an Associate in Science Degree in Nursing or completing the LVN 30-Unit Option track which leads to a certificate, not a degree.

This degree requires the completion of General Education coursework plus the following:

Prerequisite Courses

Course Prefix	Course Name	Units
	Human Anatomy, including a laboratory component.	4
	Human Physiology, including a laboratory component.	4
	Microbiology, including a laboratory component.	4
CHLD 10	Child Growth and Lifespan Development ³	3
or PSYC 14	Developmental Psychology	
ENGL 1A	Freshman Composition ¹	4
PSYC 1A	Introduction to Psychology ²	3

¹ Minimum grade of C.

² PSYC 1A must be completed prior to entrance into NURS 5.

³ CHLD 10 or PSYC 14 must be completed prior to entrance into NURS 6.

Non-course Requirements

- An overall grade point average of 2.5 for the Human Anatomy, Human Physiology and Microbiology prerequisite courses with no grade less than a "C" for each course and no more than one repetition of any one of these courses.
- A cumulative grade point average (GPA) of 2.5 for all college coursework completed.
- Eligibility for MATH 71 (Preferably MATH 71 or a college level math course completed).
- High school graduation or GED or academic degree from an accredited college/university in the United States.
- Possess a current, active California Licensed Vocational Nurse license.
- A physical examination, including specific immunizations is required of all candidates prior to the beginning of nursing classes.
- Current Healthcare Provider CPR certification.
- Criminal background check and drug screening must be completed prior to any patient contact.
- Nursing 70: Role Transition must be completed with a credit grade prior to entrance into the program. (NURS 70: Role Transition – Due to the clinical component of NURS 70, applicants must submit their names to the Nursing Office for approval prior to enrollment in this

course. Applicants must have completed all prerequisite courses prior to taking NURS 70. Applicants must provide proof of current Vocational Nurse License, physical, CPR card, Background Check, and drug testing prior to the start of class).

Required Courses

Course Prefix	Course Name	Units
Required Nursing Courses		
NURS 4	Maternity Nursing	3
NURS 5	Psychiatric Nursing	3
NURS 6	Pediatric Nursing	3
NURS 7	Medical-Surgical Nursing: Nutrition/Elimination/Surgical Asepsis	7
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5
NURS 9	Leadership in Nursing	1
NURS 10	Medical-Surgical Nursing: Integration/Regulation	4
NURS 11	Preceptorship in Nursing	2
Requirements for the Major		
Select one of the following sequences:		8-10
ANAT 35 & ANAT 36	Human Anatomy and Human Physiology	
ANAT 10A & ANAT 10B	Introductory Human Anatomy and Introductory Human Physiology	
MICR 1 or MICR 22	Principles of Microbiology Microbiology	4-5
ENGL 1A or ENGL 1AH	Freshman Composition Freshman Composition - Honors	4
CHLD 10 or CHLD 10H or PSYC 14	Child Growth and Lifespan Development Child Growth and Lifespan Development - Honors Developmental Psychology	3
PSYC 1A or PSYC 1AH	Introduction to Psychology Introduction to Psychology - Honors	3
SPCH 1A or SPCH 1AH or SPCH 2 or SPCH 8 or SPCH 8H	Public Speaking Public Speaking - Honors Survey of Communication Studies Professional and Organizational Speaking Professional and Organizational Speaking - Honors	4
Total Units		54-57

Nursing Website (<http://www.mtsac.edu/nursing/>)

Selection Process

Students applying for admission to the Nursing Program are required to see either a counselor or educational advisor to verify their eligibility to enter the Nursing program.

Procedure

Students must complete all course prerequisites prior to requesting an appointment for certifying readiness to enter into the Nursing program. Once eligibility has been established and the Admission Assessment Test has been passed, students will enter on a first come first served basis.

The Eligibility Appointment

- Once a student has completed all course prerequisites, they may request an appointment with a counselor or educational advisor.
- Students who have completed coursework at other colleges must bring the following information to their eligibility appointment:

- i. Official transcripts of all college work completed at all colleges.
- ii. If the prerequisite courses were completed at another college, a course description and a copy of the course syllabus.
- iii. Students completing college coursework outside of the United States will need to have their transcripts evaluated by an approved international transcript evaluation agency and must bring the final evaluation to their appointment (students may be able to obtain a list of agencies from the Admissions & Records Office).
- iv. Due to specific college deadlines for International Student application, please inform the Counseling/Educational Advisor that this applies to you.
- v. All students will need to bring official proof of high school graduation, GED, or college graduation from an accredited institution in the United States.

Students should also be aware that once they have been admitted to the Nursing program and before beginning the clinical portion of the program, they will need to be able to pass both a criminal background check, including a screening by the Office of Inspector General for welfare or Social Security fraud, as well as testing negative for drug use.

All applicants are required to meet the essential functions for success in the nursing program.

Physical Demands

- Perform prolonged, extensive, or considerable standing/walking, lifting positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift/carry 50 lbs. or more)
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands

(May be corrected with adaptive devices)

- Color vision: ability to distinguish and identify colors
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle emergency or crisis situations
- Subject to many interruptions

- Requires judgment/action which could result in death of a patient
- Exposed to products containing latex

English Language Skills

Although proficiency in English is not a criteria for admission into the nursing program, students are encouraged to be able to speak, write and read English to complete classes successfully and to ensure safety for themselves and for others.

REGARDING LICENSURE

The California Board of Registered Nursing (BRN) protects the consumer by screening applicants for licensure in order to identify potentially unsafe practitioners. The BRN may deny applications for interim permits, temporary licenses, and permanent licensure, if the applicant has been found guilty of dishonesty, fraud or deceit, felony child abuse, sex offender crimes, acts involving narcotics, dangerous drugs or devices, assault and/or battery, and other crimes. Applicants who have questions regarding limitations related to licensure, should contact the California Board of Registered Nursing at (916) 322-3350 or access its website at www.rn.ca.gov (<http://www.rn.ca.gov>).

Contact:

California Board of Registered Nursing
1747 North Market Boulevard, Suite 150
Sacramento, CA 95834
(916) 322-3350
www.rn.ca.gov (<http://www.rn.ca.gov>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Successfully complete the Role Transition course to be accepted into the Nursing Program in the second semester.

Review Student Learning Outcomes (SLOs) for this program.

Manufacturing Technology (AS Degree S0918)

Technology and Health Division

The Associate in Science degree in Manufacturing Technology is designed to prepare students for entrance into the manufacturing field in one of the machining occupations such as manual and computer numerical control (CNC) machinists, machinery technicians, or machinist apprentices, computer aided design (CAD) operators, draftsmen, or design engineers, and computer aided manufacturing (CAM) machine programmers. This program provides students with a broad foundation in common manufacturing processes such as injection molding, vacuum forming, sheet metal, casting processes, and laser cutting.

Graduates may enter the manufacturing field in areas dealing with production, research and development, tool and die construction, mold making, or computerized manufacturing. Laboratory practice utilizes industrial types of equipment and precision measuring instruments to provide training in the various machining occupations. This degree covers setup and tooling procedures and part certification upon completion of the metal removing process. It includes instruction on industry-based CAD and CAM methodologies and all types of lathes, mills, grinders, and specialized equipment such as CNC. Supplementary instruction is also provided in mechanical literacy, bench work, layout, inspection

process, blueprint reading, metal composition, heat treatment, assembly procedures, jig and fixture design, and construction.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
MFG 110	Introduction to CAD	4
MFG 120	CAD for Manufacturing	4
MFG 130	Manufacturing Processes and Materials	3
MFG 140	Print Reading and Shop Practice	3
MFG 150	Manual Machining I	3
MFG 155	Manual Machining II	2
MFG 160	Introduction to Mechanical Principles	3
MFG 210	Advanced CAD	3
MFG 220	Computer Aided Manufacturing II	3
MFG 250	Introduction to CNC Programming	3
MFG 260	CNC Operation	3
Three (3) units of Work Experience		3
EDT 89	Engineering Design Technology Work Experience	
Total Units		37

Manufacturing Website (<http://www.mtsac.edu/manufacturing/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be technically competent.
- Be employed or seeking employment in their area or a related area.
- Demonstrate ability to create a CAD model, 2D print, or fabricate a part from a 2D print using manual or CNC methods.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Marketing Management (AS Degree S0510)

Business Division

This program is intended to prepare students for employment following graduation. Students wishing a bachelor's degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
BUSA 7	Principles of Accounting - Financial	5
or BUSA 72	Bookkeeping - Accounting	
BUSM 20	Principles of Business	3
BUSM 61	Business Organization and Management	3
BUSO 25	Business Communications	3
BUSS 35	Professional Selling	3
BUSS 36	Principles of Marketing	3
BUSS 85	Special Issues in Marketing	2
CISB 15	Microcomputer Applications	3.5
Choose one from the following:		3
BUSC 1A	Principles of Economics - Macroeconomics	

or BUSC 1AH	Principles of Economics - Macroeconomics - Honors
BUSC 1B	Principles of Economics - Microeconomics
or BUSC 1BH	Principles of Economics - Microeconomics - Honors
BUSC 17	Applied Business Statistics
BUSM 60	Human Relations in Business
BUSO 5	Business English

Total Units **28.5**

Business Administration Website (<http://www.mtsac.edu/businessadministration/>)

(<https://www.mtsac.edu/guided-pathways/pathway-results.html?pthwyvar=S0510&desc=Marketing+Management%2C+AS+S0510>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Develop a working knowledge of marketing terminology.
- List and explain the foundations upon which business is built and the economic challenges facing the United States.
- List the characteristics of a successful salesperson.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Mental Health Technology - Psychiatric Technician (AS Degree S1208)

Technology and Health Division

Completion of coursework leads to an Associate in Science degree. The Psychiatric Technology Program will prepare students to take the California State Licensure Examination for Psychiatric Technicians.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
MENT 40	Introduction to Interviewing and Counseling	3
MENT 56	Medical-Surgical Nursing for Psychiatric Technicians	9
MENT 56L	Medical-Surgical Clinical Experience	4
MENT 58D	Advanced Medical-Surgical Nursing and Pharmacology for Psychiatric Technician (PT)	4
MENT 58L	Advanced Medical-Surgical Nursing for Psychiatric Technicians Clinical	1.5
MENT 70	Introduction to Psychiatric Technology	1.5
MENT 70L	Introduction to Psychiatric Technology Clinical	2
MENT 72	Nursing Care of the Developmentally Disabled Person	7
MENT 72L	Nursing Care of the Developmentally Disabled Person - Clinical	5.5
MENT 73L	Psychiatric Nursing for Psychiatric Technicians Clinical	5.5
MENT 73T	Psychiatric Nursing for Psychiatric Technicians	6
MENT 82	Work Experience in Mental Health Technology	2
PSYC 1A	Introduction to Psychology	3

or PSYC 1AH Introduction to Psychology - Honors

Total Units

54

Special Information

Additional general education courses needed for completion of the Degree requirements are listed in the Mt. San Antonio College Catalog, but are not required to qualify the student for the California State Board Examination.

To remain in the program, students must maintain a "C" or better grade in all courses.

The student will qualify to take the California State Board Examination upon completion of all the above courses, except MENT 82.

Mental Health Department Website (<http://www.mtsac.edu/mental-health/>)

Special Information

Additional general education courses needed for completion of the Associate in Science degree requirements are listed in the Mt. San Antonio College Catalog, but are not required to qualify the student for the California State Board Examination.

To remain in the program, students must maintain a "C" or better grade in all courses.

The student will qualify to take the California State Board Examination upon completion of all the above courses, except MENT 82.

Entrance Requirements

In addition to meeting Mt. San Antonio College's academic standards for admission, applicants must be in good standing and satisfy the following requirements:

- Be a high school graduate or equivalent. (All students who have taken coursework outside of the United States must have their transcript evaluated. Foreign transcripts will not be accepted without the evaluation.)
- Be 18 years of age.
- File a college application and be accepted as a student at Mt. San Antonio College.
- Submit an electronic application (preferred) for the Mental Health/ Psychiatric Technician Program to techandhealth@mtsac.edu or a paper application to the Health Careers Resource Center (HCRC) (909) 274-4788. All applications are dated upon receipt in the Health Careers Resource Center. A program begins each winter and summer intersession with mandatory orientations each fall and spring. Orientations are unique to each cohort, so if a student does not begin classes the intersession following the orientation, then a new orientation must be attended before starting. Students that do not attend the mandatory orientation will not be eligible to start the following intersession even if an orientation had previously been attended.
- PSYC 1A is a co-requisite for courses within the program. If you have already taken PSYC 1A at Mt. SAC, or an equivalent course at another institution within the past five years this may be waived. If PSYC1A (or equivalent course) was taken at another institution, send an official transcript from the institution where it was taken to Admissions and Records Office at Mt. SAC. An additional set of transcripts (may be unofficial) must be delivered to the Health Careers Resource Center. If there is no previously-approved course deemed as equivalent by the Psychology Department at Mt. SAC, the

student will be required to request a variance for the course from the Psychology Department at Mt. SAC.

- Forward official transcripts of all coursework completed (high school, nursing school, other than those courses taken at Mt. San Antonio College) to the Health Careers Resource Center.

EXAMPLE:

Mt. San Antonio College
Health Careers Resource Center
Psychiatric Technician Program
1100 North Grand Avenue
Walnut, CA 91789-1399

- A physical examination showing proof of specific immunizations (including seasonal influenza as appropriate), and consent/disclaimer for Hepatitis A/B vaccine is required of all candidates prior to beginning classes. Students must provide proof that he/she does not have tuberculosis. These requirements are in accordance with the healthcare agency policy that insure that students are in good health and free from communicable disease and able to perform their training functions. Drug testing may also be required as part of this physical examination. Proof of high school graduation or GED is required. Malpractice insurance may also be required.
- Certain convictions may prevent a candidate from being licensed as a Psychiatric Technician. Certain facilities require Live Scanning (both Department of Justice (DOJ) and Federal Bureau of Investigation (FBI)). Live Scans are unique to each facility. Multiple Live Scans will be required throughout the program. Clinical facilities have the right to exclude students from attending clinical at their site based on Live Scan results. The program cannot guarantee that an alternate clinical site will be available for the student to meet clinical hour obligations.
- All students may be required to pass an additional background check prior to entering the clinical education phase.

Selection Procedure

The College will make every effort to notify the applicant of acceptance by mail no less than one month prior to the beginning of the program. All applicants are required to meet the Essential Functions for Success in the Mental Health Technology - Psychiatric Technician Program (listed below).

Essential Functions for Success in the Mental Health Technology- Psychiatric Technician Program:

Physical Demands:

- Perform prolonged, extensive, or considerable standing, walking, lifting positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability to lift and carry at least 125 pounds
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands

- Color vision: ability to distinguish and identify colors (may be corrected with adaptive devices)
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less

Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids, and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle potentially dangerous emergency or crisis situations or patients
- Subject to many interruptions
- Requires decisions and actions related to end of life issues
- Exposed to products containing latex
- Requires judgment and/or action which could affect the life or death of a patient.

English Language Skills:

Although proficiency in English is not a criterion for admission into the Mental Health Technology - Psychiatric Technician Program, students must be able to speak, write, and read English to ensure patient safety and to complete classes successfully.

The Mental Health Technology - Psychiatric Technician program is accredited by the Board of Vocational Nursing and Psychiatric Technicians.

Contact:

Board of Vocational Nursing and Psychiatric Technicians, Suite 205
2535 Capital Oaks Drive
Sacramento, CA 95833
(916) 263-7800

bvnpt@dca.ca.gov

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate the ability to provide client care, within scope of practice, to safely practice as an entry-level licensed psychiatric technician.
- Demonstrate nursing skills, within scope of practice, to safely practice as an entry-level licensed psychiatric technician.
- Demonstrate the ability to successfully intervene at all levels of client escalation/de-escalation, within scope of practice, to safely practice as an entry-level licensed psychiatric technician.
- Demonstrate the ability to support client efforts to achieve and maintain optimal mental health, within scope of practice, to successfully practice as an entry-level licensed psychiatric technician.
- Demonstrate the ability to safely administer medications, with scope of practice, to safely practice as an entry-level licensed psychiatric technician.
- Demonstrate the ability to participate in all areas of treatment plan development, within scope of practice, to safely practice as an entry-level licensed psychiatric technician.

- Demonstrate the ability to develop and achieve entry-level professional goals.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Nursing (AS Degree S1203)

Technology and Health Division

Degree S1203

The Mt. San Antonio College Nursing Program, approved by the California Board of Registered Nursing, is a two-year program designed to prepare men and women to give direct nursing care to clients in various practice settings. The program consists of course work in nursing, science, general education, and clinical nursing practice at local hospitals and health agencies. Graduates of the program receive an Associate in Science Degree in Nursing and are eligible to take the NCLEX-RN examination leading to licensure as a Registered Nurse.

Enrollment in the Mt San Antonio Registered Nursing Program – Generic Option – is open to persons regardless of sex, age, marital status, disability, ethnic group, religion or national origin. Applications are accepted twice a year for the Fall and Spring semesters via on-line application process.

ADN General Education Requirements

All courses below must be completed with a grade of "C" or better. Due to the intensity of the program, students are highly encouraged to complete general education prior to admission into the program.

Course Prefix	Course Name	Units
PSYC 14	Developmental Psychology ¹	3
or CHLD 10	Child Growth and Lifespan Development	
or CHLD 10H	Child Growth and Lifespan Development - Honors	
PSYC 1A	Introduction to Psychology ²	3
or PSYC 1AH	Introduction to Psychology - Honors	
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
or SPCH 2	Survey of Communication Studies	
or SPCH 8	Professional and Organizational Speaking	
or SPCH 8H	Professional and Organizational Speaking - Honors	

¹ Must be completed before NURS 6.

² Must be completed before NURS 5.

Additional General Education Required for the Associate Degree

(These requirements are waived for students who have a Bachelor's degree or higher from a regionally accredited institution in the United States.)

Course Prefix	Course Name	Units
History or Political Science ¹		3
Select one History or Political Science course ¹		3
Arts		
Select one course from the Arts area ¹		3
Humanities		
Select one course from the Humanities area ¹		3
Physical Well-Being Requirement		

Select at least one of the physical education activity courses with the following prefixes: DNCE, KINA, KINF, KINI, KINL, KINS, or KINX .5-1

Intermediate Algebra

MATH 71	Intermediate Algebra	5
or MATH 71X	Practical Intermediate Algebra	
or MATH 71B	Intermediate Algebra - Second Half	

Reading Competency

Complete the requirement. ¹

¹ See Mt. SAC Catalog for applicable courses.

Requirements for Nursing

Course	Title	Units
Semester 1		
NURS 1A	The Nursing Process I	5
NURS 1B	The Nursing Process II	5
NURS 2	Pharmacology	2
Units		12
Semester 2		
NURS 3	Medical-Surgical Nursing: Locomotion/ Sensory/Integument/Oncology/ Immunology	3.5
NURS 4	Maternity Nursing	3
NURS 6	Pediatric Nursing	3
Units		9.5
Semester 3		
NURS 7	Medical-Surgical Nursing: Nutrition/ Elimination/ Surgical Asepsis	7
NURS 5	Psychiatric Nursing	3
Units		10
Semester 4		
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5
NURS 9	Leadership in Nursing	1
NURS 10	Medical-Surgical Nursing: Integration/ Regulation	4
NURS 11	Preceptorship in Nursing	2
Units		12
Total Units		43.5

Requests for Equivalency

Request for equivalency for core sciences: Courses must meet or exceed the 4.0 unit minimum with a laboratory component, as required by the California Community College Chancellor's office. If you are uncertain whether a course taken inside or outside the California Community College system is equivalent to the Mt. SAC course, please contact the Counseling Department.

Foreign Course Work

Course work completed in another country may be accepted to satisfy requirements for graduation. Foreign transcripts must be evaluated by a recognized foreign evaluation service. If you are selected as a candidate for the Nursing Program, please submit an official, sealed copy of the foreign evaluation during your counseling appointment.

High School Education or Equivalent

Applicants must provide proof of graduation from:

- An accredited high school in the United States by transcripts or diploma or;
- Documentation of a passing score on the General Education Development (GED) exam or;
- Associate degree, or Baccalaureate degree from an accredited institution of higher education in the United States or;
- Official evaluation of international diploma/degree

Other Program Requirements

- Meet the minimum physical and mental qualifications to perform essential nursing functions (see Essential Functions).
- Criminal background check and drug screening must be completed prior to any patient contact.
- A physical examination, including specific immunization is required of all candidates prior to the beginning of nursing classes.
- Current Health Care Provider CPR certification

Requirements for the Associate Degree

Students must develop an education plan with a counselor or educational advisor to complete college academic requirements for the AS degree. Contact the Counseling Department at (909) 274-4380 to schedule an appointment.

Requirements for Nursing

Course Prefix	Course Name	Units
Required Nursing Courses		
NURS 1A	The Nursing Process I	5
NURS 1B	The Nursing Process II	5
NURS 2	Pharmacology	2
NURS 3	Medical-Surgical Nursing: Locomotion/Sensory/ Integument/Oncology/Immunology	3.5
NURS 4	Maternity Nursing	3
NURS 5	Psychiatric Nursing	3
NURS 6	Pediatric Nursing	3
NURS 7	Medical-Surgical Nursing: Nutrition/Elimination/ Surgical Asepsis	7
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5
NURS 9	Leadership in Nursing	1
NURS 10	Medical-Surgical Nursing: Integration/Regulation	4
NURS 11	Preceptorship in Nursing	2
Required Prerequisite Courses for the Major		
Select one of the following sequences:		8-10
ANAT 35 & ANAT 36	Human Anatomy and Human Physiology	
ANAT 10B & ANAT 10A	Introductory Human Physiology and Introductory Human Anatomy	
MICR 1 or MICR 22	Principles of Microbiology Microbiology	4-5
ENGL 1A or ENGL 1AH	Freshman Composition Freshman Composition - Honors	4
Other General Education Requirements		
CHLD 10 or CHLD 10H	Child Growth and Lifespan Development ¹ Child Growth and Lifespan Development - Honors	3

or PSYC 14	Developmental Psychology	
PSYC 1A	Introduction to Psychology ²	3
or PSYC 1AH	Introduction to Psychology - Honors	
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
or SPCH 2	Survey of Communication Studies	
or SPCH 8	Professional and Organizational Speaking	
or SPCH 8H	Professional and Organizational Speaking - Honors	
Total Units		69.5-72.5

¹ CHLD 10 or PSYC 14 must be completed prior to entrance into NURS 6

² PSYC 1A must be completed prior to entrance into NURS 5

NOTE: Applicants planning to continue their education and enter a baccalaureate program in Nursing will need to meet with a counselor or educational adviser to discuss transferability of courses.

Nursing Website (<http://www.mtsac.edu/nursing/>)

Prerequisite Courses

Course Prefix	Course Name	Units
Human Anatomy, including a laboratory component.		4
Human Physiology, including a laboratory component.		4
Microbiology, including a laboratory component.		4
ENGL 1A	Freshman Composition ¹	4

¹ Minimum grade of C.

Non-course requirements

- An overall grade point average of 2.5 for the Human Anatomy, Human Physiology and Microbiology prerequisite courses with no grade less than a "C" for each course and no more than one repetition of any one of these courses.
- A cumulative grade point average (GPA) of 2.5 for all college coursework completed.
- Eligibility for MATH 71 Intermediate Algebra (Preferably MATH 71 or a college level math course completed).
- High school graduation or GED or academic degree from an accredited college/university in the United States.
- A physical examination, including specific immunizations is required of all candidates prior to the beginning of nursing classes.
- Current Healthcare Provider CPR certification.
- Criminal background check and drug screening must be completed prior to any patient contact.

Generic (Registered Nursing) Option Prerequisites Taken Prior to Entry

The following prerequisites must be completed prior to entering the Generic ADN Option. These courses cannot be in progress.

Course Prefix	Course Name	Units
ANAT 35	Human Anatomy	5
ANAT 10A	Introductory Human Anatomy	4
ANAT 36	Human Physiology	5
ANAT 10B	Introductory Human Physiology	4
MICR 1	Principles of Microbiology	5
MICR 22	Microbiology	4

ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	

Steps for Applying to the Associate Degree in Nursing (ADN) Generic Program

The application filing period does not begin until the announced application period. Two application periods in a year for enrollment of the Fall and Spring semesters. Applicants can prepare for the filing period by following the seven steps below.

- Get a Mt. SAC ID number (if you don't already have one.) To do this, go to www.mtsac.edu/apply/ (<http://www.mtsac.edu/apply/>) (Apply to Mt. SAC Now!). This can take up to two weeks to process. You need a Mt. SAC ID number in order to apply to the RN program. If you are a current or returning student and already have an ID number you do not need to apply again.
- Prerequisites and general education requirements. Prerequisites must be completed prior to applying to the Nursing Program. Due to the intensity of the Nursing Program, it is highly recommended that all general education requirements also be completed prior to entry.
- Review the multi-criteria screening process grid. This will help you determine your eligibility to enter the Nursing Program at Mt. SAC.
- Take the HESI A2 Assessment Test. Students who have taken the HESI at any location other than Mt.SAC can contact Elsevier Customer Services to request that their official HESI A2 results be sent directly to Mt. SAC's Nursing Program.
- Gather ALL required documents. Using the multi-criteria screening form, compile all required supporting documentation. Documents need to be in PDF format or you may use an iPhone/iPad to upload pictures of documents.
- Apply online during the open application filing period. The online link will only be available during the application period. Please check on-line at <http://www.mtsac.edu/nursing> for the application period. Applications will only be accepted during this time frame. You will need to upload your supporting documentation. Before submitting your application, you must review all uploaded documents to verify that the documents are legible and clear. Unreadable or inaccurate documents will result in the rejection of your application.
- Counseling Appointment: If you are selected as a candidate for the Nursing Program, you will need to make an appointment with a designated Nursing Educational Advisor or Counselor. During this appointment you will need to bring your official sealed transcripts for review.

All applicants are required to meet the essential functions for success in the nursing program.

Physical Demands

- Perform prolonged, extensive, or considerable standing/walking, lifting positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift/carry 50 lbs. or more)
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands

(May be corrected with adaptive devices)

- Color vision: ability to distinguish and identify colors
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle emergency or crisis situations
- Subject to many interruptions
- Requires judgment/action which could result in death of a patient
- Exposed to products containing latex

English Language Skills

Although proficiency in English is not a criteria for admission into the nursing program, students are encouraged to be able to speak, write and read English to complete classes successfully and to ensure safety for themselves and for others.

REGARDING LICENSURE

The California Board of Registered Nursing (BRN) protects the consumer by screening applicants for licensure in order to identify potentially unsafe practitioners. The BRN may deny applications for interim permits, temporary licenses, and permanent licensure, if the applicant has been found guilty of dishonesty, fraud or deceit, felony child abuse, sex offender crimes, acts involving narcotics, dangerous drugs or devices, assault and/or battery, and other crimes. Applicants who have questions regarding limitations related to licensure, should contact the California Board of Registered Nursing at (916) 322-3350 or access its website at www.rn.ca.gov (<http://www.rn.ca.gov>).

Contact:

California Board of Registered Nursing
1747 North Market Boulevard, Suite 150
Sacramento, CA 95834
(916) 322-3350
www.rn.ca.gov (<http://www.rn.ca.gov>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Satisfy employers with the educational preparation of the Mt. SAC Nursing graduates.
- Score above the national average on the comprehensive predictor exam.
- Take the NCLEX exam for the 1st time and will cumulatively score above the national average.
- Deliver safe and competent patient care as newly licensed registered nurses.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Ornamental Horticulture (AS Degree S0119)

Natural Sciences Division

The courses in ornamental horticulture are designed to enable students to prepare for exciting careers in the essential and diverse horticulture profession. Careers in nursery management, retail garden centers, landscape design, installation and maintenance, arboretum and botanic gardens, arboriculture, interior landscaping, education, and research are just some of the options.

This degree is part of our comprehensive agricultural sciences program. Our program is unique in that most courses provide hands-on experience and are designed to give the student a combination of practical skills and technical knowledge. Students who intend to transfer should meet with a counselor or advisor to check the lower division requirements in the catalog of the college or university which they will attend and also the semester and year in which courses are offered.

Listed below are the courses needed to satisfy major requirements. It is recommended that students consult with the department chairperson, advisor or counselor to file an educational plan. For additional information, please call the Agricultural Sciences Department, ext. 4540, or visit the Mt. SAC Web site at Agricultural Sciences. (<http://www.mtsac.edu/agriculture/>)

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
AGAG 1	Food Production, Land Use, and Politics - A Global Perspective	3
AGOR 1	Horticultural Science	3
AGOR 2	Plant Propagation/Greenhouse Management	3
AGOR 13	Landscape Design	3
AGOR 24	Integrated Pest Management	3
AGOR 29	Ornamental Plants - Herbaceous	3
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3
AGOR 32	Landscaping and Nursery Management	3
AGOR 39	Turf Grass Production and Management	3
AGOR 50	Soil Science and Management	3
AGOR 62	Irrigation Principles and Design	3
AGOR 71	Construction Fundamentals	3
Complete one to four units from the following course:		
AGOR 91	Work Experience in Horticulture	1-4
Choose six units from the following:		6
AGOR 15	Interior Landscaping	
AGOR 35	Ornamental Plants for Southwest Climates	
AGOR 40	Sports Turf Management	
AGOR 51	Tractor and Landscape Equipment Operations	
AGOR 53	Small Engine Repair I	
AGOR 63	Irrigation Systems Management	
AGOR 72	Landscape Hardscape Applications	
AGOR 75	Urban Arboriculture	

CISB 15	Microcomputer Applications
Total Units	43-46

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be technically proficient.
- Demonstrate professional conduct in the industry.
- Be able to give a professional quality oral presentation.

Review Student Learning Outcomes (SLOs) for this program.

Paralegal/Legal Assistant (AS Degree S0310)

Business Division

The paralegal program is intended to prepare students for employment as paralegals in both private and public sectors following graduation. The American Bar Association (ABA) By-Laws Section 21.12 uses the terms paralegal and legal assistant interchangeably referring to persons who, although not members of the legal profession, are qualified through education, training, or work experience and are employed or retained by a lawyer, law office, governmental agency, or other entity in a capacity or function which involves the performance, under the direction and supervision of an attorney, of specifically delegated substantive legal work. Paralegals/legal assistants must comply with the legal restrictions in the practice of law by nonlawyer. The California Business & Professions Code, Section 6450 et seq, governs paralegals in California.

The American Bar Association does not recognize the following courses as meeting its definition of General Education: ARTB 14, ARTD 15A, ARTD 20, ARTD 25A, ARTS 30A, ARTS 40A, THTR 11, MUS 7, AD 3 and COUN 5. Students developing their educational plan should select another course from the Mt. SAC General Education area which will satisfy that area's General Education requirement.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
PLGL 30	Introduction to Paralegal/Legal	3
PLGL 31	Legal Analysis and Writing	3
PLGL 32	Advanced Legal Analysis and Writing	3
PLGL 33	Civil Procedure	3
PLGL 34	Law Office Procedures	3
PLGL 35	Law Office Technology	3
PLGL 37	Tort Law	3
PLGL 38	Employment and Ethical Issues in Paralegalism	3
PLGL 39	Contract Law	3

Required Electives

Choose one course from the following:	3
BUSL 18	Business Law
BUSL 19	Advanced Business Law
PLGL 41	Property Law
PLGL 42	Family Law
PLGL 43	Wills and Trusts
PLGL 44	Bankruptcy Law

PLGL 48	Criminal Law and Procedures
PLGL 49	Evidence Law
Total Units	30

Paralegal Program Website (<http://www.mtsac.edu/paralegal/>)

The Paralegal/Legal Assistant program is approved by the American Bar Association.

Contact:

American Bar Association

321 N. Clark Street, 17th Floor

Chicago, IL 60654-7598

(312) 988-5618

www.americanbar.org (<https://www.americanbar.org/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Have increased confidence in basic paralegal skills.
- Competently prepare basic legal documents such as motions and discovery, as they would be asked to do under the direction and supervision of a licensed attorney.
- Have earned LexisAdvance certification for paralegals.
- Have earned Westlaw certification for paralegals.

Review Student Learning Outcomes (SLOs) for this program.

Park and Sports Turf Management (AS Degree S0116)

Natural Sciences Division

The courses in park and sports turf management are designed to enable students to prepare for a career in this essential and diverse profession. This degree is part of our comprehensive Agricultural Sciences Program. The program is unique in that most courses provide hands-on experience designed to give the student a combination of practical skills and technical knowledge. Students who intend to transfer should meet with a counselor to check the lower division requirements in the catalog of the college or university which they will attend and also the semester and year in which courses are offered.

This program is intended to prepare students to manage a park or sports facility and also for employment following graduation. Students will learn how to design, install and manage irrigation systems, set up and implement fertilizer and pest management programs, design and properly install a complete landscape (including all plants and hardScape), and properly identify and maintain trees, shrubs and turf grasses. In addition, students will learn about personnel management, budgeting and other management topics.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
AGOR 5	Park Facilities	3
AGOR 24	Integrated Pest Management	3
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3
or AGOR 35	Ornamental Plants for Southwest Climates	

AGOR 39	Turf Grass Production and Management	3
AGOR 40	Sports Turf Management	3
AGOR 50	Soil Science and Management	3
AGOR 51	Tractor and Landscape Equipment Operations	3
AGOR 62	Irrigation Principles and Design	3
AGOR 63	Irrigation Systems Management	3
AGOR 71	Construction Fundamentals	3
AGOR 75	Urban Arboriculture	3
Complete one unit from the following course:		1
AGOR 91	Work Experience in Horticulture	
Total Units		34

Horticulture Website (<http://www.mtsac.edu/horticulture/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Demonstrate professional conduct in the industry.
- Be able to give a professional quality oral presentation
- Be able to formulate and propose an all-inclusive management program for a sports turf area
- Be able to demonstrate proper pruning skills for pruning woody trees and shrubs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Photography (AS Degree S1002)

Arts Division

This program is designed to prepare the student for employment in the field of photography. A variety of career opportunities are available in photography, art, cinema, communications, industrial arts, graphics, and journalism. Student desiring a bachelor's degree should consult with an advisor or catalog of the institution they wish to attend regarding transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Choose one from the following:		1
PHOT 1A	Laboratory Studies: Beginning Black and White Photography	
PHOT 1B	Laboratory Studies: Advanced Black and White Photography	
PHOT 1C	Laboratory Studies: Studio Photography	
PHOT 1D	Laboratory Studies: Computer Applications in Photography	
Plus the following courses:		
PHOT 9	Digital Image Editing for Photographers	3
PHOT 10	Basic Digital and Film Photography	3
PHOT 11A	Intermediate Photography	3
PHOT 11B	Digital Capture Workflow	3
PHOT 12	Photographic Alternatives	3
or PHOT 16	Fashion and Editorial Portrait Photography	
or PHOT 18	Portraiture and Wedding Photography	
PHOT 14	Commercial Lighting	3

PHOT 15	History of Photography	3
PHOT 17	Photocommunication	3
or PHOT 30	Advertising Photography	
PHOT 20	Color Photography	3
PHOT 28	Photography Portfolio Development	3
PHOT 29	Studio Business Practices for Commercial Artists	3
PHOT 24	Advanced Digital Image Editing for Photographers	3
or PHOT 26	Video for Photographers	
Total Units		37

Recommended Electives

Course Prefix	Course Name	Units
AHIS 1	Introduction to the Visual Arts and Art History	3
or ARTB 1	Introduction to the Visual Arts and Art History	

Photography Website (<http://www.mtsac.edu/photography/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Use critical thinking skills and be able to analyze and assess photographic situations, solve technical problems, and overcome creative challenges as they arise in the production of high quality still and motion imagery for professional, editorial, commercial, or fine art applications.
- Design and construct still and motion imagery that can communicate ideas or narratives effectively for commercial, editorial, or fine art purposes.
- Have the knowledge and skills pertinent to the operation of a freelance photography business and sound business practices in the trade.
- Usefully participate in the collaborative environment of commercial art fields.
- Analyze, discuss, and critique the various technical, aesthetic, conceptual, historical, and cultural aspects of a photograph.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Psychiatric Technician to RN (AS Degree S1209)

Technology and Health Division Degree S1209

The Mt. San Antonio College Nursing Program, approved by the California Board of Registered Nursing, is a two-year program designed to prepare men and women to give direct nursing care to clients in various practice settings. The program consists of course work in nursing, science, general education, and clinical nursing practice at local hospitals and health agencies.

Graduates of the program receive an Associate in Science Degree in Nursing and are eligible to take the NCLEX-RN examination leading to licensure as a Registered Nurse.

The Licensed Psychiatric Technician is provided career mobility into the Nursing Program to earn an Associate Degree in Nursing.

This degree requires the completion of General Education coursework plus the following:

Requirements for Nursing

Course	Title	Units
Semester 1		
NURS 3	Medical-Surgical Nursing: Locomotion/Sensory/Integument/Oncology/Immunology	3.5
NURS 4	Maternity Nursing	3
NURS 6	Pediatric Nursing	3
Units		9.5
Semester 2		
NURS 7	Medical-Surgical Nursing: Nutrition/ Elimination/ Surgical Asepsis	7
Units		7
Semester 3		
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5
NURS 9	Leadership in Nursing	1
NURS 10	Medical-Surgical Nursing: Integration/Regulation	4
NURS 11	Preceptorship in Nursing	2
Units		12
Total Units		28.5

Requirements for the Major

Course Prefix	Course Name	Units
ANAT 35	Human Anatomy	5
ANAT 36	Human Physiology	5
ANAT 10A	Introductory Human Anatomy	4
ANAT 10B	Introductory Human Physiology	4
MICR 1	Principles of Microbiology	5
MICR 22	Microbiology	4
ENGL 1A	Freshman Composition	4
CHLD 10	Child Growth and Lifespan Development	3
or PSYC 14	Developmental Psychology	
PSYC 1A	Introduction to Psychology	3
SPCH 1A	Public Speaking	4
or SPCH 2	Survey of Communication Studies	
or SPCH 8	Professional and Organizational Speaking	

NOTE: Applicants planning to continue their education and enter a baccalaureate program in nursing will need to meet with a counselor or educational advisor to discuss transferability of courses.

Requirements for the Associate Degree

Students must develop an education plan with a counselor or educational advisor to complete college academic requirements for the A.S. degree. Contact the Counseling Department at (909) 274-4380 to schedule an appointment.

Requirements for Nursing

Course Prefix	Course Name	Units
Requirements for Nursing		
NURS 3	Medical-Surgical Nursing: Locomotion/Sensory/Integument/Oncology/Immunology	3.5
NURS 4	Maternity Nursing	3
NURS 6	Pediatric Nursing	3

NURS 7	Medical-Surgical Nursing: Nutrition/Elimination/Surgical Asepsis	7
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5
NURS 9	Leadership in Nursing	1
NURS 10	Medical-Surgical Nursing: Integration/Regulation	4
NURS 11	Preceptorship in Nursing	2
Requirements for Major		
ANAT 35	Human Anatomy	8-10
& ANAT 36	and Human Physiology	
or ANAT 10A	Introductory Human Anatomy	
& ANAT 10B	and Introductory Human Physiology	
MICR 1	Principles of Microbiology	4-5
or MICR 22	Microbiology	
ENGL 1A	Freshman Composition	4
or ENGL 1AH	Freshman Composition - Honors	
CHLD 10	Child Growth and Lifespan Development	3
or CHLD 10H	Child Growth and Lifespan Development - Honors	
or PSYC 14	Developmental Psychology	
PSYC 1A	Introduction to Psychology	3
or PSYC 1AH	Introduction to Psychology - Honors	
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
or SPCH 2	Survey of Communication Studies	
or SPCH 8	Professional and Organizational Speaking	
or SPCH 8H	Professional and Organizational Speaking - Honors	
Total Units		54.5-57.5

Nursing Website (<http://www.mtsac.edu/nursing/>)

Prerequisite Courses

Course Prefix	Course Name	Units
	Human Anatomy, including a laboratory component.	4
	Human Physiology, including a laboratory component.	4
	Microbiology, including a laboratory component.	4
ENGL 1A	Freshman Composition ¹	4
PSYC 1A	Introduction to Psychology	3
CHLD 10	Child Growth and Lifespan Development ²	3
or PSYC 14	Developmental Psychology	

¹ Minimum grade of C.

² CHLD 10 or PSYC 14 must be completed prior to entrance into NURS 6.

Non-course requirements

- An overall grade point average of 2.5 for the Human Anatomy, Human Physiology, and Microbiology prerequisite courses with no grade less than a "C" for each course and no more than one repetition of any one of these courses.
- A cumulative grade point average (GPA) of 2.5 for all college coursework completed.
- Eligibility for MATH 71 (Preferably MATH 71 or a college level math course completed).
- High school graduation or GED or academic degree from an accredited college/university in the United States.
- Possess a current, active California Psychiatric Technician License.
- Criminal background check and drug screening must be completed prior to any patient contact.

- g. A physical examination, including specific immunizations is required of all candidates prior to the beginning of nursing classes.
- h. Current Healthcare Provider CPR certification
- i. Nursing 70: Role Transition must be completed with a credit grade prior to entrance into the program. (Due to the clinical component of NURS 70, applicants must submit their names to the Nursing Office for approval prior to enrollment in this course. Applicants must have completed all prerequisite courses prior to taking NURS 70. Applicants must provide proof of current Psychiatric Technician License, physical, CPR card, Background Check, and drug testing prior to the start of class.)

Selection Process

Students applying for admission to the Nursing Program are required to see either a counselor or educational advisor to verify their eligibility to enter the Nursing program.

Procedure

Students must complete all course prerequisites prior to requesting an appointment for certifying readiness to enter into the Nursing program. Once eligibility has been established and the Admission Assessment Test has been passed, students will enter on a first come first served basis.

The Eligibility Appointment

- a. Once a student has completed all course prerequisites, they may request an appointment with a counselor or educational advisor.
- b. Students who have completed coursework at other colleges must bring the following information to their eligibility appointment:
 - i. Official transcripts of all college work completed at all colleges.
 - ii. If the prerequisite courses were completed at another college, a course description and a copy of the course syllabus.
 - iii. Students completing college coursework outside of the United States will need to have their transcripts evaluated by an approved international transcript evaluation agency and must bring the final evaluation to their appointment (students may be able to obtain a list of agencies from the Admissions & Records Office).
- iv. Due to specific college deadlines for International Student application, please inform the Counseling/Educational Advisor that this applies to you.
- v. All students will need to bring official proof of high school graduation, GED, or college graduation from an accredited institution in the United States. Students should also be aware that once they have been admitted to the Nursing Program and before beginning the clinical portion of the Program, they will need to be able to pass both a criminal background check, including a screening by the Office of Inspector General for Welfare or Social Security fraud, as well as testing negative for drug use.

All applicants are required to meet the essential functions for success in the Nursing Program.

Physical Demands

- Perform prolonged, extensive, or considerable standing/walking, lifting positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers

- Possess the ability for extremely heavy effort (lift/carry 50 lbs. or more)
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands

(May be corrected with adaptive devices)

- Color vision: ability to distinguish and identify colors
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle emergency or crisis situations
- Subject to many interruptions
- Requires judgment/action which could result in death of a patient
- Exposed to products containing latex

English Language Skills

Although proficiency in English is not a criteria for admission into the nursing program, students are encouraged to be able to speak, write and read English to complete classes successfully and to ensure safety for themselves and for others.

REGARDING LICENSURE

The California Board of Registered Nursing (BRN) protects the consumer by screening applicants for licensure in order to identify potentially unsafe practitioners. The BRN may deny applications for interim permits, temporary licenses, and permanent licensure, if the applicant has been found guilty of dishonesty, fraud or deceit, felony child abuse, sex offender crimes, acts involving narcotics, dangerous drugs or devices, assault and/or battery, and other crimes. Applicants who have questions regarding limitations related to licensure, should contact the California Board of Registered Nursing at (916) 322-3350 or access its website at www.rn.ca.gov.

Contact:

California Board of Registered Nursing
1747 North Market Boulevard, Suite 150
Sacramento, CA 95834
(916) 322-3350
www.rn.ca.gov/ (<http://www.rn.ca.gov/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Complete the Role Transition course to be accepted into the Nursing Program in the second semester.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Public Health (AS Degree S0428)

Natural Sciences Division

The AS degree in Public Health at Mt. San Antonio College is an interdisciplinary program grounded in the biological sciences and designed to prepare students for entry level employment in public health fields. Students completing this program will exemplify a high level of health literacy and will be exposed to a large variety of disciplines. Through this preparation, they will improve their understanding of the relationship of the environment to health, recognize and evaluate the economic impact of changing demographics on health care, identify and control disease outbreaks, and develop interventions to promote healthy behavior.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Select one of the following sequences:		8-10
ANAT 10A & ANAT 10B	Introductory Human Anatomy and Introductory Human Physiology	
ANAT 35 & ANAT 36	Human Anatomy and Human Physiology	
ANTH 5 or SOC 1 or SOC 1H	Cultural Anthropology Introduction to Sociology Introduction to Sociology - Honors	3
BIOL 1 or BIOL 4 or BIOL 4H	General Biology Biology for Majors Biology for Majors - Honors	4
MATH 110 or MATH 110H or PSYC 10	Elementary Statistics Elementary Statistics - Honors Statistics for the Behavioral Sciences	3-4
MICR 1 or MICR 22	Principles of Microbiology Microbiology	4 - 5
NF 25 or NF 25H	Introduction to Nutrition Science Introduction to Nutrition Science - Honors	3
PUBH 22	Introduction to Epidemiology	3
PUBH 24	Introduction to Public Health	3
PUBH 26	Introduction to Global Public Health	3
PUBH 27 or PUBH 28	Public Health and the Environment Public Health and Bioethics	3
Choose two courses from the following		6
ANAT 38	Pathophysiology	
BIOL 5	Contemporary Health Issues	
MICR 26	Introduction to Immunology	
PUBH 20	History of Western Medicine	
PUBH 29	Public Health Microbiology	
PUBH 30	Principles of Public Health and Infectious Disease Epidemiology	
Total Units		43-47

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Explain how the history, philosophy, and literature of public health reflect broader social influences and movements that influence our view of health.
- Explain the population health perspective and the methods used in public health to define and address population-wide/social concerns and the needs of vulnerable populations through the provision of essential services.
- Apply options for intervention frameworks including when (primary, secondary, tertiary), who (individual, population at risk, general population), and how (education, motivation, obligation) to intervene.
- Explain principles of epidemiology that are necessary in order to understand health and impairments of health, including the uses of rates, the meaning of causation, and the evaluation of the effectiveness of interventions.
- Apply the principles of epidemiology to assigned reading of research articles, including case-control, cohort studies, and randomized clinical trials.
- Explain from a global perspective the burden of disease, socioeconomic determinants of health, the links between health and development, and approaches to global cooperation to monitor, promote, and protect health.
- Describe biological principles needed to understand public health issues across the life span and apply these principles to public health interventions to eliminate, prevent, and control disease and to minimize the impact of disease on health.
- Explain the use of clinical interventions for assessing, protecting, and improving health and preventing, detecting, treating, and minimizing the impact of disease.
- Explain the way biological, environmental, and social/cultural factors interact in disease production and understand how these influences can impact prevention strategies.
- Describe the historical examples of the changing definitions of public health in a variety of cultures and times, including major scientific advancements.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Radio Broadcasting: Behind the Scenes (AS Degree S0606)

Arts Division

The Radio Broadcasting Behind-the-Scenes degree is designed for students who are interested in the non-performance side of the broadcasting industry. Instruction prepares students for entry-level jobs including production, promotion, copywriting, and management. Students also receive instruction in the business side of the industry and can further customize their program by selecting from a variety of courses. Practical hands-on experience is available at the campus radio stations.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
R-TV 01	Introduction to Electronic Media	3
R-TV 09	Broadcast Sales and Promotion	3
R-TV 10	Radio Programming and Producer Techniques	3
R-TV 11A	Beginning Radio Production	3
R-TV 11B	Advanced Radio Production	3

R-TV 15	Broadcast Law and Business Practices	3
R-TV 38	Radio Broadcasting Rules and Regulations	1.5
R-TV 96A	Beginning Campus Radio Station Lab: Studio Procedures and Equipment Operations	1
R-TV 96B	Intermediate Campus Radio Station Lab: On-Air and Behind-the-Scenes Skills	1
R-TV 96C	Advanced Campus Radio Station Lab: Program Hosting and Management Skills	1
R-TV 97A	Radio and Entertainment Industry Seminar	1
R-TV 97B	Radio/Entertainment Industry Work Experience	1
Required Electives		
Choose six units from the following:		6
R-TV 05	Radio-TV Newswriting	
R-TV 06	Broadcast Traffic Reporting	
R-TV 17	Introduction to Podcasting	
R-TV 31	History of Radio DJs	
R-TV 32	Social Media in Broadcasting	
R-TV 35	Pop Culture in the Media	
R-TV 39	Social Media and Online Ethics	
R-TV 99	Special Projects in Broadcasting and Entertainment Industry	
R-TV 101	Work Experience in Broadcast Entertainment	
Total Units		30.5

Radio Broadcasting Website (<http://www.mtsac.edu/radio/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Work in production, programming, or a variety of other behind-the-scenes positions at a commercial radio station.
- Use studio equipment to record and edit a pre-recorded piece.
- Operate the studio equipment required to produce a live broadcast.
- Use social media during a live radio show to engage with the audience.
- Develop and implement ideas for a radio show.
- Develop a format for a radio station.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Radio Broadcasting: On the Air (AS Degree S0605)

Arts Division Degree S0605

The Radio Broadcasting On-The-Air degree is designed to prepare students for an entry-level job in performance areas of the broadcasting industry, including disc jockey, news anchor, sportscaster, and commercial voice-overs. Students also receive instruction in the business side of the industry and can further customize their program by selecting from a variety of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
R-TV 01	Introduction to Electronic Media	3
R-TV 02	On-Air Personality Development	3
R-TV 05	Radio-TV Newswriting	3
R-TV 11A	Beginning Radio Production	3
R-TV 15	Broadcast Law and Business Practices	3
R-TV 17	Introduction to Podcasting	3
R-TV 36	Beginning Commercial Voice-Overs	3
R-TV 38	Radio Broadcasting Rules and Regulations	1.5
R-TV 96A	Beginning Campus Radio Station Lab: Studio Procedures and Equipment Operations	1
R-TV 96B	Intermediate Campus Radio Station Lab: On-Air and Behind-the-Scenes Skills	1
R-TV 96C	Advanced Campus Radio Station Lab: Program Hosting and Management Skills	1
R-TV 97A	Radio and Entertainment Industry Seminar	1
R-TV 97B	Radio/Entertainment Industry Work Experience	1
Required Electives		
Choose six units from the following:		6
R-TV 03	Sportscasting and Reporting	
R-TV 04	Broadcast News Field Reporting	
R-TV 06	Broadcast Traffic Reporting	
R-TV 09	Broadcast Sales and Promotion	
R-TV 10	Radio Programming and Producer Techniques	
R-TV 11B	Advanced Radio Production	
R-TV 13	Interview, Talk, and Community Affairs Programming	
R-TV 31	History of Radio DJs	
R-TV 32	Social Media in Broadcasting	
R-TV 35	Pop Culture in the Media	
R-TV 37	Advanced Voice-Overs Techniques	
R-TV 39	Social Media and Online Ethics	
R-TV 99	Special Projects in Broadcasting and Entertainment Industry	
R-TV 101	Work Experience in Broadcast Entertainment	
Total Units		33.5

Radio Broadcasting Website (<http://www.mtsac.edu/radio/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Work as a DJ or newscaster on a commercial radio station.
- Use the studio equipment to record and edit a pre-recorded piece.
- Plan, set-up, and perform a radio station remote as an on-air personality.
- Use social media during a live radio show to engage with the audience.
- Operate the studio equipment required for a live radio broadcast.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Radiologic Technology (AS Degree S1206)

Technology and Health Division

Degree S1206

The Radiologic Technology program, which is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), is designed to prepare students to function as certified radiologic technologists. Students will gain knowledge and understanding of the diagnostic uses of x-ray, as well as the technical skills to use x-ray equipment in both laboratory and clinical settings. The courses are developed to enable students to operate x-ray equipment, assist in the diagnosis of disease, and to observe proper medical ethics. Students will learn the nature of radiation, the principles of electricity, the structure of x-ray machines, and the operation of a clinical x-ray department.

Upon completion of the Associate in Sciences degree in Radiologic Technology, graduates are eligible to apply for the registry examination through the American Registry of Radiologic Technologists and the California Certification of Radiologic Technology. This is a licensed profession, and a valid Social Security number is required to obtain state certification and national licensure.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
RAD 1A	Clinical Experience 1A	4.5
RAD 1B	Clinical Experience 1B	2.5
RAD 2A	Clinical Experience 2A	4.5
RAD 2B	Clinical Experience 2B	2.5
RAD 3A	Clinical Experience 3A	7
RAD 3B	Clinical Experience 3B	2.5
RAD 3C	Clinical Experience 3C	7
RAD 4	Clinical Experience 4	4
RAD 30	Radiographic Pathology	1.5
RAD 31	Fluoroscopy and Radiobiology	4
RAD 32	Digital Imaging in Radiology	2
RAD 50	Introduction to Radiologic Science and Health Care	3
RAD 61A	Theory of Radiologic Technology	4
RAD 61B	Radiographic Procedures I	3
RAD 61C	Radiographic Procedures I Laboratory	1.5
RAD 62A	Theory of Radiologic Technology	4
RAD 62B	Radiographic Procedures II	3
RAD 62C	Radiographic Procedures II Laboratory	1.5
RAD 63	Theory of Radiologic Technology	1
RAD 64	Theory of Radiologic Technology	4
RAD 91	Patient Care in Radiologic Sciences	3
Total Units		70

To remain in the program, students must maintain a grade of "C" or better in all courses.

Radiologic Technology Website (<http://www.mtsac.edu/radiologic/>)

Admission Requirements

In addition to meeting Mt. San Antonio College's academic standards for admission, applicants must be in good standing and satisfy the following requirements prior to program admission:

- Be 18 years of age upon entrance into the program.
- Possess a valid Social Security Card. This is a licensed profession, and a valid Social Security Number is required to obtain state certification and national licensure.
- Complete the steps to apply and enroll (<https://www.mtsac.edu/admissions/steps-to-apply/>) at Mt San Antonio College.
- Submit a Radiologic Technology Program application to be placed on the waiting list. All applications are dated upon receipt. A program begins each summer intersession.
- Meet with a Counselor or Advisor to review AS degree requirements and complete an Admission Course Checklist for the Radiologic Technology Program.
- Complete all AS degree general education requirements to include program prerequisites listed below with a minimum grade of "C" in each course. Students must complete prerequisite courses prior to program admission. Students may seek variances for courses completed at other institutions. Course must be an equivalent course or higher to the courses listed below.

Course Prefix	Course Name	Units
ANAT 10A	Introductory Human Anatomy	4
or ANAT 35	Human Anatomy	
ANAT 10B	Introductory Human Physiology	4
or ANAT 36	Human Physiology	
PHYS 1	Physics	4
MEDI 90	Medical Terminology	3

7. Attend a mandatory program orientation.

8. Meet the following **Essential Functions for Success** in the Radiologic Technology Program:

Physical Demands

- Perform prolonged, extensive, or considerable standing/walking, lifting positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift/carry 50 lbs. or more)
- Perform considerable reaching, stooping, bending, kneeling, and crouching
- Respond rapidly to situations involving the health and safety of patients
- Function adequately under stressful situations

Sensory Demands

(May be corrected with adaptive devices)

- Color vision: ability to distinguish and identify colors
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens

- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle emergency or crisis situations
- Subject to many interruptions
- Requires judgment/action which could result in death of a patient
- Exposed to products containing latex

Other Requirements

- A physical examination, including specific immunizations and drug testing, is required prior to entering the clinical education phase. Drug testing procedures will be provided upon admission.
- A background check, indicating a passing clearance, is required prior to entering the clinical education phase. A valid Social Security number is required to complete this process. Information on background check procedures and clinical affiliate's review of results will be provided upon admission.
- Possess current American Heart Association: Basic Life Support (BLS) for Healthcare Providers CPR certification.

English Language Skills

Although proficiency in English is not a criterion for admission into the Radiologic Technology Program, students must be able to speak, write and read English to ensure patient safety and to complete classes successfully.

Selection Procedure

Selection of students is based upon the completion of the above admission requirements and date of application. The Department will make every effort to notify the applicant of admission no less than one month prior to program commencement.

Program Completion Requirements

Student must complete all the major course requirements, and the AS general education requirements, to earn a certificate of completion in Radiologic Technology. This certificate will permit the student to apply for the registry exam through the American Registry of Radiologic Technologist and the California Certification of Radiologic Technology.

Accreditation

The Radiologic Technology program is accredited by:

The Joint Review Committee in Radiologic Technology (JRCERT)
20 North Wacker Drive, Suite 2850
Chicago, IL 60606-3182
(312)704-5300
<http://www.jrcert.org/>

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Apply accurate positioning skills
- Select optimal technical factors
- Utilize appropriate radiation protection
- Demonstrate effective written communication skills
- Demonstrate effective oral communication skills
- Adapt standard procedures as needed
- Critique images to determine diagnostic quality
- Determine corrective measures for non-diagnostic images

- Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity, or culture
- Demonstrate professional work ethics
- Participate in professional development activities
- Pass the ARRT examination
- Secure employment in the radiology profession
- Be well prepared to function as a competent entry-level radiologic technologist

Review Student Learning Outcomes for this program. [Student Learning Outcomes \(SLOs\)](#)

Real Estate (AS Degree S0512)

Business Division

This program prepares students for employment following graduation. Students wishing a bachelor's degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses. The requirements for a degree in real estate include the eight classes needed prior to applying to take the Real Estate Broker License Exam as well as several additional classes designed to strengthen the skills needed to succeed in a career in real estate.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
BUSR 50	Real Estate Principles	3
BUSR 51	Legal Aspects of Real Estate	3
BUSR 52	Real Estate Practice	3
BUSR 53	Real Estate Finance	3
BUSR 55	Real Estate Economics	3
or BUSA 11	Fundamentals of Accounting	
BUSR 81	Appraisal: Principles and Procedures	3.5
CISB 15	Microcomputer Applications	3.5
Required Electives		
Choose three of the following		9
BUSL 18	Business Law	
BUSR 59	Real Estate Property Management	
BUSR 60	Real Estate Investment Planning	
BUSR 62	Mortgage Loan Brokering and Lending	
BUSR 76	Escrow Procedures I	
BUSR 40	Landlord-Tenant Law	
Total Units		31

Real Estate Website (<https://www.mtsac.edu/realestate/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Have the requisite knowledge to pass both the California Real Estate Sales and Broker's Exams.
- Meet or exceed the state average for success or passage on the state licensing exam.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Registered Veterinary Technology (AS Degree S0105)

Natural Sciences Division

The Registered Veterinary Technology Program, which is accredited by the American Veterinary Medical Association, is designed to enable students to prepare for a career in this essential and diverse profession. The program is unique in that most courses provide hands-on experience designed to give the student a combination of practical skills and technical knowledge. This program is intended to prepare students for entry-level employment following graduation. This degree is designed to prepare students for careers as Registered Veterinary Technicians who will work under the supervision of licensed private organizations including veterinary hospitals, research facilities, animal shelters, and other animal care agencies. Graduates of the program receive an Associate in Science Degree in Registered Veterinary Technology and are eligible to take the VTNE (Veterinary Technicians National Exam) leading to licensure as a Registered Veterinary Technician.

Required Courses

Course Prefix	Course Name	Units
Required Courses, 1st year		
AGHE 54	Veterinary Office Procedures	3
AGHE 64	Veterinary Pharmacology	3
AGHE 79	Laboratory Animal Medicine and Care	3
AGHE 83A	Work Experience in Veterinary Technology ¹	2
AGHE 86	Anatomy and Physiology of Domestic Animals	4
ASCI 1	Animal Science	3
ASCI 2	Animal Nutrition	3
ASCI 51	Animal Handling and Restraint	3
ASCI 96	Animal Sanitation and Disease Control	3
Advanced Courses:		
AGHE 60	Medical Nursing and Animal Care	4
AGHE 61	Animal Surgical Nursing	4
AGHE 62A	Clinical Pathology	3
AGHE 62B	Clinical Pathology	2
AGHE 65	Veterinary Radiography	2
AGHE 83A	Work Experience in Veterinary Technology ¹	2
AGHE 84B	Applied Animal Health Procedures	1
AGHE 85	Seminar in Registered Veterinary Technology	1
Required Electives		
Choose three units from the following:		3
ASCI 12	Exotic Animal Management	
ASCI 14	Swine Production	
ASCI 16	Horse Production and Management	
ASCI 17	Sheep Production	
ASCI 18	Horse Ranch Management	
ASCI 19	Horse Hoof Care	
ASCI 30	Beef Production	
ASCI 70	Pet Shop Management	
ASCI 71	Canine Management	
ASCI 72	Feline Management	
ASCI 73	Tropical and Coldwater Fish Management	
ASCI 74	Reptile Management	
ASCI 76	Aviculture - Cage and Aviary Birds	

ASCI 94	Animal Breeding
Total Units	49

¹ Complete a total of four units of AGHE 83A.

Registered Veterinary Technology Website (<http://www.mtsac.edu/vettech/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be able to successfully perform all of the skills on the AVMA Task List.
- Be able to successfully obtain an entry level position as a veterinary technician.
- Be able to successfully pass the Veterinary Technician's National Exam (VTNE).

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Respiratory Therapy (AS Degree S1205)

Technology and Health Division

The Respiratory Therapy Program, which is accredited by the Commission on Accreditation for Respiratory Care (COARC), is designed to train students to function as Respiratory Therapists.

Respiratory Therapy is the application of technical skills involving a complete understanding of cardiopulmonary physiology and recognition of various pathological conditions that alter the patient's ability to breathe effectively.

By applying medical gases under pressure - i.e., compressed air, oxygen, and other mixtures - to the airways through the use of various kinds of equipment, the therapist, under the direction of the physician, treats the diseased or ineffective respiratory system.

Some mechanical aptitude and the ability to perform fine motor movements with hands and fingers is required in learning the operation of specialized equipment. This includes diagnostic apparatus which aids the physician in detecting cardiorespiratory diseases.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
RESD 102	Theory and Principles of Respiratory Therapy	2
RESD 104	Respiratory Therapy Science	4
RESD 106	Pulmonary Anatomy and Physiology	3
RESD 108	Pharmacology for Respiratory Care	1.5
RESD 110	Respiratory Therapy Science	4
RESD 112	Cardiopulmonary Pathophysiology	3
RESD 114	Comprehensive Pulmonary Assessment	3
RESD 116	Special Procedures for Respiratory Care	1.5
RESD 200A	Techniques of Respiratory Therapy	2.5
RESD 200B	Techniques of Respiratory Therapy	6
RESD 202	Adult Respiratory Intensive Care	3

RESD 204	Neonatal Intensive Care	3
RESD 200C	Techniques of Respiratory Therapy	2.5
RESD 200D	Techniques of Respiratory Therapy	6
RESD 206	Respiratory Therapeutic Modalities	3
RESD 208	Current Issues in Respiratory Care	3
Total Units		51

Respiratory Department website (<http://www.mtsac.edu/respiratory/>)

Entrance Requirements

In addition to meeting Mt. San Antonio College's academic standards for admission, applicants must be in good standing and satisfy the following requirements:

- Applicants must be at least 18 years of age upon entrance into the program and must be a high school graduate or equivalent.
- Submit a college application and be accepted as a student at Mt. San Antonio College.
- Complete the online orientation and the mandatory Assessment Questionnaire (AQ) for course placement in English, math, and reading. If you have taken English and math at another college, please provide official college transcripts to the Admissions and Records Office.
- Submit an application to the Respiratory Therapy Program. The application can be accessed at: Respiratory Therapy Online Application. (https://prodweb.mtsac.edu/prodapex/f/?p=127:LOGIN_DESKTOP:11162559167878:::)
- All foreign and domestic transcripts must be evaluated. See Admissions for details.

All applicants are required to meet the **Essential Functions for Success** in the Respiratory Therapy Program:

Physical Demands

- Perform prolonged, extensive, or considerable standing/walking, lifting, positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift and carry at least 50 pounds or more)
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands

- Color vision: ability to distinguish and identify colors (may be corrected with adaptive devices)
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationship
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens

- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle emergency or crisis situations
- Subject to many interruptions
- Requires decisions/actions related to end of life issues
- Exposed to products containing latex

English Language Skills

Although proficiency in English is not a criterion for admission into the Respiratory Therapy Program, students must be able to speak, write and read English to ensure patient safety and to complete classes successfully.

Other Requirements

- RESD 50 pre-requisites ANAT 10A, ANAT 10B, CHEM 10, MATH 51 and MEDI 90 must be completed prior to entering the program.
- All students will be required to complete a background check prior to entering the clinical courses.
- A physical examination including drug testing and specific immunizations, is required of all students prior to entering clinical courses.

A.S. Degree Requirement

All students **must** complete all major course requirements and general education requirements necessary to complete the Associate degree before a certificate of completion in Respiratory Therapy will be given. The student may elect to pursue either the Associate in Science or Associate in Arts degree. An Associate degree in Respiratory Therapy is required to take National Board for Respiratory Care (NBRC) examinations.

Special Information

To remain in the program, students must maintain a "C" or better grade in all courses.

Readmission Policy

Students who are dropped, failed, or withdrew from the program may request readmission for the following year in the semester in which they were stopped or may re-start the program. Students who fail or withdraw from the program must meet with the Program Director prior to re-entry into the program to discuss a remediation plan. Students who re-enter the program in the semester they stopped are required to demonstrate cognitive and psychomotor skills prior to re-entry. Students who re-start the program will be required to retake all Respiratory Therapy courses even if satisfactory grades were received.

Re-entry (readmission or re-start) may occur only one time. Re-entry is on a space-available basis and it is possible that readmission will be denied. Dismissals for reasons 1,2,5,6 of the Program Dismissal Policy are NOT eligible for readmission to the Program. In accordance with California law, the Respiratory Care Board will also be notified of any violations, which prevent consideration for readmission.

The Respiratory Therapy program is accredited by the Commission on Accreditation for Respiratory Care (CoARC).

Contact:

Commission on Accreditation for Respiratory Care (CoARC)
 1248 Hardwood Road
 Bedford, TX 76021-4244
 (817) 283-2835
<https://www.coarc.com/>

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Achieve the CRT and RRT credential.
- Demonstrate in the laboratory and clinical setting, the correct procedures for basic Respiratory Therapy treatment modalities.
- Demonstrate in the laboratory and clinical setting, the correct procedures for advanced Respiratory Therapy procedures to include manual and mechanical ventilator. Review Student Learning Outcomes (SLOs) for this program.

Sales Engineering (AS Degree S0852)

Natural Science Division

The Sales Engineering program is designed to prepare the student for a career in a wide range of industries including sales engineering, technical sales and technical customer service. Technical Sales courses and additional requisite coursework may facilitate industry employment.

Correction: Added CHEM 55 as part of the Civil Engineering Application AS option. Left out in error. 8/23/2022

Required Courses

Course Prefix	Course Name	Units
Core courses		4
ENGT 10A	Foundations of Technical Sales	2
ENGT 10B	Technical Sales Strategies	2
And completion of an AS Engineering with Emphasis in Engineering Applications AS		

Course Prefix	Course Name	Units
Engineering with Emphasis in Mechanical Engineering Applications AS		36-37
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
or ENGR 7	Programming Applications for Engineers	
ENGR 8	Properties of Materials	4
ENGR 18	Introduction to Engineering Graphics	3
ENGR 24	Engineering Graphics	4
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
PHYS 2AG	General Physics	4
or PHYS 4A	Engineering Physics	
Required Electives: Choose at least 7 units		7
ENGR 40	Statics	
ENGR 40T	Applied Statics	
ENGR 41	Dynamics	
ENGR 42	Mechanics of Materials	
ENGR 44	Electrical Engineering	
ENGR 50A	Robotics Team Project Development	
ENGR 50B	Intermediate Robotics Team Project Development	

PHYS 2BG	General Physics
PHYS 4B	Engineering Physics

Course Prefix	Course Name	Units
Engineering with Emphasis in Software Engineering Applications AS		27.5-29
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
ENGR 16	Introduction to Digital Electronics with FPGA Programming	4
CSCI 110	Fundamentals of Computer Science	3.5
CSCI 150	Assembly Language/Machine Architecture	3.5
CSCI 220	Data Structures I	3.5
or CSCI 240	Data Structures and Algorithms	
MATH 160	Precalculus Mathematics	4
or MATH 180	Calculus and Analytic Geometry	

Course Prefix	Course Name	Units
Engineering with Emphasis in Civil Engineering Applications AS		36-37
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
or ENGR 7	Programming Applications for Engineers	
ENGR 8	Properties of Materials	4
ENGR 24	Engineering Graphics	4
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
MATH 180	Calculus and Analytic Geometry	4
or MATH 181	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
or PHYS 4A	Engineering Physics	
SURV 1A	Surveying	3
SURV 1B	Surveying	3
Required Electives: Choose a minimum of 10 units		10
ENGR 18	Introduction to Engineering Graphics	
ENGR 40	Statics	
ENGR 40T	Applied Statics	
ENGR 41	Dynamics	
ENGR 42	Mechanics of Materials	
ENGR 50A	Robotics Team Project Development	
ENGR 50B	Intermediate Robotics Team Project Development	
ENGR 285	Differential Equations and Linear Algebra for Engineers	
PHYS 2BG	General Physics	
PHYS 4B	Engineering Physics	

Course Prefix	Course Name	Units
Engineering with Emphasis in Electrical Engineering Applications AS		41
ENGR 1	Introduction to Engineering	2
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
ENGR 16	Introduction to Digital Electronics with FPGA Programming	4
ENGR 44	Electrical Engineering	4
ENGR 285	Differential Equations and Linear Algebra for Engineers	4

MATH 180	Calculus and Analytic Geometry	4
MATH 181	Calculus and Analytic Geometry	4
MATH 280	Calculus and Analytic Geometry	5
PHYS 4A	Engineering Physics	5
PHYS 4B	Engineering Physics	5

Course Prefix	Course Name	Units
Engineering with Emphasis in Chemical and Materials Engineering Applications AS		30-45
ENGR 1	Introduction to Engineering	2
ENGR 1C	Engineering Critical Thinking	3
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies	4
or ENGR 7	Programming Applications for Engineers	
ENGR 8	Properties of Materials	4
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
or CHEM 55	Chemistry for Engineers	
MATH 160	Precalculus Mathematics	4
or MATH 180	Calculus and Analytic Geometry	
PHYS 2AG	General Physics	4
or PHYS 4A	Engineering Physics	
Required Electives: Choose a minimum of 12 units		12
CHEM 51	General Chemistry II	
or CHEM 51H	General Chemistry II - Honors	
CHEM 80	Organic Chemistry I	
CHEM 81	Organic Chemistry II	
ENGR 40	Statics	
ENGR 40T	Applied Statics	
ENGR 50A	Robotics Team Project Development	
ENGR 50B	Intermediate Robotics Team Project Development	
ENGR 285	Differential Equations and Linear Algebra for Engineers	
PHYS 2BG	General Physics	
PHYS 4B	Engineering Physics	

Please see the Mt. San Antonio College Engineering, Engineering Technology and Surveying Program Website (<https://www.mtsac.edu/engineering/>) for updated information on program courses, transfer help, extracurricular activities, faculty contact information and more.

Sign Language/Interpreting (AS S0801)

Humanities and Social Sciences Division

The Mt. San Antonio College Interpreter Training Program is designed to prepare individuals for careers as Sign Language Interpreters. Interpreters are needed wherever communication happens between the hearing community and the Deaf and hard-of-hearing community. There are an endless number of settings in which this communication takes place. Interpreters are employed by school districts, cruiseship companies, corporations, government agencies, hospitals, colleges and universities, and a vast number of other organizations and private businesses.

Program Preparation: Preparation for the program includes fluency in American Sign Language demonstrated by the completion of SIGN 104,

(or the equivalent skill) and English fluency demonstrated by the completion of ENGL 1A.

National Certification: There are many specialties within the field of Sign Language Interpreting, but the focus of this program is on preparing the interpreter generalist. Although requiring some type of certification is becoming more common in California, there are still many job opportunities for the precertified interpreter.

Completing the certificate in Sign Language/Interpreting does not make one a "Certified Interpreter"; however, graduates of this program are encouraged to apply for National Interpreting Certification (NIC) through the Registry of Interpreters for the Deaf (RID) at www.rid.org (<http://www.rid.org>).

Students who complete the required courses listed below and who also complete the graduation requirements of Mt. San Antonio College will be awarded the Associate in Science degree in Sign Language/Interpreting.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Core Courses		
SIGN 105	American Sign Language 5	4
SIGN 108	Fingerspelling	2
SIGN 201	Introduction to Deaf Studies	3
SIGN 202	American Deaf Culture	3
SIGN 210	American Sign Language Structure	3
SIGN 220	Translation: American Sign Language and English	4
SIGN 223	Principles of Interpreting	3
SIGN 225	Ethical Decision Making for Interpreters	2
SIGN 227	Cognitive Processing for Interpreters	4
SIGN 231	Interpreting	4
SIGN 232	Advanced Interpreting	4
SIGN 239	Applied Interpreting	2
Required Electives		
Choose three courses from the following:		5-5.5
SIGN 240	Vocabulary Building for Interpreters	
SIGN 250	Interpreting with Classifiers	
SIGN 260	Video Interpreting	
SIGN 299	Special Projects in Sign Language/Interpreting	
Total Units		43-43.5

Sign Language/Interpreting Department Website (<http://www.mtsac.edu/sign-language/>)

Program Learning Objectives

Upon successful completion of this program, a student will be able to:

- Apply Demand Control Schema (DC-S) Theory to the field of Sign Language Interpreting.
- Given an English narrative, successfully give a functional equivalent message in ASL in a simultaneous mode.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Television Production (AS Degree S0602)

Arts Division

The Associate in Science degree in Television Production is designed to prepare students for entry-level jobs in the Television industry in a variety of areas including narrative, remote and studio production, writing, preproduction, editing, and finance.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Choose two courses from the following:		6
R-TV 01	Introduction to Electronic Media	
R-TV 14	Media Aesthetics	
R-TV 28	Introduction to Writing for Electronic Media	
Choose 12 units from the following courses, or any of the above courses not taken:		12
PHOT 10	Basic Digital and Film Photography	
R-TV 18	Introduction to Screenwriting	
R-TV 19A	Beginning Video Production	
R-TV 19B	Advanced Video Production	
R-TV 20	Beginning TV Studio Production	
R-TV 21	Remote Multicamera Production	
R-TV 22	Editing for Film and Television	
R-TV 23	Reality Show Production	
R-TV 24	American Film History	
R-TV 25	World Cinema	
R-TV 100	Work Experience in Film and TV	
Total Units		18

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Feel that they have an increased possession of the skills required for entry-level work in the entertainment industry.
- Function in three types of production: Narrative (film-style), TV Studio, and live Remote Multicamera production in any role.
- Use communication, artistic, and technical skills to collaboratively create programs as part of a team in any role, from writer to editor.
- Use Avid Media Composer to the level necessary for an editing internship.
- Present an ePortfolio containing video and written work to prospective employers, universities, and scholarship committees.
- Apply aesthetic and technical skills in telling a story visually.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Unmanned Aircraft Systems (AS Degree S0661)

Technology and Health Division
S0661

The Unmanned Aircraft System (UAS) program prepares students for careers in the rapidly growing area of unmanned aircraft systems, including piloting, mission planning, risk management, sensing operations, data collection and analysis, and other related skills. The Federal Aviation Administration (FAA) Part 107 remote pilot operator certification is not required for graduation but it is desirable for career advancement. Through course work, simulation, and flight training students may achieve the FAA remote pilot operator certificate simultaneously with the A.S. degree.

Required Courses

Course Prefix	Course Name	Units
AERO 98	Introduction to Aviation Careers	1.5
AERO 100	Primary Pilot Ground School	4
AERO 102	Aviation Weather	3
AERO 104	Federal Aviation Regulations	3
AERO 160	Unmanned Aircraft Systems Basic	4
AERO 200	Aviation Safety and Human Factors	3
AERO 210	Unmanned Aircraft Systems Advanced	4
PHOT 10	Basic Digital and Film Photography	3
PHOT 50	Drone Basic Still and Motion Camera Operator	3
Recommended Electives		
GEOG 10	Introduction to Geographic Information Systems	
PHOT 11B	Digital Capture Workflow	
Total Units		28.5

Welding (AS Degree S0919)

Technology and Health Division

Degree S0919

This program is designed to prepare the student for employment in the broad field of welding. It leads to occupations in manufacturing and repair and helps prepare the student for positions in supervision.

Courses in the welding curriculum prepare students for welding certification. The college is a testing agency for the City of Los Angeles and is authorized to administer the performance test for the Structural Welding Certificate. There is a \$50 charge for students and \$60 for non-students to take this test. Topics of the written portion of the test which is administered by the city are reviewed in various welding courses offered by the college. This program is intended to prepare students for employment following graduation. Students desiring a bachelor's degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
WELD 40	Introduction to Welding	2
WELD 50	Oxyacetylene Welding	2
WELD 51	Basic Electric Arc Welding	2
WELD 53A	Welding Metallurgy	3
WELD 70A	Beginning Arc Welding	3
WELD 70B	Intermediate Arc Welding	3
WELD 70C	Certification for Welders	3
WELD 80	Construction Fabrication and Welding	3
Total Units		21

Recommended Electives

Course Prefix	Course Name	Units
BUSM 61	Business Organization and Management	3
WELD 30	Metal Sculpture	2
WELD 60	Print Reading and Computations for Welders	3
WELD 81	Pipe and Tube Welding	3

Air Conditioning & Welding Website (<http://www.mtsac.edu/airconditioning-welding/>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Be prepared to pass the Los Angeles City Structural Steel Exam.
- Be employed or seeking employment in their area or a related area.

Review Student Learning Outcomes (SLOs) for this program.

Associate in Arts Degrees (AA) with Emphases

Liberal Arts and Sciences with area of
emphasis in one of the following:

Business (AA Degree A8981)	199
Communication (AA Degree A8982)	199
Dance (AA Degree A0444).....	200
Environmental Studies (AA Degree A0411)	200
Fine Arts (AA Degree A8983)	201
Humanities (AA Degree A8984).....	202
Information Technology (AA Degree A8985)	204
Kinesiology and Wellness (AA Degree A8986).....	204
Language Arts (AA Degree A8987)	206
Mathematics (AA Degree A8989).....	207
Natural Sciences (AA Degree A8988)	207
Social & BehavioralSciences (AA Degree A8991)	208
World Language & Global Studies (AA Degree A0429).....	209

Business Emphasis (AA Degree A8981)

Degree A8981

An emphasis in Business provides the student with an understanding of business and its role in society. Students will have knowledge of various business functions and economic analysis. Upon completion of this degree students will be prepared for an entry level job in the business world.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
BUSC 1A	Principles of Economics - Macroeconomics	3
or BUSC 1AH	Principles of Economics - Macroeconomics - Honors	
BUSC 1B	Principles of Economics - Microeconomics	3
or BUSC 1BH	Principles of Economics - Microeconomics - Honors	
CISB 15	Microcomputer Applications	3.5
or CISB 11	Computer Information Systems	
Choose a minimum of 3 courses from the following which should be selected in consultation with a counselor or educational advisor:		9-13
BUSA 7	Principles of Accounting - Financial	
BUSA 8	Principles of Accounting - Managerial	
BUSC 17	Applied Business Statistics	
BUSL 18	Business Law	
BUSM 20	Principles of Business	
BUSO 25	Business Communications	
Total Units		18.5-22.5

Business Administration Website (<http://www.mtsac.edu/businessadministration/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Describe the basic accounting system and how it is used to serve business needs.
- List and explain the foundations upon which business is built and the economic challenges facing the United States.
- Compose an appropriate, effective letter presenting good news, bad news, sales, or persuasive content.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Communication Emphasis, AA Liberal Arts and Sciences (Degree A8982)

Degree A8982

An emphasis in Communication provides the student with an understanding of communication strategies, reasoning, logic, and critical analysis as it relates to human interaction within multiple cultural contexts.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Required Core		7
SPCH 1A	Public Speaking (Required course)	
or SPCH 1AH	Public Speaking - Honors	
or SPCH 2	Survey of Communication Studies	
SPCH 26	Interpersonal Communication	
or SPCH 26H	Interpersonal Communication - Honors	
Choose eleven units from the following:		11
JOUR 100	Introduction to Mass Communications	
JOUR 101	Beginning Writing and Reporting for the Mass Media	
JOUR 102	Intermediate Writing and Reporting for Mass Media	
JOUR 111	Writing Broadcast and Web News	
PHOT 10	Basic Digital and Film Photography	
R-TV 01	Introduction to Electronic Media	
R-TV 11A	Beginning Radio Production	
R-TV 19A	Beginning Video Production	
R-TV 99	Special Projects in Broadcasting and Entertainment Industry	
SPCH 1A	Public Speaking	
or SPCH 1AH	Public Speaking - Honors	
SPCH 2	Survey of Communication Studies	
SPCH 3	Voice and Diction	
SPCH 4	Performance of Literature	
SPCH 6	Group Communication	
SPCH 7	Intercultural Communication	
or SPCH 7H	Intercultural Communication - Honors	
SPCH 8	Professional and Organizational Speaking	
or SPCH 8H	Professional and Organizational Speaking - Honors	
SPCH 15	Forensics: Fundamentals of Contest Speech and Debate	
SPCH 16	Forensics: Individual Event Team	
SPCH 17	Forensics: Debate Team	
SPCH 18	Forensics: Reader's Theater Team	
SPCH 20	Argumentation and Debate	
or SPCH 20H	Argumentation and Debate - Honors	
SPCH 30	Introduction to Communication Theory	
SPCH 99	Special Projects in Speech	
For Area of Emphasis		
Total Units		18

Communication Website (<http://www.mtsac.edu/communication/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Perform basic speech delivery skills.
- Critically analyze information and arguments.
- Select and research an appropriate topic and thesis.
- Logically organize supporting materials into a well-crafted presentation.
- Demonstrate effective verbal and non-verbal delivery skills to present a message to a live audience in a confident manner.
- Formulate communication solutions to problems in a range of contexts.

- Create messages appropriate for diverse audiences and listener.
- Develop an improved understanding of themselves as communicators.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Dance Emphasis (AA Degree A0444)

Kinesiology

An emphasis in Dance provides the student with an understanding of the practices and theories of dance history, pedagogy and choreography. In addition to the foundational courses, students select courses from dance technique, performance and anatomy and Pilates categories.

Required Courses

Course Prefix	Course Name	Units
DN-T 9	Dance Audition Techniques	1
DN-T 18	Introduction to Dance	1.5
DN-T 20	History and Appreciation of Dance	3
DN-T 38	Dance Teaching Methods	3
DNCE 4	Choreography	1
DNCE 33	Improvisation	0.5
Anatomy and Pilates: Complete a minimum of 3 Units		3
DN-T 28	Functional Anatomy for Pilates	
DNCE 39	Pilates Fundamentals	
DNCE 40	Conditioning Through Dance	
KIN 24	Applied Kinesiology	
Performance Ensemble: Complete a minimum of 3 Units		3
DNCE 22	Dance Rehearsal	
DNCE 24	Dance Production	
DNCE 25	Dance Ensemble	
DNCE 35	Repertory	
Ballet: Complete a minimum of 2 Units		2
DNCE 2B	Ballet II	
DNCE 3	Ballet Performance	
DNCE 31	Classical Dance	
Modern: Complete a minimum of 2 units		2
DNCE 12B	Modern II	
DNCE 13	Modern Performance	
DNCE 30	Contemporary Dance	
Theatrical Dance: Complete a minimum of 1 units		1
DNCE 8	Latin Dance I	
DNCE 18B	Tap II	
DNCE 19	Tap Performance	
DNCE 29	Theater Dance II	
Commercial Dance: Complete a minimum of 1 units		1
DNCE 14B	Jazz II	
DNCE 15	Jazz Performance	
DNCE 32	Commercial Dance	
DNCE 36	Commercial Dance II	
Total Units		22

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Environmental Studies Emphasis (AA Degree A0411)

Humanities and Social Sciences Division

An emphasis in Environmental Studies is an interdisciplinary course of study that provides students with an integrated and critical understanding of the natural environment and human interactions with it. The coursework is designed to examine the interplay between natural and social systems and the ideological foundations of humanity's attitudes and behaviors in relation to its ever-changing environment. This program is designed to prepare students to research, analyze, and propose solutions to the myriad environmental challenges facing the world today through a well-rounded curriculum combining classroom, laboratory, and field study instruction. Students who are interested in an Environmental Science major are advised to follow the AA in Liberal Arts with an emphasis in natural sciences and to work with a counselor to select major courses appropriate to their intended transfer institution.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Choose a combination of any 3 courses		9-11
BIOL 6	Humans and the Environment	
BIOL 6L	Humans and the Environment Laboratory	
BUSC 1A	Principles of Economics - Macroeconomics	
or BUSC 1AH	Principles of Economics - Macroeconomics - Honors	
GEOL 9	Environmental Geology	
POLI 10	Environmental Politics	
Scientific Inquiry and Quantitative Reasoning		
Choose a minimum of three units from the following:		3-5
BIOL 1	General Biology	
BIOL 3	Ecology and Field Biology	
BIOL 4	Biology for Majors	
or BIOL 4H	Biology for Majors - Honors	
BIOL 20	Marine Biology	
BIOL 21	Marine Biology Laboratory	
BIOL 25	Conservation Biology	
BTNY 3	Plant Structures, Functions, and Diversity	
CHEM 10	Chemistry for Allied Health Majors	
CHEM 40	Introduction to General Chemistry	
CHEM 50	General Chemistry I	
or CHEM 50H	General Chemistry I - Honors	
GEOG 1	Physical Geography	
or GEOG 1H	Physical Geography - Honors	
GEOG 1L	Physical Geography Laboratory	
or GEOG 1LH	Physical Geography Laboratory - Honors	
GEOG 10	Introduction to Geographic Information Systems	
GEOL 1	Physical Geology	
GEOL 8	Earth Science	
or GEOL 8H	Earth Science - Honors	
GEOL 8L	Earth Science Laboratory	
MATH 110	Elementary Statistics	
or MATH 110H	Elementary Statistics - Honors	
MATH 140	Calculus for Business	
MATH 160	Precalculus Mathematics	

MATH 180	Calculus and Analytic Geometry
METO 3	Weather and the Atmospheric Environment
METO 3L	Weather and Atmospheric Environment Laboratory
OCEA 10	Introduction to Oceanography
or OCEA 10H	Introduction to Oceanography - Honors
OCEA 10L	Introduction to Oceanography Laboratory
OCEA 20	The Coastal Ocean
PHYS 1	Physics
PHYS 2AG	General Physics
PHYS 4A	Engineering Physics
PHSC 9	Physical Science
PSYC 10	Statistics for the Behavioral Sciences
Social Science	
Choose two of the following options:	
ANTH 5	Cultural Anthropology
or ANTH 5H	Cultural Anthropology - Honors
BUSC 1B	Principles of Economics - Microeconomics
or BUSC 1BH	Principles of Economics - Microeconomics - Honors
GEOG 2	Human Geography
or GEOG 2H	Human Geography - Honors
GEOG 5	World Regional Geography
GEOG 30	Geography of California
PHIL 12	Introduction to Ethics
or PHIL 12H	Introduction to Ethics - Honors
POLI 1	Introduction to American Government and Politics
or POLI 1H	Introduction to American Government and Politics - Honors
SOC 2	Contemporary Social Problems
or SOC 2H	Contemporary Social Problems - Honors
Total Units	18-22

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate critical thinking skills in relation to environmental issues
- Demonstrate an ability to integrate the many disciplines and fields that intersect with environmental concerns
- Demonstrate an awareness, knowledge, and appreciation of ecological processes and their relationship they have with human communities
- Demonstrate an ability to integrate environmental issues within the concept of sustainability

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Fine Arts Emphasis (AA Degree A8983)

Degree A8983

An emphasis in Fine Arts provides the student with an understanding of the practices and theories of traditional and contemporary two- and three-dimensional studio arts and an introduction to the history of Western art. In addition to the foundation courses (24 units), students select twelve (12) units from one of the art categories.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
ARTD 15A	Drawing: Beginning	3
ARTD 17A	Drawing: Life	3
ARTD 20	Design: Two-Dimensional	3
ARTD 21	Design: Color and Composition	3
ARTD 25A	Beginning Painting I	3
ARTS 22	Design: Three-Dimensional	3
AHIS 4	History of Western Art: Prehistoric Through Gothic	3
or AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors	
AHIS 5	History of Western Art: Renaissance Through Modern	3
or AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	
Choose twelve units from one of the following art categories:		12

Ceramics

ARTS 30A	Ceramics: Beginning I
ARTS 30B	Ceramics: Beginning II
ARTS 31	Ceramics: Intermediate Studio
ARTS 33	Ceramics: Hand Construction
ARTS 34	The Sculptural Vessel

Drawing

ARTD 15B	Drawing: Intermediate
ARTD 17B	Drawing: Life-Intermediate
ARTD 23A	Drawing: Heads and Hands
ANIM 101A	Drawing - Gesture and Figure
ANIM 110	Animal Drawing
ARTD 16	Drawing: Perspective

Figure Drawing

ARTD 17B	Drawing: Life-Intermediate
ARTD 23A	Drawing: Heads and Hands
ARTD 23B	Drawing: Intermediate Heads and Hands
ARTD 75	Anatomy for Artists
ANIM 101A	Drawing - Gesture and Figure
ANIM 101B	Figure Gesture - Design
ANIM 101C	Figure Gesture Expressive Design
ANIM 107	Figure in Motion
ANIM 110	Animal Drawing

Portrait Studies

ARTD 17B	Drawing: Life-Intermediate
ARTD 19A	Figure Painting
ARTD 23A	Drawing: Heads and Hands
ARTD 23B	Drawing: Intermediate Heads and Hands
ARTS 41A	Sculpture: Life
ARTS 41B	Sculpture: Intermediate Life

Painting

ARTD 19A	Figure Painting
ARTD 25B	Beginning Painting II
ARTD 26A	Intermediate Painting I
ARTD 26B	Intermediate Painting II
ARTD 27	Painting: Watercolor

Printmaking

ARTD 43A	Introduction to Printmaking
ARTD 43B	Intermediate Printmaking in Intaglio and Relief

ARTD 44A	Printmaking: Introduction to Lithography I
ARTD 46A	Printmaking: Introduction to Monotype
ARTD 48A	Letterpress Book Arts
Applied Printmaking	
ARTD 43A	Introduction to Printmaking
ARTD 45A	Printmaking: Introduction to Screenprinting
ARTD 45B	Printmaking: Intermediate Screenprinting
ARTD 47A	Printmaking: Photo and Alternative Processes
ARTD 48A	Letterpress Book Arts
Sculpture	
ARTS 40A	Sculpture: Beginning
ARTS 40B	Sculpture: Intermediate
ARTS 40C	Sculpture: Carving
ARTS 41A	Sculpture: Life
ARTS 41B	Sculpture: Intermediate Life
ARTS 42	Sculpture: Mold Making
ARTS 46A	Sculpture: Special Effects Makeup
ARTS 46B	Sculpture: Special Effects Makeup
Sculpture Special Effects Makeup	
ARTS 41A	Sculpture: Life
ARTS 41B	Sculpture: Intermediate Life
ARTS 42	Sculpture: Mold Making
ARTS 46A	Sculpture: Special Effects Makeup
ARTS 46B	Sculpture: Special Effects Makeup
ARTD 75	Anatomy for Artists
Gallery	
ARTG 20	Art, Artists, and Society
ARTG 21A	Introduction to Exhibition Production
ARTG 21B	Intermediate Exhibition Production
ARTG 23	Art Writing
ARTG 24	Shop Practices for Art Careers
Graphic Design	
ARTC 100	Fundamentals of Graphic Design
ARTC 120	Print Design and Advertising
ARTC 140	Vector Design and Illustration
ARTC 160	Typography
ARTC 200	Web Design
ARTC 210	Corporate Identity and Branding
ARTC 220	Creative Design and Compositing
Illustration	
ARTC 100	Fundamentals of Graphic Design
ARTC 163	Dynamic Sketching
ARTC 165	Illustration
ARTC 169	Contemporary Illustration
ARTC 290	Portfolio
ARTD 19A	Figure Painting
ARTC 167	Visual Development
or ANIM 167	Visual Development
Photography	
PHOT 10	Basic Digital and Film Photography
PHOT 12	Photographic Alternatives
PHOT 20	Color Photography
PHOT 9	Digital Image Editing for Photographers
or PHOT 17	Photocommunication
Total Units	

36

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Have completed the foundation courses of the major which are the aesthetic base needed for transfer into bachelors programs or independent work as an artist.
- Be able to apply critical thinking skills to original work.
- Be able to apply the elements and principles of design to original art work.
- Be able to apply visual arts concepts that are basic to many forms and fields of art and design in visual, oral, and written communication
- Be able to analyze historical, contemporary, peer, and personal visual artwork that range in modes of artistic expression.
- Be able to demonstrate in oral, written, and studio work familiarity with the history of western art.
- Be proficient in a variety of visual art techniques and tools using them to explore a range of subjects, media, styles, and formats.
- Create independent original work in the area of their focus demonstrating basic professional practices.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Humanities Emphasis (AA Degree A8984)

Degree A8984

An emphasis in Humanities provides the student with an understanding of the interrelationship between art, religion, history, music, literature and the dramatic arts, and philosophical and political thought. This emphasis also strengthens the understanding of other cultures through the study of a foreign language.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Complete the required core course and select one course from each of the five categories (List A through List E)		18
Required Core		
HUMA 1	Humanities and the Human Experience	
or HUMA 1H	Humanities and the Human Experience - Honors	
List A: Art History and Classics		
Classical Humanities		
AHIS 10	A History of Greek and Roman Art and Architecture	
AHIS 14	Rome: The Ancient City	
AHIS 15	Culture and Art of Pompeii	
Western Humanities		
AHIS 4	History of Western Art: Prehistoric Through Gothic	
or AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors	
AHIS 5	History of Western Art: Renaissance Through Modern	
or AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	
AHIS 8	History of Medieval Art and Architecture	
Global Humanities		
AHIS 9	History of Asian Art and Architecture	

AHIS 11	History of African, Oceanic, and Native American Art
or AHIS 11H	History of African, Oceanic, and Native American Art - Honors
AHIS 12	History of Precolumbian Art and Architecture
or AHIS 12H	History of Precolumbian Art and Architecture - Honors

Modern American Humanities

AHIS 3	History of Women and Gender in Art
or AHIS 3H	History of Women and Gender in Art - Honors
AHIS 6	History of Modern Art
or AHIS 6H	History of Modern Art - Honors
AHIS 13	World Art and Visual Culture

List B: World Languages and History

Classical and Western

HIST 3	World History: Prehistoric to Early Modern
or HIST 3H	World History: Prehistoric to Early Modern - Honors
HIST 4	World History: Early Modern to the Present
or HIST 4H	World History: Early Modern to the Present - Honors
LATN 2	Continuing Elementary Latin
or LATN 2H	Continuing Elementary Latin - Honors

Global

HIST 3	World History: Prehistoric to Early Modern
or HIST 3H	World History: Prehistoric to Early Modern - Honors
HIST 4	World History: Early Modern to the Present
or HIST 4H	World History: Early Modern to the Present - Honors
HIST 10	History of Premodern Asia
HIST 11	History of Modern Asia
HIST 19	History of Mexico
HIST 35	History of Africa

Language (Level 2 or higher)

ARAB 2	Continuing Elementary Arabic
or CHIN 2	Continuing Elementary Chinese
or FRCH 2	Continuing Elementary French
or GERM 2	Continuing Elementary German
or ITAL 2	Continuing Elementary Italian
or JAPN 2	Continuing Elementary Japanese
or SPAN 2	Continuing Elementary Spanish

Modern American Humanities

HIST 7	History of the United States to 1877
or HIST 7H	History of the United States to 1877 - Honors
HIST 8	History of the United States from 1865
or HIST 8H	History of the United States from 1865 - Honors
HIST 16	The Wild West - A History, 1800-1890
HIST 30	History of the African American 1619-1877
HIST 31	History of the African American
HIST 36	Women in American History
HIST 39	California History
HIST 40	History of the Mexican American
HIST 44	History of Native Americans

List C: Literature, Drama, and Film

Classical Humanities

LIT 36	Introduction to Mythology
LIT 46	The Bible As Literature: Old Testament
LIT 47	The Bible As Literature: New Testament

Western Humanities

LIT 6A	Survey of English Literature
LIT 6B	Survey of English Literature
LIT 10	Survey of Shakespeare

THTR 10	History of Theater Arts

Global Humanities

FRCH 60	French Culture Through Cinema
ITAL 60	Italian Culture Through Cinema
LIT 11A	World Literature to 1650
LIT 11B	World Literature from 1650

Modern American Humanities

LIT 1	Early American Literature
LIT 2	Modern American Literature
LIT 3	Multicultural American Literature
LIT 14	Introduction to Modern Poetry
LIT 15	Introduction to Cinema
LIT 20	African American Literature
LIT 25	Contemporary Mexican American Literature

List D: Music and Dance

Western Humanities

DN-T 20	History and Appreciation of Dance
MUS 100	Introduction to Western Classical Music
or MUS 100H	Introduction to Western Classical Music - Honors

Global Humanities

MUS 14A	World Music

Modern American Humanities

MUS 12	History of Jazz
MUS 14B	American Folk Music
MUS 15	Rock Music History and Appreciation
or MUS 15H	Rock Music History and Appreciation - Honors

List E: Philosophy and Religion

Classical Humanities

PHIL 20A	Introduction to Ancient Philosophy
or PHIL 20AH	Introduction to Ancient Philosophy - Honors

Western Humanities

PHIL 20A	Introduction to Ancient Philosophy
or PHIL 20AH	Introduction to Ancient Philosophy - Honors
PHIL 20B	Introduction to Modern Philosophy
or PHIL 20BH	Introduction to Modern Philosophy - Honors

Global Humanities

PHIL 5	Introduction to Philosophy
or PHIL 5H	Introduction to Philosophy - Honors
PHIL 15	Major World Religions
or PHIL 15H	Major World Religions - Honors
PHIL 12	Introduction to Ethics
or PHIL 12H	Introduction to Ethics - Honors

Modern America Humanities

PHIL 20B	Introduction to Modern Philosophy
or PHIL 20BH	Introduction to Modern Philosophy - Honors

Total Units**18****Program Learning Outcomes***Upon successful completion of this program, a student will be able to:*

- identify the influence and interrelationship of culture on human and artistic expression
- demonstrate an understanding of other cultures, including through the study of foreign language, the arts, and humanistic thought
- analyze modes of artistic expression (visual arts, music, and literature)

- demonstrate knowledge of philosophy and politics and the natural environment, including the relationship between social, political, and/or economic institutions and human behavior

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Information Technology Emphasis (AA Degree A8985)

Business Division

The A.A. Degree in Liberal Arts and Sciences with an emphasis in Information Technology is designed to prepare students for a career in Information Technology. The degree offers a balanced set of classes that enables students to maintain and secure a computer, create and modify computer applications and databases, create customized reports, and use productivity software to solve business problems. Emphasis is placed on developing object-oriented, business-related applications, creating and maintaining a database, and utilizing operating system utilities to optimize, maintain and secure a computer. Career opportunities available after the completion of this degree include technical support and systems analyst. Students wishing a bachelor's degree (transfer program) should meet with a counselor or advisor to discuss transferability of course.

This degree requires the completion of General Education (<https://catalog.mtsac.edu/programs/degrees-certificates/#gerequisitestext>) coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Information Technology Basics		
Required Core		
CISB 11	Computer Information Systems	3.5
CISB 15	Microcomputer Applications	3.5
Software Development		
Choose one of the following sequences:		3.5
CISP 11 & 11L	Programming in Visual Basic and Programming in Visual Basic Laboratory	
CISP 21 & 21L	Programming in Java and Programming in Java Laboratory	
CISP 31 & 31L	Programming in C++ and Programming in C++ Laboratory	
CISP 41 & 41L	Programming in C# and Programming in C# Laboratory	
CISP 52 & 52L	Mobile Device Programming and Mobile Device Programming Laboratory	
CISP 71 & 71L	Programming in Python and Programming in Python Laboratory	
CISW 21 & 21L	Secure Web Programming with ASP.NET and Secure Web Programming with ASP.NET Laboratory	
CISW 24 & 24L	Secure Web Server Programming in Python and Secure Web Server Programming in Python Laboratory	
Database Technology		
Choose one of the following sequences:		3.5
CISD 11 & 11L	Database Management - Microsoft Access and Database Management - Microsoft Access Laboratory	

CISD 21 & 21L	Database Management - Microsoft SQL Server and Database Management - Microsoft SQL Server Laboratory	
CISD 31 & 31L	Database Management - Oracle and Database Management - Oracle Laboratory	
Operating Systems and Networking		
Choose one of the following options:		3-3.5
CISN 11 & 11L	Telecommunications Networking and Telecommunications/Networking Laboratory	
CISN 21	Windows Operating System	
CISN 31 & 31L	Linux Operating System and Linux Operating System Laboratory	
CISN 61	Cloud and Virtualization Network Security	
Security		
Choose one of the following options:		3-4
CISS 13	Principles of Information Systems Security	
CISS 15	Operating Systems Security	
CISS 21 & 21L	Network Vulnerabilities and Countermeasures and Network Vulnerabilities and Countermeasures Laboratory	
Recommended Elective		
Choose one of the following options:		
CISB 31	Microsoft Word	
CISB 51	Microsoft PowerPoint	
CISM 11	Systems Analysis and Design	
SPCH 26 or SPCH 26H	Interpersonal Communication Interpersonal Communication - Honors	
Total Units		20-21.5

Guided Pathways of Study Suggested Course Sequence (<https://www.mtsac.edu/guided-pathways/pathway-results.html?pthwyvar=A8985&desc=Information+Technology+Emphasis+AA+Liberal+Arts+and+Sciences+A8985>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Know the four primary operations of a computer and the hardware that performs these operations.
- Be able to create effective queries that answer needed questions.
- Be able to identify four types of common transmission media and be able to describe the basic characteristics of each.
- Be able to use decision making statements and loops in order to create a business application.
- Be able to understand the need for security.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Kinesiology and Wellness Emphasis (AA Degree A8986)

Kinesiology Division

An emphasis in Kinesiology and Wellness provides the student with an understanding of kinesiology, health promotion, and the mechanics of human bodily movement. In addition to the foundational physical

education and movement courses, students select courses from a scientific and nutrition and behavioral development and diversity cluster.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Cluster 1: Kinesiology, Movement, and Health Promotion		
Choose a minimum of 6 units from the following:		6
DN-T 18	Introduction to Dance	
DN-T 20	History and Appreciation of Dance	
KIN 3	First Aid and CPR	
or KIN 5	Advanced First Aid/CPR/Emergency Response	
KIN 13	Sports Officiating	
KIN 17	Introduction to Kinesiology	
KIN 19	Introduction to Care/Prevention of Activity/Sports-Related Injuries	
KIN 34	Fitness for Living	
KIN 39	Techniques of Fitness Testing	
KIN 44	Theory of Coaching	
Cluster 2: Scientific and Nutrition Background		
Choose a minimum of 3 units from the following:		3
ANAT 10A	Introductory Human Anatomy	
or ANAT 35	Human Anatomy	
ANAT 10B	Introductory Human Physiology	
or ANAT 36	Human Physiology	
ANAT 35	Human Anatomy	
ANAT 36	Human Physiology	
BIOL 1	General Biology	
BIOL 4	Biology for Majors	
or BIOL 4H	Biology for Majors - Honors	
BIOL 5	Contemporary Health Issues	
BIOL 13	Human Reproduction, Development and Aging	
CHEM 10	Chemistry for Allied Health Majors	
CHEM 40	Introduction to General Chemistry	
CHEM 50	General Chemistry I	
or CHEM 50H	General Chemistry I - Honors	
MICR 1	Principles of Microbiology	
MICR 22	Microbiology	
NF 10	Nutrition for Health and Wellness	
or NF 12	Sports Nutrition	
NF 25	Introduction to Nutrition Science	
or NF 25H	Introduction to Nutrition Science - Honors	
PHYS 1	Physics	
PHYS 2AG	General Physics	
PSYC 1B	Biological Psychology	
Cluster 3: Behavioral Development and Diversity		
Choose a minimum of 3 units from the following:		3
ANTH 5	Cultural Anthropology	
CHLD 1	Child, Family, School and Community	
CHLD 10	Child Growth and Lifespan Development	
or CHLD 10H	Child Growth and Lifespan Development - Honors	
CHLD 11	Child and Adolescent Development	
COUN 2	College Success Strategies	
COUN 5	Career and Life Planning	
PSYC 1A	Introduction to Psychology	

or PSYC 1AH	Introduction to Psychology - Honors
PSYC 3	Introduction to Research Methods in Psychology
PSYC 14	Developmental Psychology
PSYC 15	Introduction to Child Psychology
PSYC 17	Introduction to Human Services
PSYC 26	Psychology of Sexuality
PSYC 33	Psychology for Effective Living
SOC 1	Introduction to Sociology
or SOC 1H	Introduction to Sociology - Honors
SOC 2	Contemporary Social Problems
or SOC 2H	Contemporary Social Problems - Honors
SOC 15	Child Development
SOC 20	Introduction to Race and Ethnicity
or SOC 20H	Introduction to Race and Ethnicity - Honors

Required Electives

Activity Courses

Choose a minimum of two courses from the following: (these units count towards the 18 required for the degree 1 - 5.5 units)

DNCE 1	Ballet Fundamentals
DNCE 10	Modern Fundamentals
DNCE 17	Jazz Fundamentals
DNCE 28	Theater Dance I
DNCE 41	Pilates I
KINA 8A	Swimming - Beginning
KINF 10A	Weight Training - Beginning
KINF 34A	Cardiorespiratory Training Beginning
KINF 36A	Circuit Training Beginning
KINF 38A	Aerobics - Beginning
KINI 4A	Badminton - Beginning
KINI 18A	Golf - Beginning
KINI 29	Self Defense and Martial Arts
KINI 33A	Kickboxing Beginning
KINI 50A	Yoga
KINL 2	Physical Fitness for the Physically Limited
KINS 2A	Basketball Beginning
KINL 18	Weight Training for the Physically Limited
KINS 10A	Beginning Soccer
KINS 24A	Volleyball - Beginning
KINX 88	Pre-Season Athletics
KINX 99	Off-Season Athletics

Must complete at least 18 units from clusters 1 – 3 including activity courses.

For Area of Emphasis

Total Units 18

Kinesiology, Athletics, and Dance Website (<http://www.mtsac.edu/kinesiology/>)

Program Learning Objectives

Upon successful completion of this program, a student will:

- Have an understanding of kinesiology, health promotion, and the mechanics of human bodily movement.
- Have an understanding of Anatomy, Nutrition as well as Behavior Development as it applies to Kinesiology.
- Be able to demonstrate competence in several activities.
- Be provided with an opportunity to prepare for transfer or a career in the field of human movement and wellness.

- Be able to examine personal health-related behavioral patterns, select goals, and formulate appropriate health and fitness strategies.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Language Arts Emphasis (AA Degree A8987)

Degree A8987

An emphasis in Language Arts provides the student with an understanding of the acquisition of language with a focus on reading, writing, listening, and speaking with a diverse environment. In addition to the foundational language acquisition courses, students select personal options that will strengthen their individual interest and goals within Language Arts.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Foundations		
Choose a 7-8 units from the following:		7-8
ENGL 1A	Freshman Composition	
ENGL 1AH	Freshman Composition - Honors	
ENGL 1AM	College Composition for Non-Native English Speakers	
ENGL 1B	English - Introduction to Literary Types	
ENGL 1BH	English - Introduction to Literary Types - Honors	
ENGL 1C	Critical Thinking and Writing	
ENGL 1CH	Critical Thinking and Writing - Honors	
PHIL 9	Critical Thinking and Writing	
PHIL 9H	Critical Thinking and Writing - Honors	
READ 100	Analysis and Critical Reading	
SPCH 1A	Public Speaking	
SPCH 1AH	Public Speaking - Honors	
Language and Culture		
Choose 3-4 units from the following:		3-4
ANTH 6	Language and Culture: An Introduction to Linguistic Anthropology	
ARAB 1	Elementary Arabic	
ARAB 2	Continuing Elementary Arabic	
CHIN 1	Elementary Chinese	
CHIN 2	Continuing Elementary Chinese	
CHIN 3	Intermediate Chinese	
CHIN 4	Continuing Intermediate Chinese	
CHLD 5	Principles and Practices in Child Development Programs	
ENGL 81	Language Acquisition	
FRCH 1	Elementary French	
FRCH 2	Continuing Elementary French	
FRCH 3	Intermediate French	
FRCH 4	Continuing Intermediate French	
FRCH 53	Intermediate Conversational French	
FRCH 54	Continuing Intermediate Conversational French	
FRCH 60	French Culture Through Cinema	
GERM 1	Elementary German	

GERM 2	Continuing Elementary German
GERM 3	Intermediate German
GERM 60	German Culture through Cinema
ITAL 1	Elementary Italian
ITAL 2	Continuing Elementary Italian
ITAL 3	Intermediate Italian
ITAL 4	Continuing Intermediate Italian
ITAL 53	Continuing Conversational Italian
ITAL 54	Advanced Conversational Italian
ITAL 60	Italian Culture Through Cinema
JAPN 1	Elementary Japanese
JAPN 2	Continuing Elementary Japanese
JAPN 3	Intermediate Japanese
JAPN 4	Continuing Intermediate Japanese
JAPN 53	Conversational Japanese
JOUR 107	Race, Culture, Gender, and Mass Media Images
LATN 1	Elementary Latin
LATN 1H	Elementary Latin - Honors
LATN 2	Continuing Elementary Latin
LATN 2H	Continuing Elementary Latin - Honors
LING 2	Languages, Gender, and Power
LING 3	Languages, Cultures, and Writing in East Asia
SPAN 1	Elementary Spanish
SPAN 1S	Spanish for the Spanish Speaking
SPAN 2	Continuing Elementary Spanish
SPAN 2S	Continuing Spanish for the Spanish Speaking
SPAN 3	Intermediate Spanish
SPAN 4	Continuing Intermediate Spanish
SPAN 50	Spanish of the Barrio: A Socio-linguistic Perspective
SPAN 53	Conversational Spanish
SPAN 54	Continuing Conversational Spanish
SIGN 101	American Sign Language 1
SIGN 101H	American Sign Language 1 - Honors
SIGN 102	American Sign Language 2
SIGN 103	American Sign Language 3
SIGN 104	American Sign Language 4
SIGN 105	American Sign Language 5
SIGN 210	American Sign Language Structure
Literature and Expression	
Choose a minimum of three units from the following:	
CHLD 51	Early Literacy in Child Development
CHLD 61	Language Arts and Art Media for Young Children
ENGL 8A	Creative Writing - Fiction
ENGL 8B	Creative Writing - Poetry
ENGL 8E	Creative Writing - Memoir
ENGL 8F	Creative Writing - Nonfiction
JOUR 100	Introduction to Mass Communications
JOUR 101	Beginning Writing and Reporting for the Mass Media
JOUR 102	Intermediate Writing and Reporting for Mass Media
LIT 1	Early American Literature
LIT 2	Modern American Literature
LIT 3	Multicultural American Literature
LIT 6A	Survey of English Literature
LIT 6B	Survey of English Literature

LIT 11A	World Literature to 1650	
LIT 11B	World Literature from 1650	
LIT 20	African American Literature	
LIT 25	Contemporary Mexican American Literature	
LIT 40	Children's Literature	
R-TV 05	Radio-TV Newswriting	
SPCH 4	Performance of Literature	
Plus two courses (6-7 units) from any of the above areas not already taken		6-7
Total Units		19-22

Language Arts Website (<http://www.mtsac.edu/languages/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- demonstrate language acquisition and usage through reading, writing, listening, signing, or speaking within a diverse environment

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Mathematics Emphasis (AA Degree A8989)

Degree A8989

An emphasis in Mathematics provides the student with an understanding of college level mathematics. In addition to the foundational calculus courses, students may select from computer science programming options.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Choose a minimum of 18 units from the following with at most two CSCI courses:		18
CSCI 110	Fundamentals of Computer Science	
CSCI 140	C++ Language and Object Development	
CSCI 145	Java Language and Object Oriented Programming	
MATH 130	College Algebra	
MATH 140	Calculus for Business	
MATH 150	Trigonometry	
MATH 160	Precalculus Mathematics	
MATH 180	Calculus and Analytic Geometry	
MATH 181	Calculus and Analytic Geometry	
MATH 245	A Transition to Advanced Mathematics	
MATH 280	Calculus and Analytic Geometry	
MATH 285	Linear Algebra and Differential Equations	
For Area of Emphasis		
Total Units		18

Recommended Electives

Course Prefix	Course Name	Units
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
CHEM 51	General Chemistry II	5
MATH 100	Survey of College Mathematics	3
MATH 110	Elementary Statistics	3

or MATH 110H	Elementary Statistics - Honors	
MATH 120	Finite Mathematics	3
PHYS 4A	Engineering Physics	5
PHYS 4B	Engineering Physics	5
PHYS 4C	Engineering Physics	5

Math and Computer Science Website (<http://www.mtsac.edu/math/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate critical thinking skills in solving an application problem in the math and computer science courses that the student takes.
- Analyze success rates for the math courses that are assigned to the AA Degree.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Natural Sciences Emphasis (AA Degree A8988)

Natural Sciences Division

An emphasis in Natural Sciences provides the student with an understanding of living and non-living systems and promotes an appreciation of the methodologies and tools of science. Students may select courses that focus on a specific major and then select complementary courses to strengthen their selected focus or they may select courses that strengthen and broaden their overall understanding of the Natural Sciences.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Choose a minimum of 18 units from the following with at least one GE lab from each group:		18-22
Group 1A: Physical Science Lecture Courses		
(May take one or more courses from Group 1A)		
ASTR 5	Introduction to Astronomy	
or ASTR 5H	Introduction to Astronomy - Honors	
ASTR 7	Geology of the Solar System	
ASTR 8	Introduction to Stars, Galaxies, and the Universe	
ASTR 11	Introduction to Astrophysics	
CHEM 9	Chemistry of Everyday Life	
GEOG 1	Physical Geography	
or GEOG 1H	Physical Geography - Honors	
GEOL 7	Geology of California	
GEOL 8	Earth Science	
or GEOL 8H	Earth Science - Honors	
GEOL 9	Environmental Geology	
GEOL 10	Natural Disasters	
GEOL 30	Global Climate Change	
METO 3	Weather and the Atmospheric Environment	
OCEA 10	Introduction to Oceanography	
or OCEA 10H	Introduction to Oceanography - Honors	
Group 1B: Physical Science Lab Courses		

(Must take at least one course from either Group 1B or 1C)

ASTR 5L	Astronomical Observing Laboratory
GEOG 1L	Physical Geography Laboratory
or GEOG 1LH	Physical Geography Laboratory - Honors
GEOL 8L	Earth Science Laboratory
GEOL 9L	Environmental Geology Laboratory
METO 3L	Weather and Atmospheric Environment Laboratory
OCEA 10L	Introduction to Oceanography Laboratory

Group 1C: Physical Science Lecture-Lab Courses

(Must take at least one course from either Group 1B or 1C)

CHEM 10	Chemistry for Allied Health Majors
CHEM 20	Introductory Organic and Biochemistry
CHEM 40	Introduction to General Chemistry
CHEM 50	General Chemistry I
or CHEM 50H	General Chemistry I - Honors
CHEM 51	General Chemistry II
or CHEM 51H	General Chemistry II - Honors
CHEM 55	Chemistry for Engineers
CHEM 80	Organic Chemistry I
CHEM 81	Organic Chemistry II
ENGR 1	Introduction to Engineering
ENGR 1C	Engineering Critical Thinking
ENGR 6	Introduction to Engineering Programming Concepts and Methodologies
ENGR 8	Properties of Materials
GEOL 1	Physical Geology
GEOL 24	Geologic Field Studies: Central California
or GEOL 25	Geologic Field Studies: Southern California
GEOL 29	Special Topics in Field Geology
PHSC 3	Energy Science
PHSC 9	Physical Science
PHYS 1	Physics
PHYS 2AG	General Physics
PHYS 2BG	General Physics
PHYS 4A	Engineering Physics
PHYS 4B	Engineering Physics
PHYS 4C	Engineering Physics
PHYS 6A	General Physics with Calculus
PHYS 6B	General Physics with Calculus

Group 2A: Life Sciences Lecture Courses

(May take one or more courses from Group 2A)

ANTH 1	Biological Anthropology
or ANTH 1H	Biological Anthropology - Honors
BIOL 6	Humans and the Environment
BIOL 17	Neurobiology and Behavior
BIOL 20	Marine Biology
BIOL 34	Fundamentals of Genetics
MICR 26	Introduction to Immunology

Group 2B: Life Science Lab Courses

(Must take at least one course from either Group 2B or 2C)

Choose at least one from the following:

ANTH 1L	Biological Anthropology Laboratory
BIOL 6L	Humans and the Environment Laboratory
BIOL 21	Marine Biology Laboratory
BIOL 34L	Fundamentals of Genetics Laboratory

Group 2C: Life Science Lecture-Lab Courses

(Must take at least one course from either Group 2B or 2C)

BIOL 1	General Biology
BIOL 2	Plant and Animal Biology
BIOL 3	Ecology and Field Biology
BIOL 4	Biology for Majors
or BIOL 4H	Biology for Majors - Honors
BIOL 8	Cell and Molecular Biology
BTNY 3	Plant Structures, Functions, and Diversity
MICR 1	Principles of Microbiology
or MICR 22	Microbiology

Total Units**18-22**Natural Sciences Division Website (<http://www.mtsac.edu/sciences/>)**Program Learning Outcomes***Upon successful completion of this program, a student will be able to:*

- Analyze and model chemical, physical, or biological systems using scientific and/or mathematical methods.
- Analyze and model chemical, physical, or biological systems using scientific and/or mathematical methods.
- Critically read, interpret, and analyze a range of complex text and data to make connections and draw meaningful conclusions.
- Identify and model the professional and ethical responsibilities of a scientist.
- Communicate scientific principles and applications effectively, both verbally and in writing.
- Describe the impact of humans and our technology in an environmental and societal context.
- Pursue further study or life-long learning in the sciences.
- Work collaboratively to reach a common goal or solve a problem.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Social & Behavioral Sciences Emphasis (AA Degree A8991)

Humanities and Social Sciences Division

The intent of this degree is to prepare students for careers and/or higher education in the social sciences, generally, or in the specific disciplines within the the overall social science designation. This degree emphasizes the nature of individual and collective human behavior; our interactions; the political economic, social, and psychological structures and institutions of human beings; and the challenges of developing and sustaining interpersonal and intercultural relationships. This degree will enhance their ability to explain how groups and subgroups operate to make responsible political, moral, and social decisions. Select at least one course (three units minimum) from each category. Select additional 9 units from any course not already used in category 1, 2, or 3 for a total of 18 units. This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Core Courses		
Select at least one course from each of the three categories		9
Category 1: Psychology, Sociology and Human Development:		

Choose a minimum of 3 units from the following		3
BIOL 5	Contemporary Health Issues	
BIOL 13	Human Reproduction, Development and Aging	
BIOL 15	Human Sexuality	
or BIOL 15H	Human Sexuality - Honors	
CHLD 1	Child, Family, School and Community	
CHLD 10	Child Growth and Lifespan Development	
or CHLD 10H	Child Growth and Lifespan Development - Honors	
CHLD 11	Child and Adolescent Development	
PSYC 1A	Introduction to Psychology	
or PSYC 1AH	Introduction to Psychology - Honors	
PSYC 1B	Biological Psychology	
PSYC 14	Developmental Psychology	
PSYC 15	Introduction to Child Psychology	
PSYC 19	Abnormal Psychology	
PSYC 25	The Psychology of Women	
PSYC 26	Psychology of Sexuality	
SOC 1	Introduction to Sociology	
or SOC 1H	Introduction to Sociology - Honors	
SOC 2	Contemporary Social Problems	
or SOC 2H	Contemporary Social Problems - Honors	
SOC 4	Introduction to Gerontology	
SOC 5	Introduction to Criminology	
or SOC 5H	Introduction to Criminology - Honors	
SOC 14	Marriage and the Family	
or SOC 14H	Marriage and the Family - Honors	
SOC 15	Child Development	
SOC 20	Introduction to Race and Ethnicity	
or SOC 20H	Introduction to Race and Ethnicity - Honors	
SOC 40	Introduction to Sex and Gender Roles	
Category 2: Anthropology, Geography and Biology as it relates to Society		
Choose a minimum of three units from the following:		3
ANTH 1	Biological Anthropology	
or ANTH 1H	Biological Anthropology - Honors	
ANTH 1L	Biological Anthropology Laboratory	
ANTH 4	Archaeology	
ANTH 5	Cultural Anthropology	
or ANTH 5H	Cultural Anthropology - Honors	
ANTH 6	Language and Culture: An Introduction to Linguistic Anthropology	
ANTH 30	The Native American	
BIOL 6	Humans and the Environment	
BIOL 6L	Humans and the Environment Laboratory	
BIOL 17	Neurobiology and Behavior	
BIOL 25	Conservation Biology	
GEOG 1	Physical Geography	
GEOG 1H	Physical Geography - Honors	
GEOG 1L	Physical Geography Laboratory	
GEOG 1LH	Physical Geography Laboratory - Honors	
GEOG 2	Human Geography	
GEOG 2H	Human Geography - Honors	
GEOG 5	World Regional Geography	
GEOG 8	Urban Geography	
GEOG 30	Geography of California	
PUBH 24	Introduction to Public Health	
PUBH 26	Introduction to Global Public Health	

PUBH 27	Public Health and the Environment	
Category 3: Economics, History, and Political Science		
Choose a minimum of three units from the following:		3
AGAG 1	Food Production, Land Use, and Politics - A Global Perspective	
BUSC 1A	Principles of Economics - Macroeconomics	
or BUSC 1AH	Principles of Economics - Macroeconomics - Honors	
BUSC 1B	Principles of Economics - Microeconomics	
or BUSC 1BH	Principles of Economics - Microeconomics - Honors	
BUSM 50	World Culture: A Business Perspective	
HIST 1	History of the United States	
HIST 3	World History: Prehistoric to Early Modern	
or HIST 3H	World History: Prehistoric to Early Modern - Honors	
HIST 4	World History: Early Modern to the Present	
or HIST 4H	World History: Early Modern to the Present - Honors	
HIST 7	History of the United States to 1877	
or HIST 7H	History of the United States to 1877 - Honors	
HIST 8	History of the United States from 1865	
or HIST 8H	History of the United States from 1865 - Honors	
HIST 30	History of the African American 1619-1877	
HIST 31	History of the African American	
HIST 35	History of Africa	
HIST 36	Women in American History	
HIST 39	California History	
HIST 40	History of the Mexican American	
POLI 1	Introduction to American Government and Politics	
POLI 1H	Introduction to American Government and Politics - Honors	
POLI 2	Comparative Politics	
POLI 9	International Relations	
POLI 10	Environmental Politics	
POLI 25	Latino Politics in the United States	
POLI 35	African American/Black Politics	
Recommended Electives		
LIBR 1	Library Research Methods and Resources	
MATH 110	Elementary Statistics	
or MATH 110H	Elementary Statistics - Honors	
PSYC 3	Introduction to Research Methods in Psychology	
PSYC 10	Statistics for the Behavioral Sciences	
SOC 23	Introduction to Statistics in Sociology and Social Sciences	
SPCH 7	Intercultural Communication	
SPCH 26	Interpersonal Communication	
or SPCH 26H	Interpersonal Communication - Honors	

Total Units	18

Program Learning Objectives

Upon successful completion of this program, a student will be able to:

- Analyze cultural and gender diversity in humans.
- Explain the development of the person within society.
- Explain how biology relates to behavior or society.
- Discuss historical and political implications on society.

Review Student Learning Outcomes (SLOs) for this program.

World Languages & Global Studies Emphasis (AA Degree A0429)

Humanities and Social Studies Division A0429 Degree

The Associate of Arts in World Languages and Global Studies is a multidisciplinary course of study that encourages global awareness and intercultural understanding through the acquisition of at least one modern language other than English, namely Arabic, Chinese, French, German, Italian, Japanese, Korean, and Spanish. The coursework is designed with the dual intent of examining the nature of language and relating it to multiculturalism around the globe and in the United States. Overall the program prepares students to function effectively in a global world by promoting a level of linguistic competence and cultural sensitivity that allows individuals to build ties of trust and collaboration across a number of career fields, such as International Business, Government, Teaching, Travel and Arts, Journalism, etc. The elective component of the program allows students to frame their foreign language acquisition within regional cultural studies, global cultural studies or international relations.

Upon completion of the program students should be able to:

- Demonstrate proficiency in at least one language other than English
- Demonstrate understanding of at least one culture other than their native one
- Demonstrate awareness of the interconnected nature of language and culture
- Recognize cultural expressions across disciplines

Students who are interested in pursuing a Language major are advised to work with a counselor in order to identify the specific course requirement of their transfer institution.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
Language Core Courses		16
Option 1: Choose sixteen units of sequential courses in one language.		
CHIN 1	Elementary Chinese	
CHIN 2	Continuing Elementary Chinese	
CHIN 3	Intermediate Chinese	
CHIN 4	Continuing Intermediate Chinese	
OR		
FRCH 1	Elementary French	
FRCH 2	Continuing Elementary French	
FRCH 3	Intermediate French	
FRCH 4	Continuing Intermediate French	
OR		
ITAL 1	Elementary Italian	
ITAL 2	Continuing Elementary Italian	
ITAL 3	Intermediate Italian	
ITAL 4	Continuing Intermediate Italian	
OR		
JAPN 1	Elementary Japanese	
JAPN 2	Continuing Elementary Japanese	
JAPN 3	Intermediate Japanese	
JAPN 4	Continuing Intermediate Japanese	
OR		

SPAN 1	Elementary Spanish
SPAN 2	Continuing Elementary Spanish
SPAN 3	Intermediate Spanish
SPAN 4	Continuing Intermediate Spanish

Option 2: Choose sixteen units in two levels of two different languages from the list above or the following list:

ARAB 1	Elementary Arabic
ARAB 2	Continuing Elementary Arabic
GERM 1	Elementary German
GERM 2	Continuing Elementary German
GERM 3	Intermediate German
KORE 1	Elementary Korean
KORE 2	Continuing Elementary Korean
KORE 3	Intermediate Korean
KORE 4	Continuing Intermediate Korean
LATN 1	Elementary Latin
or LATN 1H	Elementary Latin - Honors
LATN 2	Continuing Elementary Latin
or LATN 2H	Continuing Elementary Latin - Honors
SIGN 101	American Sign Language 1
or SIGN 101H	American Sign Language 1 - Honors
SIGN 102	American Sign Language 2
SIGN 103	American Sign Language 3
SIGN 104	American Sign Language 4
SIGN 105	American Sign Language 5
SPAN 1S	Spanish for the Spanish Speaking
SPAN 2S	Continuing Spanish for the Spanish Speaking

Choose three units within one of the following tracks: 3

Track A - Regional Cultural Studies

For China and Japan:

AHIS 9	History of Asian Art and Architecture
HIST 10	History of Premodern Asia
HIST 11	History of Modern Asia
or HIST 11H	History of Modern Asia - Honors
JAPN 53	Conversational Japanese
JAPN 62	Japanese Culture Through Anime and Manga
KORE 60	Korean Culture Through Cinema
LING 3	Languages, Cultures, and Writing in East Asia

For France:

FRCH 53	Intermediate Conversational French
FRCH 60	French Culture Through Cinema

For Italy:

AHIS 14	Rome: The Ancient City
AHIS 15	Culture and Art of Pompeii
ITAL 53	Continuing Conversational Italian
ITAL 60	Italian Culture Through Cinema
ITAL 61	Italian Culture through Food

For Germany:

GERM 60	German Culture through Cinema

For Spanish Speaking Countries:

AHIS 12	History of Precolumbian Art and Architecture
or AHIS 12H	History of Precolumbian Art and Architecture - Honors
HIST 19	History of Mexico
HIST 40	History of the Mexican American
POLI 25	Latino Politics in the United States
SPAN 30	Spanish Composition: Exploring U.S. Latino Topics

SPAN 50	Spanish of the Barrio: A Socio-linguistic Perspective
SPAN 53	Conversational Spanish
SPAN 60	Latin American Culture Through Cinema
Track B - Global Cultural Studies	
ARCH 250	World Architecture: Prehistory to the Middle Ages
ARCH 251	World Architecture: Renaissance through the Contemporary Era
CUL 107	World Cuisines
FASH 14	Dress, Culture, and Identity
HIST 3	World History: Prehistoric to Early Modern
or HIST 3H	World History: Prehistoric to Early Modern - Honors
HIST 4	World History: Early Modern to the Present
or HIST 4H	World History: Early Modern to the Present - Honors
LIT 11A	World Literature to 1650
LIT 11B	World Literature from 1650
MUS 14A	World Music
NF 28	Cultural and Ethnic Foods
R-TV 25	World Cinema
Track C - International Relations	
GEOG 2	Human Geography
or GEOG 2H	Human Geography - Honors
GEOG 5	World Regional Geography
LING 2	Languages, Gender, and Power
LING 4	Introduction to World Languages
PHIL 15	Major World Religions
or PHIL 15H	Major World Religions - Honors
POLI 9	International Relations
SPCH 7	Intercultural Communication
or SPCH 7H	Intercultural Communication - Honors
Total Units	19

Program Learning Outcomes

Upon completion of the program the student should be able to:

- Demonstrate proficiency in at least one language other than English
- Demonstrate understanding of at least one culture other than their native one
- Demonstrate awareness of the interconnected nature of language and culture
- Recognize cultural expressions across disciplines

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

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Anthropology (AA-T Degree A0668)

Natural Sciences Division

Anthropology is the holistic study of humans today and in the past, with a focus on cultural diversity and bio-cultural variation and a scope that include our ancestors and close relatives in the primates. Students will be introduced to the core concepts, research methods, and theories of the major subfields of anthropology. Anthropological skills and concepts are useful for a variety of public and private sector careers, including those in journalism, business, public health, social services, economic development, and museums, to name a few.

The Associate in Arts in Anthropology for Transfer degree at Mt. San Antonio College prepares students for post-secondary study and to transfer to the California State University system (CSU). Students planning to transfer to anthropology programs at other universities (including the University of California and private four-year institutions) should research those programs and meet with a counselor to plan a course of study at Mt. San Antonio College beyond the Anthropology core requirements.

To Earn an Associate in Arts in Anthropology for Transfer degree, a student must complete a minimum of 60 semester units that are eligible for transfer to the CSU system that consist of the IGETC pattern or CSU GE breadth and a major of at least 18 units or more. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer, and all courses in the major must be completed with a C or better.

Required Courses

Course Prefix	Course Name	Units
ANTH 1	Biological Anthropology	3
or ANTH 1H	Biological Anthropology - Honors	
ANTH 4	Archaeology	4
ANTH 5	Cultural Anthropology	3
or ANTH 5H	Cultural Anthropology - Honors	

List A

Select one course from the following:		3-5
ANTH 6	Language and Culture: An Introduction to Linguistic Anthropology	
MATH 110	Elementary Statistics	
or MATH 110H	Elementary Statistics - Honors	
or PSYC 10	Statistics for the Behavioral Sciences	
or BUSC 17	Applied Business Statistics	

List B

Select one or two courses from the following or any course not already selected from List A		3-4

ANAT 10A	Introductory Human Anatomy
GEOG 10	Introduction to Geographic Information Systems
PSYC 3	Introduction to Research Methods in Psychology
or PSYC 3H	Introduction to Research Methods in Psychology - Honors
or SOC 12	Introduction to Research Methods in the Social Sciences

List C

Select one course or any course not already selected from List A or List B		3

AHIS 11	History of African, Oceanic, and Native American Art
or AHIS 11H	History of African, Oceanic, and Native American Art - Honors
AHIS 12	History of Precolumbian Art and Architecture
or AHIS 12H	History of Precolumbian Art and Architecture - Honors
ANTH 30	The Native American

GEOG 2	Human Geography
or GEOG 2H	Human Geography - Honors
HIST 3	World History: Prehistoric to Early Modern
or HIST 3H	World History: Prehistoric to Early Modern - Honors
HIST 4	World History: Early Modern to the Present
or HIST 4H	World History: Early Modern to the Present - Honors
HIST 7	History of the United States to 1877
or HIST 7H	History of the United States to 1877 - Honors
HIST 8	History of the United States from 1865
or HIST 8H	History of the United States from 1865 - Honors
HIST 10	History of Premodern Asia
HIST 11	History of Modern Asia
HIST 16	The Wild West - A History, 1800-1890
HIST 19	History of Mexico
HIST 30	History of the African American 1619-1877
HIST 31	History of the African American
HIST 35	History of Africa
HIST 36	Women in American History
HIST 39	California History
HIST 40	History of the Mexican American
HIST 44	History of Native Americans
MUS 14A	World Music
MUS 14B	American Folk Music
NF 28	Cultural and Ethnic Foods
PHIL 15	Major World Religions
or PHIL 15H	Major World Religions - Honors
SOC 20	Introduction to Race and Ethnicity
or SOC 20H	Introduction to Race and Ethnicity - Honors
SPCH 7	Intercultural Communication
or SPCH 7H	Intercultural Communication - Honors

Total Units	19-22

Art History (AA-T Degree A0330)

Humanities and Social Sciences Division

The academic discipline of Art History involves the study of visual objects as both works of art and as artifacts of the historical and cultural contexts in which they were created. The Associate in Arts in Art History for Transfer (AA-T) will provide the student with a solid foundation in both European and non-European art and visual culture from the periods of pre-history through modern. The degree program requires students to critically analyze visual objects from a variety of perspectives, utilizing various modes of analysis.

To earn an Associate in Arts in Art History for Transfer a student must complete 60 semester units that are eligible for transfer to the CSU that consist of: IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements. A "P" (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
AHIS 4	History of Western Art: Prehistoric Through Gothic	3
or AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors	
AHIS 5	History of Western Art: Renaissance Through Modern	3
or AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	
ARTD 15A	Drawing: Beginning	3
List A		
Choose one from the following:		3
AHIS 9	History of Asian Art and Architecture	
AHIS 11	History of African, Oceanic, and Native American Art	
or AHIS 11H	History of African, Oceanic, and Native American Art - Honors	
AHIS 12	History of Precolumbian Art and Architecture	
or AHIS 12H	History of Precolumbian Art and Architecture - Honors	
AHIS 13	World Art and Visual Culture	
List B		
Choose one from the following:		3
ARTB 14	Basic Studio Arts	
ARTD 17A	Drawing: Life	
ARTD 20	Design: Two-Dimensional	
ARTG 20	Art, Artists, and Society	
ARTS 22	Design: Three-Dimensional	
ARTS 30A	Ceramics: Beginning I	
ARTS 40A	Sculpture: Beginning	
PHOT 10	Basic Digital and Film Photography	
List C		
Choose one from the following or any one course not selected from List A or B:		3
AHIS 3	History of Women and Gender in Art	
or AHIS 3H	History of Women and Gender in Art - Honors	
AHIS 6	History of Modern Art	
or AHIS 6H	History of Modern Art - Honors	
AHIS 7	Global Contemporary Visual Culture	
AHIS 8	History of Medieval Art and Architecture	
AHIS 10	A History of Greek and Roman Art and Architecture	
AHIS 14	Rome: The Ancient City	
AHIS 15	Culture and Art of Pompeii	
Total Units for Major		18
CSU General Education or IGETC Pattern¹		39-42
Total Units		60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Art History Website (<http://www.mtsac.edu/art-history/>)

Program Learning Outcomes

Upon successful completion of this program:

- Students will demonstrate the ability to critically analyze visual objects as works of art.
- Students completing a course in "Area C: Arts" will be able to analyze modes of artistic expression.

- Students will demonstrate the ability to critically analyze visual objects as artifacts of visual culture from a variety of perspectives, utilizing various modes of analysis.
- Student completing an assignment will be able to identify the influence of culture on human expression.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Communication Studies (AA-T Degree A0325)

Humanities and Social Sciences Division

Communication Studies is a broad-based discipline with foundational coursework in oral communication theory and skills development, augmented with course options that add dimension and depth to the student's understanding of the discipline – such as interpersonal, group, organizational and intercultural communication, argumentation, journalism, forensics, and communication research methods.

The degree program requires students to critically analyze information and arguments, select and research an appropriate topic and thesis, and logically organize the supporting material into a well-crafted presentation. Students will employ appropriate verbal and nonverbal delivery skills and visual aids to present a message to an audience in a conversational and confident manner; and formulate communication solutions to problems in a range of contexts. Students will create messages appropriate for diverse audiences and listeners and develop an improved understanding of themselves as communicators.

To earn an Associate in Arts in Communication Studies for Transfer a student must complete 60 semester Units that are eligible for transfer to the CSU that consist of: IGETC pattern or CSU GE breadth and a major of at least 18 Units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
SPCH 1A	Public Speaking	4
or SPCH 1AH	Public Speaking - Honors	
List A		
Choose two courses from the following:		6
SPCH 6	Group Communication	
SPCH 20	Argumentation and Debate	
or SPCH 20H	Argumentation and Debate - Honors	
SPCH 26	Interpersonal Communication	
or SPCH 26H	Interpersonal Communication - Honors	
List B		
Choose any two courses from the following or any one course not already used from List A:		6-7
JOUR 100	Introduction to Mass Communications	
SPCH 2	Survey of Communication Studies	
SPCH 4	Performance of Literature	
SPCH 7	Intercultural Communication	
or SPCH 7H	Intercultural Communication - Honors	
SPCH 8	Professional and Organizational Speaking	

or SPCH 8H	Professional and Organizational Speaking - Honors	
SPCH 9	Introduction to Persuasion	
SPCH 15	Forensics: Fundamentals of Contest Speech and Debate	
SPCH 16	Forensics: Individual Event Team	
SPCH 30	Introduction to Communication Theory	
or SPCH 30H	Introduction to Communication Theory - Honors	
List C		
Choose at least one course from the following or any one course not selected from List A or List B:		3-4
ANTH 5	Cultural Anthropology	
or ANTH 5H	Cultural Anthropology - Honors	
ENGL 1B	English - Introduction to Literary Types	
or ENGL 1BH	English - Introduction to Literary Types - Honors	
ENGL 1C	Critical Thinking and Writing	
or ENGL 1CH	Critical Thinking and Writing - Honors	
JOUR 101	Beginning Writing and Reporting for the Mass Media	
PSYC 1A	Introduction to Psychology	
or PSYC 1AH	Introduction to Psychology - Honors	
SOC 1	Introduction to Sociology	
or SOC 1H	Introduction to Sociology - Honors	
SPCH 3	Voice and Diction	
SPCH 17	Forensics: Debate Team	
SPCH 18	Forensics: Reader's Theater Team	
Total Units for Major		19-21
CSU General Education or IGETC Pattern¹		39-42
Total Units		60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Communication Website (<http://www.mtsac.edu/communication/>)

Program Learning Objectives

Upon successful completion of this program, a student will be able to:

- Critically analyze information and arguments.
- Select and research an appropriate topic and thesis.
- Logically organize supporting materials into a well-crafted presentation.
- Demonstrate effective verbal and non-verbal delivery skills to present a message to a live audience in a confident manner.
- Formulate communication solutions to problems in a range of contexts.
- Create messages appropriate for diverse audiences and listener.
- Develop an improved understanding of themselves as communicators.

Review Student Learning Outcomes (SLOs) for this program.

English (AA-T Degree A0332)

Humanities and Social Sciences Division Degree A0332

The Associate in Arts in English for Transfer introduces students to Literature written in English and gives them the option of studying creative writing. Completion of the degree provides students with the core skills and knowledge needed to pursue a baccalaureate degree in English. Those core skills and knowledge include the ability to analyze literature

and the ability to write researched analytical papers. Students who earn this degree will be able to write a literary analysis, analyze major themes and concerns in literature, and identify the influence of culture on human expression.

To earn an Associate in Arts in English for Transfer a student must complete 60 semester units that are eligible for transfer to the CSU that consist of: IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
ENGL 1B	English - Introduction to Literary Types	3
or ENGL 1BH	English - Introduction to Literary Types - Honors	
ENGL 1C	Critical Thinking and Writing	4
or ENGL 1CH	Critical Thinking and Writing - Honors	
List A: Choose one sequence from the following:		6
LIT 1	Early American Literature	
& LIT 2	and Modern American Literature	
LIT 6A	Survey of English Literature	
& LIT 6B	and Survey of English Literature	
LIT 11A	World Literature to 1650	
& LIT 11B	and World Literature from 1650	
List B: Choose one course from the following or any course not selected from List A:		3
ENGL 8A	Creative Writing - Fiction	
ENGL 8B	Creative Writing - Poetry	
ENGL 8F	Creative Writing - Nonfiction	
ENGL 81	Language Acquisition	
List C: Choose one course from the following or any course not selected from List A or List B:		3
JOUR 100	Introduction to Mass Communications	
JOUR 101	Beginning Writing and Reporting for the Mass Media	
LIT 10	Survey of Shakespeare	
LIT 14	Introduction to Modern Poetry	
LIT 15	Introduction to Cinema	
LIT 25	Contemporary Mexican American Literature	
LIT 36	Introduction to Mythology	
LIT 40	Children's Literature	
LIT 46	The Bible As Literature: Old Testament	
LIT 47	The Bible As Literature: New Testament	
Total Units for Major		19
CSU General Education or IGETC Pattern¹		39-42
Total Units		60

¹ Courses may be double-counted with either CSU-GE or IGETC.

English, Literature, and Journalism Website (<http://www.mtsac.edu/elj/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- write an essay using appropriate academic format
- write researched analytical papers using proper documentation

- analyze major themes in a range of literary genres
- compare and contrast literary elements such as authorial approaches, narrative styles, character development, and thematic concerns
- recognize cultural influences on literature

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Geography (AA-T Degree A0356)

Humanities and Social Sciences Division

Geography is a diverse discipline, with foundational coursework in both Earth and Social Sciences. Such foundational courses are augmented by coursework that applies geographic principles to particular world regions and by courses that explore the fundamental human-environment relationship, including coursework in Anthropology, Political Science, Biology and Earth Sciences.

To earn an Associate in Arts in Geography for Transfer degree, a student must complete 60 semester units that are eligible for transfer to the CSU system that consist of the IGETC pattern or CSU GE breadth and a major of a minimum of 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Correction: Added originally omitted sentence for List A: Choose two courses from the following or any course not selected from core, and sentence for List B went from Select two courses from the following or any course not already selected from list A: to Select two courses from the following or any course not already selected.

Required Courses

Course Prefix	Course Name	Units
Core Courses		7
GEOG 1	Physical Geography	3
or GEOG 1H	Physical Geography - Honors	
GEOG 1L	Physical Geography Laboratory	1
or GEOG 1LH	Physical Geography Laboratory - Honors	
GEOG 2	Human Geography	3
or GEOG 2H	Human Geography - Honors	
or GEOG 5	World Regional Geography	
List A		
Choose two courses from the following or any course not selected from core:		6
GEOG 10	Introduction to Geographic Information Systems	
GEOG 30	Geography of California	
List B		
Select two courses from the following or any course not already selected:		3-4
ANTH 5	Cultural Anthropology	
or ANTH 5H	Cultural Anthropology - Honors	
GEOG 8	Urban Geography	
GEOL 1	Physical Geology	
Total Units for Major		19-20
CSU General Education or IGETC Pattern ¹		39-42
Total Units		60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Program Learning Objectives

Upon successful completion of this program, a student will be able to:

- Apply geographic principles to particular world regions.
- Analyze the fundamental human-environment relationship.
- Evaluate spatial variation in human and physical processes.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

History (AA-T Degree A0334)

Humanities and Social Sciences Division

History is a broad-based academic discipline with foundational coursework in both World History and The History of the United States, augmented with course options that add dimension and depth to the student's understanding of the discipline - such as history courses outside of the Western World, courses in the humanities or social sciences (including history) that address any historically under-represented groups or non-western subject matter fulfilling transfer level GE categories.

The Associate in Arts in History for Transfer Degree program requires students to critically analyze material from a variety of sources and to develop links and connections in abstracting fundamental meaning of historical data. The course distribution of the degree will expose the students to the complexity and diversity of the historical past, thus placing the present by issues and problems with a meaningful historical context.

To earn an Associate in Arts in History Degree for Transfer, a student must complete a minimum of 60 semester units that are eligible for transfer to the CSU system that consist of the IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements. A "P" (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
HIST 7	History of the United States to 1877	3
or HIST 7H	History of the United States to 1877 - Honors	
HIST 8	History of the United States from 1865	3
or HIST 8H	History of the United States from 1865 - Honors	
List A		
HIST 3	World History: Prehistoric to Early Modern	3
or HIST 3H	World History: Prehistoric to Early Modern - Honors	
HIST 4	World History: Early Modern to the Present	3
or HIST 4H	World History: Early Modern to the Present - Honors	
List B: Choose one course from each area:		
Area 1 Diversity: or any List A course not already used:		3
HIST 9	Asian American and Pacific Islander History	
HIST 10	History of Premodern Asia	
or HIST 10H	History of Premodern Asia - Honors	

HIST 11	History of Modern Asia	
or HIST 11H	History of Modern Asia - Honors	
HIST 18	History of Latin America	
HIST 19	History of Mexico	
HIST 30	History of the African American 1619-1877	
HIST 31	History of the African American	
HIST 35	History of Africa	
HIST 36	Women in American History	
HIST 40	History of the Mexican American	
HIST 44	History of Native Americans	
Area 2: or any course not already used:		3
HIST 16	The Wild West - A History, 1800-1890	
HIST 39	California History	
Total Units for Major		18
CSU General Education or IGETC Pattern ¹		39-42
Total Units		60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Analyze the relationship between social, political, and/or economic institutions and human behavior from a historical perspective
- Identify and evaluate major agents of change/reform across time in the United States and other countries and continents.
- Differentiate among changes in American Constitutional government over time and discuss its impact.
- Identify the influence of culture on human expression and analyze cultural and gender diversity in humans.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Journalism (AA-T Degree A0400)

Humanities and Social Science Division

The Associate in Arts in Journalism for Transfer provides a broad base of education in the discipline and introduces students to journalism and multimedia. It gives students the option of studying journalistic writing for traditional and online media. Completion of the degree provides students with the core skills and knowledge needed to pursue a baccalaureate degree in Journalism. Students who earn this degree will be able to transfer to university or enter the local job market. In this program, students will gain hands-on experience with all aspects of news gathering, organizing, writing, and disseminating information.

To earn an Associate in Arts degree for Transfer a student must complete 60 semester units that are eligible for transfer to the CSU that consist of: IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
JOUR 100	Introduction to Mass Communications	3
JOUR 101	Beginning Writing and Reporting for the Mass Media	3

JOUR 114	Student News Media Staff	3
LIST A		
Choose one course from the following:		3
JOUR 102	Intermediate Writing and Reporting for Mass Media	
JOUR 108	Introduction to Public Relations	
JOUR 115	Student News Media Editing Staff	
JOUR 116	Multimedia Storytelling	
LIST B		
Choose two courses from the following		6-7
BUSC 1A	Principles of Economics - Macroeconomics	
or BUSC 1AH	Principles of Economics - Macroeconomics - Honors	
BUSC 1B	Principles of Economics - Microeconomics	
or BUSC 1BH	Principles of Economics - Microeconomics - Honors	
BUSC 17	Applied Business Statistics	
ENGL 1B	English - Introduction to Literary Types	
or ENGL 1BH	English - Introduction to Literary Types - Honors	
ENGL 1C	Critical Thinking and Writing	
or ENGL 1CH	Critical Thinking and Writing - Honors	
JOUR 106	Online Media Laboratory	
JOUR 107	Race, Culture, Gender, and Mass Media Images	
JOUR 111	Writing Broadcast and Web News	
MATH 110	Elementary Statistics	
or MATH 110H	Elementary Statistics - Honors	
PHIL 3	Introduction to Logic	
or PHIL 3H	Introduction to Logic - Honors	
PHIL 9	Critical Thinking and Writing	
or PHIL 9H	Critical Thinking and Writing - Honors	
PHOT 10	Basic Digital and Film Photography	
POLI 1	Introduction to American Government and Politics	
or POLI 1H	Introduction to American Government and Politics - Honors	
POLI 2	Comparative Politics	
POLI 25	Latino Politics in the United States	
POLI 35	African American/Black Politics	
PSYC 10	Statistics for the Behavioral Sciences	
R-TV 02	On-Air Personality Development	
R-TV 19A	Beginning Video Production	
SOC 20	Introduction to Race and Ethnicity	
or SOC 20H	Introduction to Race and Ethnicity - Honors	
SOC 23	Introduction to Statistics in Sociology and Social Sciences	
SPCH 20	Argumentation and Debate	
or SPCH 20H	Argumentation and Debate - Honors	
SPCH 30	Introduction to Communication Theory	
or SPCH 30H	Introduction to Communication Theory - Honors	
Total Units for Major		18-21
CSU General Education or IGETC Pattern ¹		39-42
Total Units		60

¹ Courses may be double-counted with either CSU-GE or IGETC

Journalism Website (<http://mtsac.edu/elj/journ/aatdegree.html>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Critically and ethically evaluate and apply functions of the mass media.
- Create and/or analyze content in diverse settings.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Kinesiology (AA-T Degree A0454)

Kinesiology Division

Associate in Arts in Kinesiology for Transfer degree is designed to prepare students for transfer into the CSU system to complete a baccalaureate degree in kinesiology, exercise science, pre-physical therapy, athletic training, and other related health professions. This degree provides guaranteed admission with junior status to the CSU system. Upon completion of the Associate in Arts in Kinesiology for Transfer degree, students will attain a scientific foundation of Kinesiology as well as a movement-based competency that prepares them in pursuing a bachelor's or master's degree and/or professional certification in sports medicine, exercise science, sports management, athletic training, physical therapy, nutrition, health promotion, and coaching or related fields.

To earn an Associate in Arts in Kinesiology for Transfer, students must complete 60 semester units that are eligible for transfer to the CSU that consist of IGETC pattern of CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree of transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		14
ANAT 10A	Introductory Human Anatomy	
ANAT 10B	Introductory Human Physiology	
KIN 17	Introduction to Kinesiology	

Movement Based Course List - Select one (1) course from three (3) separate areas for a total of three (3) units:

Aquatics		
KINA 8A	Swimming - Beginning	
KINA 8B	Swimming - Intermediate	
KINA 14	Water Polo	
KINA 20	Aquatic Fitness	
Combatives		
KINI 25	Mixed Martial Arts	
KINI 27A	Jeet Kune Do - Beginning	
KINI 27B	Jeet Kune Do - Intermediate	
KINI 29	Self Defense and Martial Arts	
KINI 30A	Filipino Martial Arts - Beginning	
KINI 30B	Filipino Martial Arts - Intermediate	
KINI 31A	Jiu-jitsu - Beginning	
KINI 31B	Jiu-jitsu - Intermediate	
KINI 34	Women's Self Defense	
KINI 37A	Tai Chi Chuan - Beginning	
KINI 37B	Tai Chi Chuan - Intermediate	
KINI 33A	Kickboxing Beginning	
KINI 33B	Kickboxing Intermediate	

Dance

DNCE 1	Ballet Fundamentals
DNCE 2A	Ballet I
DNCE 2B	Ballet II
DNCE 8	Latin Dance I
DNCE 10	Modern Fundamentals
DNCE 11A	Social Dance Forms I
DNCE 11B	Social Dance Forms II
DNCE 12A	Modern I
DNCE 12B	Modern II
DNCE 14A	Jazz I
DNCE 14B	Jazz II
DNCE 17	Jazz Fundamentals
DNCE 18A	Tap I
DNCE 18B	Tap II
DNCE 28	Theater Dance I
DNCE 29	Theater Dance II
DNCE 31	Classical Dance
DNCE 32	Commercial Dance
DNCE 36	Commercial Dance II
DNCE 39	Pilates Fundamentals
DNCE 41	Pilates I
DNCE 42	Pilates II

Fitness

KINF 10A	Weight Training - Beginning
KINF 10B	Weight Training - Intermediate
KINF 19	Strength Training
KINF 25	Core Performance and Foundation Movement
KINF 34A	Cardiorespiratory Training Beginning
KINF 34B	Cardiorespiratory Training Intermediate
KINF 36A	Circuit Training Beginning
KINF 36B	Circuit Training Intermediate
KINF 38A	Aerobics - Beginning
KINF 38B	Aerobics - Intermediate

Individual Sports

KINI 4A	Badminton - Beginning
KINI 4B	Badminton - Intermediate
KINI 18A	Golf - Beginning
KINI 18B	Golf - Intermediate
KINI 40A	Tennis - Beginning
KINI 40B	Tennis - Intermediate
KINI 40C	Tennis - Advanced
KINI 50A	Yoga

Team Sports

KINS 2A	Basketball Beginning
KINS 2B	Basketball Intermediate
KINS 10A	Beginning Soccer
KINS 10B	Soccer Intermediate
KINS 16A	Co-Ed Slow Pitch Softball
KINS 24A	Volleyball - Beginning
KINS 24B	Volleyball - Intermediate
KINS 24C	Volleyball - Advanced

Required Electives

6

Select two (6 units minimum)

BIOL 1	General Biology
or BIOL 4	Biology for Majors
or BIOL 4H	Biology for Majors - Honors

CHEM 50	General Chemistry I	
or CHEM 50H	General Chemistry I - Honors	
KIN 3	First Aid and CPR	
MATH 110	Elementary Statistics	
or MATH 110H	Elementary Statistics - Honors	
PHYS 2AG	General Physics	
or PHYS 4A	Engineering Physics	
Total Units		20

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Music (AA-T Degree A0347)

Arts Division

Music is a broad-base academic discipline with foundational coursework in theory and performance. By providing a theoretical understanding of the development and creation of music, along with requisite technical proficiency, it is expected that these skills will be used to demonstrate musical sensitivity and creativity as a soloist or in the context of a musical ensemble. To further foster these skills, optional courses in the areas of piano and music history should also be taken. The degree requires four semesters of theory, four semesters of applied music (lessons), and four semester of musical ensemble to provide the skills necessary for transferring to a 4-year institution to pursue a degree in music, including composition, performance, and/or music education.

To earn an Associate in Arts in Music for Transfer degree, a student must complete a minimum of 60 semester units that are eligible for transfer to the CSU system that consist of the IGETC pattern or CSU GE breadth and a major of at least 18 units more. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements. A "P" (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
MUS 110	Music Fundamentals	3
MUS 120	Music Theory I	3
MUS 125	Musicianship I	1
MUS 130	Music Theory II	3
MUS 135	Musicianship II	1
MUS 140	Music Theory III	3
MUS 145	Musicianship III	1
MUS 160	Individual Instruction ^{Complete 2 units}	0.5
Major Ensemble and/or specialized Ensemble (4 semesters)		4-6
MUS 27	Chamber Music	
MUS 31	Concert Choir	
MUS 33	Opera Scenes	
MUS 34	Women's Vocal Ensemble	

List A: Choose one course from the following list **3**

MUS 100	Introduction to Western Classical Music
or MUS 100H	Introduction to Western Classical Music - Honors
or MUS 105	Western Music History I: Antiquity to 1750
or MUS 106	Western Music History II: 1750 to Present

Total Units for Major	24-26
CSU General Education or IGETC Pattern ¹	39-42
Total Units	60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Music Department Website (<http://mtsac.edu/music/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate proficiency in the rehearsal, collaboration, and performance of music across a wide range of compositional styles and in a variety of venues.
- Demonstrate proficiency in the analysis and composition of tonal music.
- Students will demonstrate proficiency in the dictation and sight singing of tonal music
- Demonstrate proficiency in sight reading, transposition, and improvisation at the keyboard
- Comprehend and communicate in writing the cultural and historical contexts of music, as well as stylistic differences, in the Western classical traditions.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Philosophy (AA-T Degree A0424)

Humanities and Social Science Division

Philosophy studies basic issues in ethics, social philosophy, metaphysics, epistemology, and contemporary philosophies of life. Special consideration is given to an understanding of sound thinking and constructing well thought out arguments.

The degree program requires students to develop a foundational knowledge necessary to pursue post-secondary degrees in philosophy and a variety of specializations in the field. Moreover, the program fosters critical thinking and critically analysis of philosophical arguments. The degree provides students with a core curriculum that instills the knowledge, skills, and practices of philosophical content, theory and methodology. The Associate in Arts in Philosophy for Transfer degree is designed to assist students in seamlessly transferring to a CSU major in Philosophy.

To earn an Associate in Arts in Philosophy for Transfer degree, a student must complete 60 semester units that are eligible for transfer to the CSU system that consist of the IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirement.

Required Courses

Course Prefix	Course Name	Units
CORE COURSES		6

PHIL 3	Introduction to Logic
or PHIL 3H	Introduction to Logic - Honors

Plus one course from:

PHIL 5	Introduction to Philosophy
or PHIL 5H	Introduction to Philosophy - Honors
PHIL 12	Introduction to Ethics

or PHIL 12H Introduction to Ethics - Honors

LIST A 3

Choose three units from the following list or any course not selected from core courses

ENGL 1C	Critical Thinking and Writing
or ENGL 1CH	Critical Thinking and Writing - Honors
PHIL 8	Critical Thinking
PHIL 9	Critical Thinking and Writing
or PHIL 9H	Critical Thinking and Writing - Honors
PHIL 15	Major World Religions
or PHIL 15H	Major World Religions - Honors
PHIL 20A	Introduction to Ancient Philosophy
or PHIL 20AH	Introduction to Ancient Philosophy - Honors
PHIL 20B	Introduction to Modern Philosophy
or PHIL 20BH	Introduction to Modern Philosophy - Honors

LIST B: Select any two courses from LIST A not already used. 6-7

LIST C: Select any one course from LIST A not already used 3-4

Total Units for the Major 18-19

CSU General Education or IGETC Pattern ¹

Total Units 60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Political Science (AA-T Degree A0345)

Humanities and Social Sciences Division

Political Science introduces students to political science theories and methodologies used in the scientific study of political institutions and behavior. The Associate in Arts in Political Science for Transfer degree will provide students with the foundational knowledge necessary to identify research and statistical methods appropriate to political science, to compare and contrast the major theoretical perspectives in political science, and synthesize the analysis of institutions and individuals. The Associate in Arts in Political Science for Transfer degree is designed to assist students in seamlessly transferring to a CSU major in Political Science.

To earn an associate degree for transfer, a student must complete 60 semester units that are eligible for transfer to a CSU that consist of: IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
POLI 1	Introduction to American Government and Politics	3
or POLI 1H	Introduction to American Government and Politics - Honors	
List A		
Choose three courses from the following:		9-10
MATH 110	Elementary Statistics	

or MATH 110 Elementary Statistics - Honors

or PSYC 10 Statistics for the Behavioral Sciences

POLI 2	Comparative Politics
POLI 5	Political Theory I - Ancient to Contemporary
POLI 9	International Relations

List B

Choose two courses from the following or any course not selected in List A: 6

ANTH 5	Cultural Anthropology
BUSC 1A	Principles of Economics - Macroeconomics
or BUSC 1AH	Principles of Economics - Macroeconomics - Honors
GEOG 2	Human Geography
or GEOG 2H	Human Geography - Honors
GEOG 5	World Regional Geography
GEOG 30	Geography of California
HIST 1	History of the United States
HIST 4	World History: Early Modern to the Present
or HIST 4H	World History: Early Modern to the Present - Honors
HIST 7	History of the United States to 1877
or HIST 7H	History of the United States to 1877 - Honors
HIST 8	History of the United States from 1865
or HIST 8H	History of the United States from 1865 - Honors
POLI 7	Political Theory II - Early Modern to Contemporary
POLI 10	Environmental Politics
POLI 25	Latino Politics in the United States
POLI 35	African American/Black Politics
PSYC 1A	Introduction to Psychology
or PSYC 1AH	Introduction to Psychology - Honors
SOC 1	Introduction to Sociology
or SOC 1H	Introduction to Sociology - Honors

Total Units for Major 18-19

CSU General Education or IGETC Pattern ¹ 39-42

Total Units 60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Program Learning Objectives

Upon successful completion of this program, a student will be able to:

- Explain political institutions and processes of the United States government.
- Identify research and statistical methods appropriate to Political Science.
- Compare and contrast major theoretical perspectives in Political Science.
- Analyze the relationships between governments globally.
- Compare and contrast the institutions and processes of governments around the world.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Psychology (AA-T Degree A0324)

Humanities and Social Sciences Division Degree A0324

The Associate in Arts in Psychology for Transfer introduces students to the psychological principles and methodologies used in the scientific study of mental processes and behaviors. Students will acquire the

foundational knowledge necessary to pursue post-secondary degrees in psychology and a variety of specialization in the field. The goals of this degree are to prepare students to identify research and statistical methods appropriate to psychology, to compare and contrast the major theoretical perspectives in psychology, and synthesize the relationships between biological and behavioral functions.

To earn an associate degree for transfer, a student must complete 60 semester units that are eligible for transfer to CSU that consist of: IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
PSYC 1A	Introduction to Psychology	3
or PSYC 1AH	Introduction to Psychology - Honors	
PSYC 3	Introduction to Research Methods in Psychology	4
or PSYC 3H	Introduction to Research Methods in Psychology - Honors	
Choose one of the following:		3-4
PSYC 10	Statistics for the Behavioral Sciences	
MATH 110	Elementary Statistics	
MATH 110H	Elementary Statistics - Honors	
List A		
Choose one from the following:		3-4
BIOL 1	General Biology	
BIOL 4	Biology for Majors	
BIOL 4H	Biology for Majors - Honors	
PSYC 1B	Biological Psychology	
List B		
Choose one course from the following or any course not already selected from List A:		3-4
BIOL 13	Human Reproduction, Development and Aging	
CHLD 11	Child and Adolescent Development	
ENGL 1C	Critical Thinking and Writing	
ENGL 1CH	Critical Thinking and Writing - Honors	
PHIL 3	Introduction to Logic	
PHIL 3H	Introduction to Logic - Honors	
PHIL 8	Critical Thinking	
PHIL 9	Critical Thinking and Writing	
PHIL 9H	Critical Thinking and Writing - Honors	
PSYC 14	Developmental Psychology	
SOC 1	Introduction to Sociology	
SOC 1H	Introduction to Sociology - Honors	
List C		
Choose one course from the following or any course not already selected from List A or List B:		3
PSYC 5	Psychology of Reasoning and Problem Solving	
PSYC 15	Introduction to Child Psychology	
PSYC 19	Abnormal Psychology	
PSYC 20	Introduction to Social Psychology	
PSYC 25	The Psychology of Women	
PSYC 26	Psychology of Sexuality	
PSYC 33	Psychology for Effective Living	

Total Units for Major	19-22
CSU General Education or IGETC Pattern ¹	39-42
Total Units	60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Psychology Website (<http://www.mtsac.edu/psychology/>)

Program Learning Objectives

Upon successful completion of this program, a student will be able to:

- Matriculate to a Bachelor's program in psychology or a related discipline.
- Describe research and statistical methods appropriate to psychology.
- Compare and contrast major theoretical perspectives in psychology.
- Synthesize relationships between biological and behavioral functions.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Social Justice Studies (AA-T Degree A0669)

The Associate in Arts in Social Justice Studies for Transfer is an interdisciplinary program that provides students with the core knowledge and skills needed to pursue a baccalaureate degree in Social Justice or a related field. In this program, students will be introduced to the basic principles of social justice, social equity, and social change, and they will be challenged to explore and identify how deficits within the social structure — rather than deficits within marginalized individuals — are the primary cause of the inequitable distribution of and access to wealth and health, education and occupations, power and privilege.

The Associates in Arts in Social Justice Studies for Transfer can be earned as follows:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:

A. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education — Breadth Requirements.

B. A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the Mt. San Antonio College District.

2. Obtainment of a minimum grade point average of 2.0. ADTs also require that students must earn a C or better in all courses required for the major or area of emphasis. A 'P' (Pass) grade is also an acceptable grade for courses in the major if the course is taken on Pass/No Pass basis. Students earning an associate degree for transfer in Social Justice Studies will not be required to complete any other local graduation requirements.

Correction: Wrong units printed in error. Should be 18-21. 8/23/2022

Required Courses

Course Prefix	Course Name	Units
Core Courses		
SOC 40	Introduction to Sex and Gender Roles	3
or SOC 40H	Introduction to Sex and Gender Roles - Honors	
or SOC 130	Introduction to LGBTQ Studies	
SOC 110	Introduction to Social Justice	3
or SOC 20	Introduction to Race and Ethnicity	
or SOC 20H	Introduction to Race and Ethnicity - Honors	

Choose one course from the following or any course not already selected from the core courses **3-4**

AHIS 11	History of African, Oceanic, and Native American Art
or AHIS 11H	History of African, Oceanic, and Native American Art - Honors
ANTH 30	The Native American
HIST 30	History of the African American 1619-1877
HIST 31	History of the African American
HIST 35	History of Africa
LIT 20	African American Literature
LIT 25	Contemporary Mexican American Literature
PHIL 8	Critical Thinking
POLI 25	Latino Politics in the United States
POLI 35	African American/Black Politics
PSYC 5	Psychology of Reasoning and Problem Solving
PSYC 25	The Psychology of Women
SOC 36	Asian American Communities
SPAN 1	Elementary Spanish
SPAN 1S	Spanish for the Spanish Speaking
SPAN 2	Continuing Elementary Spanish
SPAN 2S	Continuing Spanish for the Spanish Speaking
SPAN 3	Intermediate Spanish
SPAN 4	Continuing Intermediate Spanish

List A: Select three courses from at least two of the following areas. Only one course from Area 4 may be used for List A **9-11**

Area 1: History or Government

HIST 7	History of the United States to 1877
or HIST 7H	History of the United States to 1877 - Honors
HIST 8	History of the United States from 1865
or HIST 8H	History of the United States from 1865 - Honors
HIST 10	History of Premodern Asia
or HIST 10H	History of Premodern Asia - Honors
HIST 11	History of Modern Asia
or HIST 11H	History of Modern Asia - Honors
HIST 19	History of Mexico
HIST 36	Women in American History
HIST 40	History of the Mexican American
HIST 44	History of Native Americans
POLI 2	Comparative Politics
POLI 9	International Relations

Area 2: Arts and Humanities

AHIS 9	History of Asian Art and Architecture
AHIS 12	History of Precolumbian Art and Architecture
or AHIS 12H	History of Precolumbian Art and Architecture - Honors
LIT 3	Multicultural American Literature
LIT 11B	World Literature from 1650
LIT 15	Introduction to Cinema
MUS 14A	World Music
NF 28	Cultural and Ethnic Foods
PHIL 5	Introduction to Philosophy
or PHIL 5H	Introduction to Philosophy - Honors
PHIL 15	Major World Religions
or PHIL 15H	Major World Religions - Honors
SIGN 101	American Sign Language 1
or SIGN 101H	American Sign Language 1 - Honors
THTR 9	Introduction to Theater Arts
THTR 10	History of Theater Arts

Area 3: Social Science

ANTH 5	Cultural Anthropology
or ANTH 5H	Cultural Anthropology - Honors
FASH 14	Dress, Culture, and Identity
JOUR 107	Race, Culture, Gender, and Mass Media Images
PSYC 1A	Introduction to Psychology
or PSYC 1AH	Introduction to Psychology - Honors
PSYC 15	Introduction to Child Psychology
SOC 1	Introduction to Sociology
or SOC 1H	Introduction to Sociology - Honors
SOC 2	Contemporary Social Problems
or SOC 2H	Contemporary Social Problems - Honors
SOC 5	Introduction to Criminology
or SOC 5H	Introduction to Criminology - Honors
SOC 14	Marriage and the Family
or SOC 14H	Marriage and the Family - Honors
SOC 15	Child Development
SPCH 7	Intercultural Communication
or SPCH 7H	Intercultural Communication - Honors

Area 4: Quantitative Reasoning and Research Methods

MATH 110	Elementary Statistics
or MATH 110H	Elementary Statistics - Honors
PSYC 3	Introduction to Research Methods in Psychology
or PSYC 3H	Introduction to Research Methods in Psychology - Honors
PSYC 10	Statistics for the Behavioral Sciences
SOC 12	Introduction to Research Methods in the Social Sciences
SOC 23	Introduction to Statistics in Sociology and Social Sciences

Area 5: Major Preparation

AHIS 11	History of African, Oceanic, and Native American Art
or AHIS 11H	History of African, Oceanic, and Native American Art - Honors
ANTH 30	The Native American
HIST 30	History of the African American 1619-1877
HIST 31	History of the African American
HIST 35	History of Africa
LIT 20	African American Literature
LIT 25	Contemporary Mexican American Literature
PHIL 8	Critical Thinking
POLI 25	Latino Politics in the United States
POLI 35	African American/Black Politics
PSYC 5	Psychology of Reasoning and Problem Solving
PSYC 25	The Psychology of Women
SOC 36	Asian American Communities
SPAN 1	Elementary Spanish
SPAN 1S	Spanish for the Spanish Speaking
SPAN 2	Continuing Elementary Spanish
SPAN 2S	Continuing Spanish for the Spanish Speaking
SPAN 3	Intermediate Spanish
SPAN 4	Continuing Intermediate Spanish

Total Units for Major **18-21**

CSU General Education or IGETC Pattern¹ **39-42**

Total Units **60**

¹ Courses may be double-counted with either CSU-GE or IGETC

Sociology, AA-T (Degree A0419)

Humanities and Social Sciences Division

Sociology introduces students to the systematic and scientific study of human relations and social structures which emphasizes the interaction between personality, culture and society. The Associate in Arts in Sociology for Transfer degree requires students to use sociological theories and research to evaluate the basic dimensions of social inequality and social change, and assess how social forces shape, guide and influence individual and group behavior. Students will acquire the foundational knowledge necessary to pursue post-secondary degrees in sociology and a variety of specializations in the field. The Associate in Arts in Sociology for Transfer degree is designed to assist students in seamlessly transferring to a CSU major in Sociology.

To earn an Associate in Arts in Sociology for Transfer degree, a student must complete 60 semester units that are eligible for transfer to the CSU system that consist of the IGETC pattern or CSU GE breadth and a major of 18 units more. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
SOC 1	Introduction to Sociology	3
or SOC 1H	Introduction to Sociology - Honors	
Select two courses		6
SOC 2	Contemporary Social Problems	
or SOC 2H	Contemporary Social Problems - Honors	
MATH 110	Elementary Statistics	
or MATH 110H	Elementary Statistics - Honors	
or PSYC 10	Statistics for the Behavioral Sciences	
List A		
Select two courses from the following or any course not already selected from core courses:		6
SOC 5	Introduction to Criminology	
or SOC 5H	Introduction to Criminology - Honors	
SOC 14	Marriage and the Family	
or SOC 14H	Marriage and the Family - Honors	
SOC 20	Introduction to Race and Ethnicity	
or SOC 20H	Introduction to Race and Ethnicity - Honors	
List B		
Select one course from the following or any course not already selected from list A		3-4
ENGL 1C	Critical Thinking and Writing	
or ENGL 1CH	Critical Thinking and Writing - Honors	
GEOG 2	Human Geography	
or GEOG 2H	Human Geography - Honors	
PHIL 3	Introduction to Logic	
or PHIL 3H	Introduction to Logic - Honors	
PHIL 8	Critical Thinking	
PHIL 9	Critical Thinking and Writing	
or PHIL 9H	Critical Thinking and Writing - Honors	
PSYC 1A	Introduction to Psychology	

or PSYC 1AH	Introduction to Psychology - Honors	
SOC 4	Introduction to Gerontology	
SOC 7	Sociology of Religion	
SOC 15	Child Development	
SOC 36	Asian American Communities	
Total Units for Major		18-20
CSU General Education or IGETC Pattern ¹		39-42
Total Units		60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Program Learning Objectives

Upon successful completion of this program, a student will be able to:

- Analyze cultural and gender diversity in humans.
- Explain the development of the person within society.
- Explain how biology relates to behavior or society.
- Discuss historical and political implications on society.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Studio Arts (AA-T Degree A0395)

Arts Division

The Associate of Arts in Studio Arts for Transfer is designed to facilitate successful transfer to baccalaureate art degree programs. This degree provides students with the lower division breadth and depth of the field of art. This degree exposes students to the core principles and practices in the field. Students will learn to visually express personal experience and thought with skill and clarity. Students will acquire fundamental visual experiences and concepts basic to many forms and fields of art, animation and design.

To earn an Associate in Arts in Studio Arts for Transfer (AA-T) a student must complete 60 semester units that are eligible for transfer to the CSU that consist of: IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
AHIS 5	History of Western Art: Renaissance Through Modern	3
or AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	
ARTD 15A	Drawing: Beginning	3
ARTD 20	Design: Two-Dimensional	3
ARTS 22	Design: Three-Dimensional	3
LIST A		
Choose one from the following:		3
AHIS 4	History of Western Art: Prehistoric Through Gothic	
or AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors	
LIST B		9
ARTD 17A	Drawing: Life	

ARTD 21	Design: Color and Composition
ARTD 25A	Beginning Painting I
Total Units for Major	24
CSU General Education or IGETC Pattern ¹	39-42
Total Units	60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Fine Arts Website (<http://www.mtsac.edu/finearts/>)

Program Learning Outcomes

Upon the successful completion of this program, a student will:

- Be prepared to transfer to the California State University system or other public and private colleges and universities to complete Bachelor of Arts or Bachelor of Fine Arts in Art, Studio Art, Fine Art, or Visual Art degrees.
- Be able to apply visual arts concepts that are basic to many forms and fields of art and design in visual, oral, and written communication.
- Be able to analyze historical, contemporary, peer, and personal visual artwork that range in modes of artistic expression.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Theater Arts (AA-T A0346)

Arts Division Degree A0346

The Associate in Arts in Theater Arts for Transfer develops confidence, improves communication skills and provides experiences to work in a collaborative endeavor. In each course, students learn to perfect the skills needed for the discipline of theater while learning to work cooperatively with others in theater-related disciplines. The program emphasizes self-reliance and creative problem solving along with personal artistic development. To earn an Associate in Arts in Theater, a student must complete 60 semester units that are eligible for transfer to the CSU that consist of: IGETC pattern or CSU GE breadth and a major of at least 18 units. The degree allows students the flexibility to pursue a particular area of interest; however, any student who completes the AA-T in Theater Arts will be prepared to pursue an emphasis in acting, technical theater, design, playwriting or general theater. The degree has been designed to assist students who wish to obtain a baccalaureate in Theater. The degree is intended to help the student make an uninterrupted transition to a C.S.U. Students must have a minimum GPA of 2.0 in all major requirements to receive an Associate in Arts in Theater for Transfer degree and all courses in the major must be completed with a C or better. Students earning an Associate in Arts in Theater for Transfer degree will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		9
THTR 9 or THTR 10	Introduction to Theater Arts History of Theater Arts	
THTR 11	Principles of Acting I	
THTR 13 or THTR 15	Play Rehearsal and Performance - Technical Play Rehearsal and Performance - Acting	

List A

Choose 9 units from the following or any course not already selected from the core courses:	9
THTR 12	Principles of Acting II
THTR 14	Stagecraft
THTR 15	Play Rehearsal and Performance - Acting
THTR 16	Theatrical Make-Up
THTR 19	Theatrical Costuming
THTR 20	Introduction to Script Analysis for the Theater
THTR 21	Introduction to Theater Design
THTR 22	Stage Lighting
Total Units for Major	18
CSU General Education or IGETC Pattern ¹	39-42

¹ Courses may be double-counted with either CSU-GE or IGETC.

Theater Arts Website (<http://www.mtsac.edu/theater/>)

Program Learning Outcomes

Upon the successful completion of this program, a student will:

- Use script analysis and performance techniques to create a character in a live theater performance.
- Analyze and critique the various aspects of a theater production (acting, directing and design) without making value judgments.
- Perform various tasks associated with the creation and implementation of the technical elements (lights, sound, lighting, costumes, and makeup) of a live theater production.
- Understand the interactions of the various theater disciplines and be able to usefully participate in the collaborative environment of theater.
- Analyze and critique elements of the production in their historical and cultural context.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Administration of Justice (AS-T Degree S0362)

Technology and Health Division Degree S0362

The Associate of Science in Administration of Justice for Transfer provides a broad base of education in the discipline. Students will acquire the ability to identify and apply legal precedents in field work, be prepared to understand the use of criminal codes in the investigation and documentation of crime, and become familiarized with the social factors that involve police interaction within the community. The degree will support students interested in branching out into undergraduate studies in the social sciences.

To earn an associate degree for transfer, a student must complete 60 units that are eligible for transfer to CSU that consist of: IGETC pattern (<https://catalog.mtsac.edu/programs/transferring-to-4-year-institutions/#theuniversityofcaliforniatext>) or CSU GE breadth (<https://catalog.mtsac.edu/programs/transferring-to-4-year-institutions/#thecaliforniastateuniversitytext>) and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an

associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
ADJU 1	The Administration of Justice System	3
ADJU 3	Concepts of Criminal Law	3
List A		
Choose two from the following:		6
ADJU 2	Principles and Procedures of the Justice System	
ADJU 4	Legal Aspects of Evidence	
ADJU 5	Community Relations	
ADJU 20	Principles of Investigation	
ADJU 50	Introduction to Forensics for Criminal Justice	
List B		
Choose two from the following:		6
MATH 110	Elementary Statistics	
or MATH 110H Elementary Statistics - Honors		
PSYC 1A	Introduction to Psychology	
or PSYC 1AH Introduction to Psychology - Honors		
SOC 1	Introduction to Sociology	
or SOC 1H Introduction to Sociology - Honors		
Total Units for Major		18
CSU General Education or IGETC Pattern ¹		39-42
Total Units		60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Additional Notations

In addition to List C, any CSU transferable Administration of Justice lower division course or courses outside the Administration of Justice discipline that are articulated as lower division major preparation for the Criminal Justice or Criminology Major at any CSU.

Administration of Justice Website (<http://www.mtsac.edu/justice/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Demonstrate the principals involved in documenting the investigation of criminal activity.
- Identify and apply legal precedents in field work.
- Demonstrate familiarity with the social factors related to police interaction with communities.
- Demonstrate understanding of how criminal codes are used and how statutory law is practically applied.
- Demonstrate the ability to use technology and other resources to research social and legal aspects of the criminal justice system.
- Demonstrate the ability to present information in diverse circumstances, with various cultures and communities, involving public and media issues.
- Understand professional skills related to court testimony, interview, interrogation, and law enforcement nomenclature.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Agriculture Plant Science (AS-T Degree S0847)

Natural Science Division

Plant Science includes topics such as propagation, plant production practices, nursery operations, soil science, plant pest and disease control, and landscape management. The Associate in Science in Agriculture Plant Science for Transfer prepares students with the foundational knowledge necessary to pursue post-secondary degrees in Plant Science and careers within a variety of specializations in the field. The Associate in Science in Agriculture Plant Science for Transfer is designed to assist students in seamlessly transferring to a CSU major in Plant Science.

To earn an Associate in Science in Agriculture Plant Science for Transfer, a student must complete a minimum of 60 semester units that are eligible for transfer to the CSU system that consist of the IGETC pattern or CSU GE breadth and a major of at least 18 units more. Students must have a minimum GPA of 2.0 (or "P") in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements

Required Courses

Course Prefix	Course Name	Units
Core Courses		
AGOR 1	Horticultural Science	3
AGOR 50	Soil Science and Management	3
BUSC 1B	Principles of Economics - Microeconomics	3
or BUSC 1BH	Principles of Economics - Microeconomics - Honors	
CHEM 40	Introduction to General Chemistry	5
or CHEM 50	General Chemistry I	
or CHEM 50H	General Chemistry I - Honors	
MATH 110	Elementary Statistics	3
or MATH 110H	Elementary Statistics - Honors	
List A		
Choose one course from the following:		3
AGOR 2	Plant Propagation/Greenhouse Management	
AGOR 29	Ornamental Plants - Herbaceous	
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	
AGOR 51	Tractor and Landscape Equipment Operations	
CHEM 80	Organic Chemistry I	
List B		
Select any course not already used above, or none or one course from the following list:		0-3
AGAG 1	Food Production, Land Use, and Politics - A Global Perspective	
AGOR 32	Landscaping and Nursery Management	
AGOR 62	Irrigation Principles and Design	
AGOR 71	Construction Fundamentals	
AGOR 72	Landscape Hardscape Applications	
BIOL 4	Biology for Majors	
or BIOL 4H	Biology for Majors - Honors	
Total Units for the Major		20-30
CSU General Education or IGETC Pattern ¹		39-42
Total Units		60

¹ Course may be double-counted with either CSU-GE or IGETC.

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Business Administration (AS-T Degree S0418)

Business Division

The Associate in Arts in Business Administration for Transfer provides a broad base of education in the discipline and introduces students to the fundamental principles underlying organizations and basic analytical tools of business. It gives students a basis in various business functions and economic analysis. Completion of the degree provides students with the core skills and knowledge needed to pursue a baccalaureate degree in Business Administration. Students who earn this degree will be able to transfer to CSU campus or enter the local job market.

To earn an Associate in Science degree for Transfer a student must complete 60 semester units that are eligible for transfer to the CSU that consist of IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
BUSA 7	Principles of Accounting - Financial	5
BUSA 8	Principles of Accounting - Managerial	5
BUSC 1A	Principles of Economics - Macroeconomics	3
or BUSC 1AH	Principles of Economics - Macroeconomics - Honors	
BUSC 1B	Principles of Economics - Microeconomics	3
or BUSC 1BH	Principles of Economics - Microeconomics - Honors	
BUSL 18	Business Law	3
List A		3
MATH 110	Elementary Statistics	
or MATH 110H	Elementary Statistics - Honors	
List B		6.5
BUSO 25	Business Communications	
CISB 11	Computer Information Systems	
Total Units for Major		28.5
CSU General Education (CSU-GE or IGETC) Units ¹		39-42
Total Units		60

¹ Courses may be double counted with either CSU-GE or IGETC.

Business Administration Website (<http://www.mtsac.edu/businessadministration/>)

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Early Childhood Education (AS-T Degree S0401)

Business Division Degree S0401

The Associate in Science in Early Childhood Education for Transfer requires students to critically analyze child development theory, developmentally appropriate approaches, and instructional strategies that positively influence children's learning and development. Students explore the importance of developmental domains and use their knowledge to design, implement, and evaluate meaningful curriculum and environments that promote comprehensive developmental learning outcomes for children. Child observation, documentation, and assessment are explored as essential practices in order to develop effective curriculum and interventions. The California Title 22 regulations, standards, and policies required for early care and education programs are examined. Ethical guidelines, professional practices, and advocacy are assessed to inform future practitioners of standards in the early childhood profession.

The Associate in Science in Early Childhood Education for Transfer degree qualifies students for transfer to a California State University (CSU) to complete a Baccalaureate degree in Early Childhood Education or related majors. To earn an Associate in Science in Early Childhood Education for Transfer degree, a student must complete 60 semester units that are eligible for transfer to the CSU including only CSU GE breadth and a major of at least 24 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements. A "P" (Pass) grade is also an acceptable grade for courses in the major if the course taken on a Pass/No Pass basis.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
CHLD 1	Child, Family, School and Community	3
CHLD 5	Principles and Practices in Child Development Programs	3
CHLD 6	Introduction to Child Development Curriculum ²	3
CHLD 11	Child and Adolescent Development ²	3
CHLD 50	Teaching in a Diverse Society	3
CHLD 64	Health, Safety, and Nutrition of Children	3
CHLD 66	Early Childhood Development Observation and Assessment ¹	2
CHLD 66L	Early Childhood Development Observation and Assessment Laboratory ¹	1
CHLD 67	Early Childhood Education Practicum ¹	2
CHLD 67L	Early Childhood Education Practicum Laboratory ¹	1
or		
CHLD 86	Infant Toddler Practicum Seminar	2
CHLD 87	Infant Toddler Practicum Field Work Experience ¹	1
Total Units for Major		24
CSU General Education or IGETC Pattern ³		39-42
Total Units		60

¹ Students must provide documentation of influenza, pertussis (TDap), and measles immunization, as well as TB clearance, as required by SB792 prior to being permitted to enroll in this class. Instructions on submitting documentation are available at Child Development Center (<http://www.mtsac.edu/cdc/>)

² Documentation of tuberculosis (TB) clearance is required.

³ Courses may be double-counted with either CSU-GE or IGETC.

Program Learning Outcomes
Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Film Television and Electronic Media (AS-T Degree S0442)

Arts Division

Upon successful completion of Associate in Science in Mt. San Antonio College's Film, Television, and Electronic Media for Transfer degree requirements, the student will have demonstrated understanding of coursework and foundational training in all stages of television and film production, including the historical, business and legal underpinnings of the industry; writing for the screen; visual and aural aesthetics; live and pre-recorded television and film production techniques; and post production aesthetics and techniques. This degree can prepare students for careers in film, television, advertising, and other electronic media as writers, directors, production crew, editors, postproduction crew, and producers. This coursework will satisfy the lower division requirements at the California State University in and students are guaranteed admission with junior status to the CSU system will be granted in Radio-TV-Film, Film and Electronic Arts, Television Production, Film Production, Cinema, Screenwriting and Producing.

To earn an Associate in Science degree in Film, Television, and Electronic Media for Transfer degree a student must complete 60 semester units that are eligible for transfer to the CSU that consist of IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Select 2 courses from the following:		6
R-TV 01	Introduction to Electronic Media	
R-TV 14	Media Aesthetics	
R-TV 28	Introduction to Writing for Electronic Media	
List A: Select one from each area		
Area 1: Audio Production		3
R-TV 11A	Beginning Radio Production	
R-TV 29	Introduction to Audio Production for Film and Television	
Area 2: Video or Film Production		3
R-TV 19A	Beginning Video Production	
List B: Select one course		3
R-TV 02	On-Air Personality Development	
R-TV 24	American Film History	
R-TV 25	World Cinema	
List C: Select one course		3
R-TV 18	Introduction to Screenwriting	
R-TV 22	Editing for Film and Television	
Total Units		18

Program Learning Outcomes
Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Geology (AS-T Degree S0670)

Natural Sciences Division

Mt. San Antonio College Associate in Science in Geology for Transfer degree includes such topics as mineral and rock identification, earthquakes, plate tectonics, history of geological and evolutionary change, volcanism, climate change and geomorphology. The Associate in Science in Geology prepares students with the foundational knowledge necessary to pursue post-secondary degrees in geology and careers with a variety of specializations in the geosciences. The Associate in Science in Geology is designed to assist students in seamlessly transferring to a CSU major in Geology.

To earn an Associate in Science in Geology for Transfer, a student must complete a minimum of 60 semester units that are eligible for transfer to the CSU system that consist of the IGETC pattern or CSU GE breadth and a major of at least 18 units more. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
CHEM 51	General Chemistry II	5
or CHEM 51H	General Chemistry II - Honors	
GEOL 1	Physical Geology	4
GEOL 2	Historical Geology	4
MATH 180	Calculus and Analytic Geometry	4
MATH 181	Calculus and Analytic Geometry	4
Total Units		26

Hospitality Management (AS-T Degree S0451)

Business Division

The Hospitality Management for Transfer degree prepares students for mid-level or Manager-In-Training positions in the hospitality industry. Students gain practical and management training in: food safety and sanitation, food production, dining room service management, supervision, cost control, financial accounting, lodging management, and hospitality law.

To earn a Hospitality Management for transfer degree, a student must complete 60 semester units that are eligible for transfer to CSU that consist of: IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive a Hospitality Management for transfer degree and all courses in the major must be completed with a C or better. Students earning the Hospitality Management for transfer degree will not be required to complete any other local graduation requirements.

This degree requires the completion of General Education coursework plus the following:

Required Courses

Course Prefix	Course Name	Units
HRM 51	Introduction to Hospitality	3

Required Electives

List A

Select 8 to 9 units or three courses: 8-9

BUSC 1B	Principles of Economics - Microeconomics
or BUSC 1BH	Principles of Economics - Microeconomics - Honors
CUL 102	Professional Cooking I
HRM 52	Food Safety and Sanitation
HRM 59	Introduction to Food and Beverage Management
HRM 66	Hospitality Law
HRM 70	Introduction to Lodging

List B

Select 7 to 8 units or two courses or any courses from List A not already used: 7-8

BUSA 7	Principles of Accounting - Financial
BUSL 18	Business Law
HRM 57	Hospitality Cost Control
HRM 64	Hospitality Financial Accounting
HRM 91	Hospitality Work Experience
MATH 110	Elementary Statistics
or MATH 110H	Elementary Statistics - Honors

Total Units 18-20

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Mathematics (AS-T Degree S0333)

Natural Sciences Division

The Associate in Science in Mathematics for Transfer is designed to facilitate successful transfer to a baccalaureate mathematics program. This degree provides the lower division breadth and depth of calculus, differential equations, and linear algebra. Students who complete the requirements for this degree will be prepared to continue their studies in mathematics. Students in the STEM fields can complete a majority, if not all, of their lower division Math requirements by completing the Associate in Science in Mathematics for Transfer degree requirements.

To earn an Associate in Science in Mathematics for Transfer a student must complete 60 semester units that are eligible for transfer to the CSU that consist of: IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		

MATH 180	Calculus and Analytic Geometry	4
MATH 181	Calculus and Analytic Geometry	4
MATH 280	Calculus and Analytic Geometry	5

List A:

MATH 260	Linear Algebra	3
MATH 290	Differential Equations	4

Total Units for Major	20
CSU General Education of IGETC Pattern ¹	39-42
Total Units	60

¹ Courses may be double-counted with either CSU-GE or IGETC.

Math and Computer Science Website (<http://www.mtsac.edu/math/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Translate real world phenomena and conceptual ideas into mathematical symbols and equations.
- Use mathematical tools to manipulate, simplify, and transform mathematical expressions.
- Model real world phenomenon using mathematical equations.
- Develop techniques to analyze and interpret data.
- Use mathematical tools to effectively communicate outcomes of experiments and describe the nature of real world phenomenon and conceptual ideas.
- Develop ability to effectively use numbers and other abstract representations of real world phenomenon and conceptual ideas.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Nutrition and Dietetics (AS-T Degree S0422)

Business Division S0422

The Associate in Science in Nutrition and Dietetics for Transfer introduces students to the principles and methodologies used in the study of nutrition and dietetics. Students will acquire the foundational knowledge necessary to pursue post-secondary degrees in nutrition and dietetics.

To earn an Associate of Science in Nutrition for Transfer degree, a student must complete 60 semester units that are eligible for transfer to the CSU system that consist of the IGETC pattern or CSU GE breadth and a major of 18 units more. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		

CHEM 50	General Chemistry I	5
or CHEM 50H	General Chemistry I - Honors	
NF 25	Introduction to Nutrition Science	3
or NF 25H	Introduction to Nutrition Science - Honors	
PSYC 1A	Introduction to Psychology	3
or PSYC 1AH	Introduction to Psychology - Honors	

Select one course: 4-5

MICR 1	Principles of Microbiology	
or MICR 22	Microbiology	

List A

Choose two courses 7-8

ANAT 10A	Introductory Human Anatomy ¹
or ANAT 10B	Introductory Human Physiology

MATH 110	Elementary Statistics	
or MATH 110H	Elementary Statistics - Honors	
or PSYC 10	Statistics for the Behavioral Sciences	
List B		
Choose one course		
NF 20	Principles of Food with Laboratory	3
NF 28	Cultural and Ethnic Foods	3
Total Units for Major		25-27
CSU General Education or IGETC Pattern ²		39-42
Total Units		60

¹ Students cannot be awarded credit for

² Courses may be double-counted with either CSU-GE or IGETC.

Nutrition and Food Website (<http://www.mtsac.edu/nutrition/>)

Program Learning Outcomes

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Public Health (AS-T Degree S0857)

Natural Sciences Division

The Public Health Science for transfer degree at Mt San Antonio College is an interdisciplinary program grounded in the biological sciences and designed to prepare students for transfer to university public health programs and other programs in the health sciences. Students completing this program will exemplify a high level of health literacy and will be exposed to a large variety of disciplines. Through this preparation, they will improve their understanding of the relationship of the environment to health, recognize and evaluate the economic impact of changing demographics on health care, identify and control disease outbreaks, and develop interventions to promote healthy behavior.

To earn an Associate in Science in Public Health Science for transfer, a student must complete a minimum of 60 semester units that are eligible for transfer to the CSU system that consist of the IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements. A "P" (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.

Required Courses

Course Prefix	Course Name	Units
Core courses		
ANAT 10A	Introductory Human Anatomy	4
ANAT 10B	Introductory Human Physiology	4
BIOL 1	General Biology	4
or BIOL 4	Biology for Majors	
or BIOL 4H	Biology for Majors - Honors	
BIOL 5	Contemporary Health Issues	3
CHEM 40	Introduction to General Chemistry	5
or CHEM 50	General Chemistry I	
or CHEM 50H	General Chemistry I - Honors	
MATH 110	Elementary Statistics	3
or MATH 110H	Elementary Statistics - Honors	
PSYC 1A	Introduction to Psychology	3
or PSYC 1AH	Introduction to Psychology - Honors	

PUBH 24	Introduction to Public Health	3
List A		
Select one course from the following:		3-5
BIOL 13	Human Reproduction, Development and Aging	
BUSC 1A	Principles of Economics - Macroeconomics	
or BUSC 1AH	Principles of Economics - Macroeconomics - Honors	
BUSC 1B	Principles of Economics - Microeconomics	
or BUSC 1BH	Principles of Economics - Microeconomics - Honors	
GEOG 8	Urban Geography	
MICR 1	Principles of Microbiology	
MICR 22	Microbiology	
NF 25	Introduction to Nutrition Science	
or NF 25H	Introduction to Nutrition Science - Honors	
PSYC 1B	Biological Psychology	
PSYC 26	Psychology of Sexuality	
SOC 1	Introduction to Sociology	
or SOC 1H	Introduction to Sociology - Honors	
SOC 2	Contemporary Social Problems	
or SOC 2H	Contemporary Social Problems - Honors	
Total Units for the Major		32-34
CSU General Education or IGETC Pattern ¹		39-42
Total Units		60

¹ Courses may be double-counted with either CSU-GE or IGETC.



2022-23 CATALOG

TRANSFERRING to 4-year COLLEGES and UNIVERSITIES

TRANSFERRING TO 4-YEAR INSTITUTIONS

Students may earn credit for Advanced Placement (AP) test with scores 3, 4, and 5. AP Credit can be used to meet California State University General Education (CSUGE) Breadth and Intersegmental General Education Transfer Credit (IGETC). Students must turn in AP exam results to the Mt. San Antonio College (Mt. SAC) Admission and Records Office. The table below lists how the California State University (CSU) and the University of California (UC) will accept AP credit to meet CSU and IGETC general education areas and the minimum units awarded toward each general education area. The table also lists the minimum CSU and UC units accepted toward the 60 units needed to meet transfer admission unit requirements. The CSU or UC campus to which the student transfers determines the total number of units awarded for Advanced Placement examinations and the applicability to other graduation requirements. A table that list how AP is accepted for Mt. SAC general education is available in the Academic Policies and Requirements section.

AP Examinations in CSU/UC

College Credit for Advanced Placement (AP) Tests

Exam	CSU GE Breadth Units	CSU Units	IGETC Units	UC Units
Art History	3 semester (Area C1 or C2)	6 semester	3 semester (Area 3A or 3B)	8 quarter/5.3 semester
Biology	4 semester (Area B2 and B3)	6 semester	4 semester (Area 5B with lab)	8 quarter/5.3 semester
Calculus AB ^{1, 8, 9}	3 semester (Area B4)	3 semester	3 semester (Area 2A)	4 quarter/2.6 semester
Calculus BC ^{1, 8, 9}	3 semester (Area B4)	6 semester	3 semester (Area 2A)	8 quarter/5.3 semester
Chemistry ²	4 semester (Area B1 and B3)	6 semester	4 semester (Area 5A with lab)	8 quarter/5.3 semester
Chinese Language and Culture	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
Computer Science A ^{1, 8}	N/A	3 semester	N/A	2 quarter/1.3 semester
Computer Science AB ^{1, 8}	N/A	6 semester	N/A	4 quarter/2.6 semester
Computer Science Principles	3 semester (Area B4)	6 semester	N/A	8 quarter/5.3 semester
Economics - Macroeconomics	3 semester (Area D)	3 semester	3 semester (Area 4)	4 quarter/2.6 semester
Economics - Microeconomics	3 semester (Area D)	3 semester	3 semester (Area 4)	4 quarter/2.6 semester
English Language and Composition ⁸	3 semester (Area A2)	6 semester	3 semester (Area 1A)	8 quarter/5.3 semester
English Literature and Composition ⁸	6 semester (Area A2 and C2)	6 semester	3 semester (Area 1A or 3B)	8 quarter/5.3 semester
Environmental Science ³	4 semester (Area B1 and B3)	4 semester	3 semester (Area 5A with lab)	4 quarter/2.6 semester
French Language ⁴	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
French Language and Culture	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
French Literature ⁵	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
German Language ⁴	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
German Language and Culture	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
Government & Politics - Comparative	3 semester (Area D)	3 semester	3 semester (Area 4)	4 quarter/2.6 semester
Government & Politics - U.S.	3 semester (Area D and US 2)	3 semester	3 semester (Area 4 and US 2)	4 quarter/2.6 semester
History - European	3 semester (Area C2 or D)	6 semester	3 semester (Area 3B or 4)	8 quarter/5.3 semester
History - U.S.	3 semester (Area C2 or D and US 1)	6 semester	3 semester (Area 3B or 4 and US 1)	8 quarter/5.3 semester
History - World	3 semester (Area C2 or D)	6 semester	3 semester (Area 3B or 4)	8 quarter/5.3 semester
Human Geography	3 semester (Area D)	3 semester	3 semester (Area 4)	4 quarter/2.6 semester
Italian Language and Culture ⁶	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
Japanese Language and Culture	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
Latin	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
Latin - Literature ⁵	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	4 quarter/2.6 semester
Latin - Vergil	3 semester (Area C2)	3 semester	3 semester (Area 3B and 6A)	4 quarter/2.6 semester
Music Theory ^{5, 8, 10}	3 semester (Area C1)	6 semester	N/A	8 quarter/5.3 semester

Physics B ^{7,8}	4 semester (Area B1 and B3)	6 semester	4 semester (Area 5A with lab)	8 quarter/5.3 semester
Physics C - Mechanics ^{7,8}	4 semester (Area B1 and B3)	4 semester	3 semester (Area 5A with lab)	4 quarter/2.6 semester
Physics C - Electricity/ Magnetism ^{7,8}	4 semester (Area B1 and B3)	4 semester	3 semester (Area 5A with lab)	4 quarter/2.6 semester
Physics 1 ⁷	4 semester (Area B1 and B3)	4 semester	4 semester (Area 5A with lab)	8 quarter/5.3 semester
Physics 2 ⁷	4 semester (Area B1 and B3)	4 semester	4 semester (Area 5A with lab)	8 quarter/5.3 semester
Psychology	3 semester (Area D)	3 semester	3 semester (Area 4)	4 quarter/2.6 semester
Seminar	N/A	3 semester	N/A	N/A
Spanish Language ⁴	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
Spanish Language and Culture	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
Spanish Literature ⁴	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
Spanish Literature and Culture	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	8 quarter/5.3 semester
Statistics	3 semester (Area B4)	3 semester	3 semester (Area 2A)	4 quarter/2.6 semester
Studio Art - 2D Design ⁸	N/A	3 semester	N/A	8 quarter/5.3 semester
Studio Art - 3D Design ⁸	N/A	3 semester	N/A	8 quarter/5.3 semester
Studio Art - Drawing ⁸	N/A	3 semester	N/A	8 quarter/5.3 semester

- If a student passes more than one AP exam in calculus or computer science, only one examination may be applied to the baccalaureate.
- Students who pass AP Chemistry earn 6 units of credit. Tests prior to Fall 2009 may apply 4 units to area B1+B3 of GE Breadth. Tests after Fall of 2009 may apply 6 units to area B1+B3.
- Students who pass AP Environmental Science earn 4 units of credit. Tests prior to Fall 2009 may apply to either B1+B3 or B2+B3. Fall of 09 or later, those credits may only apply to B1+B3.
- Students who pass AP French Language, German Language, Spanish Language, and Spanish Literature earn 6 units of credit. Tests prior to Fall 2009 may apply 6 units to area C2 of GE Breadth. Tests after Fall 2009 may apply 3 units to area C2.
- Students seeking certification in GE Breadth prior to transfer must have passed the test before Fall 2009.
- Students seeking certification in GE Breadth prior to transfer must have passed the test before Fall 2010.
- If a student passes more than one AP exam in physics, only six units of credit may be applied to the baccalaureate, and only four units of credit may be applied to a certification in GE Breadth. Students who pass AP Physics B earn 6 units of credit. Tests prior to Fall 2009 may apply 6 units to area B1+B3 of GE Breadth. Tests after Fall of 2009 may apply 4 units to area B1+B3.
- At all UC Campuses, a maximum of 8 quarter units are allowed in each of the following areas: Art (Studio), English, Mathematics, Music and Physics. A maximum of 4 quarter units are allowed in Computer Science.
- Students who take the Calculus BC examination and earn a subscore of 3 or higher on the Calculus AB portion will receive UC credit for the Calculus AB examination, even if they do not receive a score of 3 or higher on the BC examination.
- The UC will grant credit for the full Music Theory exam. Students who earn only a subscore will not receive exam credit.

International Baccalaureate (IB) Exams

Students may earn credit for International Baccalaureate (IB) test with a score* of 5, 6, or 7 on Higher Level exams. IB credit can be used to meet the California State University General Education (CSUGE) Breadth and Intersegmental General Education Transfer Credit (IGETC). Student must turn in IB exam results the Mt. San Antonio College (Mt. SAC) Admissions and Records Office. The table below lists how the California State University (CSU) and the University of California (UC) will accept IB credit to meet CSU and IGETC general education areas and the minimum units toward each general education area. The table also lists the minimum CSU and UC accepted toward the 60 units needed to meet transfer admission unit requirements.

The CSU or UC campus to which the student transfers determine the total number of units awarded for International Baccalaureate examinations and the applicability to other graduation requirements. A table that list how IB is accepted for Mt. SAC general education is available in the Academic Policies and Requirements section.

College Credit for International Baccalaureate (IB) Exams

Exam	CSU GE Breadth Units	CSU Units	IGETC Units	UC Units
Biology HL	3 semester (Area B2)	6 semester	3 semester (Area 5B)	8 quarter/5.3 semester
Chemistry HL	3 semester (Area B1)	6 semester	3 semester (Area 5A)	8 quarter/5.3 semester
Economics HL	3 semester (Area D)	6 semester	3 semester (Area 4)	8 quarter/5.3 semester
Geography HL	3 semester (Area D)	6 semester	3 semester (Area 4)	8 quarter/5.3 semester
History HL	3 semester (Area C2 or D)	6 semester	3 semester (Area B or 4)	8 quarter/5.3 semester
Language A Literature (any language, except English) HL	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6)	8 quarter/5.3 semester

Language A Language and Literature (any language, except English) HL	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6)	8 quarter/5.3 semester
Language Literature (any language) HL*	3 semester (Area C2)*	6 semester*	3 semester (Area 3B)	8 quarter/5.3 semester
Language and Literature (any language) HL*	3 semester (Area C2)*	6 semester*	3 semester (Area 3B)	8 quarter/5.3 semester
Language B HL*	N/A	6 semester*	3 semester (Area 6)	8 quarter/5.3 semester
Mathematics HL*	3 semester (Area B4)*	6 semester*	3 semester (Area 2A)	8 quarter/5.3 semester
Physics HL	3 semester (Area B1)	6 semester	3 semester (Area 5A)	8 quarter/5.3 semester
Psychology HL	3 semester (Area D)	3 semester	3 semester (Area 4)	8 quarter/5.3 semester
Theater*	3 semester (Area C1)	6 semester	3 semester (Area 3A)	8 quarter/5.3 semester

* A minimum score of 4 is needed for CSU Credit

College Level Examination Program (CLEP)

The College Level Examination Program (CLEP) is a credit-by-examination program that measures a student's level of comprehension of introductory college-level material and consecutively earn college credit. The California State University (CSU) requires a passing score of a least 50 on the CLEP exam. Visit for the most up-to-date credit toward California State University General Education (CSUGE) Breadth credit. Each campus in the CSU system determines how it will apply external examinations toward credit in the major.

CLEP exams cannot be used to meet requirements for Intersegmental General Education Transfer Credit (IGETC). The University of California (UC) does not accept CLEP exams.

CLEP Examination	Passing Score	Semester Credits Toward CSU GE Breadth Requirement	American Institutions and/or CSU GE Breadth Area
American Government	50	3	D
American Literature	50	3	C2
Analyzing and Interpreting Literature	50	3	C2
Biology	50	3	B2
Calculus	50	3	B4
Chemistry	50	3	B1
College Algebra	50	3	B4
College Algebra - Trigonometry	50	3	B4
College Composition	50	0	Not Applicable
College Composition - Modular	50	0	Not Applicable
College Mathematics	50	0	Not Applicable
English Composition (no essay)	50	0	Not Applicable
College Composition (with essay)	50	0	Not Applicable
Financial Accounting	50	0	Not Applicable
French Level I	50	0	Not Applicable
French Level II	59	3	C2
Freshman College Composition	50	0	Not Applicable
German Level I	50	0	Not Applicable
German Level II	60	3	C2
History, United States I	50	3	D + US-1
History, United States II	50	3	D + US-1
Human Growth and Development	50	3	E
Humanities	50	3	C2
Information Systems and Computer Apps	50	0	Not Applicable
Introduction to Educational Psychology	50	0	Not Applicable
Introduction to Business Law	50	0	Not Applicable
Introduction to Psychology	50	3	D
Introduction to Sociology	50	3	D

Natural Sciences	50	3	B1 or B2
Pre-Calculus	50	3	B4
Principles of Accounting	50	0	Not Applicable
Principles of Management	50	0	Not Applicable
Principles of Marketing	50	0	Not Applicable
Principles of Macroeconomics	50	3	D
Principles of Microeconomics	50	3	D
Social Sciences and History	50	0	Not Applicable
Spanish Level I	50	0	Not Applicable
Spanish Level II	63	3	C2
Western Civilization I	50	3	C2 or D
Western Civilization II	50	3	D

CSU/UC Cross Enrollment

California resident students at Mt. San Antonio College may enroll in one undergraduate course per term at a participating CSU or UC campus without formal admission and without payment of state university fees/tuition. To be eligible for cross-enrollment, students must:

- have completed at least one term at Mt. SAC;
- have at least a 2.0 GPA in all coursework completed;
- have satisfied prerequisite(s) of the class in which they plan to enroll at CSU/UC;
- be enrolled in at least six units at Mt. SAC;
- and have paid their registration fees.

To apply for CSU/UC Cross Enrollment, students must complete the CSU/UC Cross Enrollment application. The form is available in the Transfer Center and online (Transfer (<http://transfer.mtsac.edu/>)).

California Independent Colleges and Universities

California's fully-accredited independent colleges and universities provide many options at the undergraduate, graduate, and professional levels for students planning to continue their education beyond the community college. Admission requirements vary and are listed in the catalogs of the various universities and colleges.

For more information about California Independent Colleges and Universities, visit college/university websites, www.aiccu.edu (<http://www.aiccu.edu/>), or Mt. SAC Transfer Services.

Out-of-State Colleges and Universities

Students may also consider transferring to colleges and universities in other states. Admission requirements vary by school. For more information, visit college/university websites or Mt. SAC Transfer Services.

California State University

Upper Division Transfer Admission Requirements

Students are eligible for admission with 60 or more transferable semester units (90 quarter units) if they:

- Have a college grade point average of 2.00 or better in all transferable college units attempted.
- Are in good standing at the last college or university attended, i.e. are eligible to re-enroll.
- Have completed or will complete prior to transfer at least 30 semester units (45 quarter units) of courses equivalent to general education requirements with a grade of "C-" or better. The 30 units must include all of the general education requirements in communication in the English language (English composition, oral communication, and critical thinking) and at least one course of at least 3 semester units (4 quarter units) required in college-level mathematics.
- Students are advised to complete major preparation classes prior to transfer. For some majors/campuses, these courses may be required for admission. Consult university websites, counselors/advisors, and visit Mt. SAC Transfer Services for more information. Also, visit ASSIST (<http://www.assist.org/>) to find community college courses that fulfill major requirements.

Note: These are the minimum admission standards. Many campuses and majors are impacted (more competitive) and may require a higher GPA and/or completion of specific courses for admission.

Lower Division Transfer Admission Requirements

Please be aware that most CSU campuses do not admit lower-division transfer students. California residents may be eligible for CSU admission with fewer than 60 transferable semester units (90 quarter units) if they:

- Have a college grade point average of 2.00 or better in all transferable college units attempted.
- Are in good standing at the last college or university attended, i.e., eligible to re-enroll.
- Meet the admission requirements for a first-time freshman or have successfully completed necessary courses to make up the deficiencies from high school if the student did not complete the 15-unit pattern of college preparatory subjects.
- Meet the eligibility index required of a freshman.

Some campuses may require lower-division transfer students to have completed English composition and general education mathematics prior to transfer. Contact the transfer campus of choice to determine whether there are admission limits on the number of lower-division transfer students.

California State University General Education Requirements 2022-23

The requirements listed below are for the 2022-23 academic year and are based upon information available at the time of catalog publication.

Forty-eight units of general education are required to graduate from campuses of the CSU system. A maximum of 39 units may be certified by community colleges; nine units must be taken at the upper division level. Acceptable courses are grouped in six areas, A through F. The list of certifiable courses will be subject to change year by year, but students are assured that courses taken to meet General Education-Breadth Requirements will be honored if they are on the list during the year taken.

The following program is structured so that a student who completes the program will be assured of properly meeting the General Education-Breadth Requirements of CSU. Area A and Mathematics must be completed with a minimum grade of "C-". Students who have attended other colleges are urged to consult with a counselor or educational advisor for advice on satisfying General Education-Breadth Requirements.

Significant changes have been made to this general education (GE) pattern effective Fall 2021. Area D, Social Sciences, has been reduced from 9 units to 6. Area F, Ethnic Studies, is a new 3 unit requirement.

Students who began attending Mt. SAC or another California Community College or California State University prior to Fall 2021 will be permitted to complete the previous CSU GE pattern if they maintain CSU continuous enrollment. Please consult a counselor for additional information. Courses must be approved for the academic year in which they are completed.

Students beginning Fall 2022 must follow 2022-2023 CSU GE–Breadth requirements. Courses are approved for the academic year in which they were completed.

Area A: The English Language and Critical Thinking

Course Prefix	Course Name	Units
Choose one course from each group:		9
A-1: Oral Communication		
SPCH 1A	Public Speaking	
SPCH 1AH	Public Speaking - Honors	
SPCH 2	Survey of Communication Studies	
SPCH 8	Professional and Organizational Speaking	
SPCH 8H	Professional and Organizational Speaking - Honors	
A-2: Written Communication		
AMLA 1A	College Composition for Non-Native English Speakers	
ENGL 1A	Freshman Composition	
ENGL 1AH	Freshman Composition - Honors	
ENGL 1AM	College Composition for Non-Native English Speakers	
A-3: Critical Thinking		
ENGL 1C	Critical Thinking and Writing	
ENGL 1CH	Critical Thinking and Writing - Honors	
ENGR 1C	Engineering Critical Thinking	
PHIL 3	Introduction to Logic	
PHIL 3H	Introduction to Logic - Honors	
PHIL 8	Critical Thinking	
PHIL 9	Critical Thinking and Writing	
PHIL 9H	Critical Thinking and Writing - Honors	
PSYC 5	Psychology of Reasoning and Problem Solving	
READ 100	Analysis and Critical Reading	
SPCH 20	Argumentation and Debate	
SPCH 20H	Argumentation and Debate - Honors	

Area B: The Physical Universe & Life

Course Prefix	Course Name	Units
Choose one course from each group. Also, one lab course must be included in one of the science groups:		9
B-1: Physical Science		
ASTR 5	Introduction to Astronomy	
ASTR 5H	Introduction to Astronomy - Honors	
ASTR 5L	Astronomical Observing Laboratory ¹	
ASTR 7	Geology of the Solar System	
ASTR 8	Introduction to Stars, Galaxies, and the Universe	
CHEM 9	Chemistry of Everyday Life	
CHEM 10	Chemistry for Allied Health Majors ¹	
CHEM 20	Introductory Organic and Biochemistry ¹	
CHEM 40	Introduction to General Chemistry ¹	
CHEM 50	General Chemistry I	
CHEM 50H	General Chemistry I - Honors ¹	
CHEM 51	General Chemistry II ¹	
CHEM 51H	General Chemistry II - Honors ¹	
CHEM 55	Chemistry for Engineers ¹	
GEOG 1	Physical Geography	
GEOG 1H	Physical Geography - Honors	
GEOG 1L	Physical Geography Laboratory ¹	
GEOG 1LH	Physical Geography Laboratory - Honors ¹	
GEOL 1	Physical Geology ¹	
GEOL 2	Historical Geology ¹	
GEOL 7	Geology of California	
GEOL 8	Earth Science	
GEOL 8H	Earth Science - Honors	
GEOL 8L	Earth Science Laboratory ¹	
GEOL 9	Environmental Geology	
GEOL 9L	Environmental Geology Laboratory ¹	
GEOL 10	Natural Disasters	
GEOL 24	Geologic Field Studies: Central California ¹	
GEOL 25	Geologic Field Studies: Southern California ¹	
GEOL 30	Global Climate Change	
METO 3	Weather and the Atmospheric Environment	
METO 3L	Weather and Atmospheric Environment Laboratory ¹	
OCEA 10	Introduction to Oceanography	
OCEA 10H	Introduction to Oceanography - Honors	
OCEA 10L	Introduction to Oceanography Laboratory ¹	
PHSC 3	Energy Science ¹	
PHSC 9	Physical Science ¹	
PHYS 1	Physics ¹	
PHYS 2AG	General Physics ¹	
PHYS 2BG	General Physics ¹	
PHYS 4A	Engineering Physics ¹	
PHYS 4B	Engineering Physics ¹	
PHYS 4C	Engineering Physics ¹	
PHYS 6A	General Physics with Calculus ¹	
PHYS 6B	General Physics with Calculus ¹	
B-2: Life Sciences		
AGOR 1	Horticultural Science	
ANAT 10A	Introductory Human Anatomy ¹	
ANAT 10B	Introductory Human Physiology ¹	
ANAT 35	Human Anatomy ¹	
ANAT 36	Human Physiology ¹	
ANTH 1	Biological Anthropology	

ANTH 1H	Biological Anthropology - Honors
ANTH 1L	Biological Anthropology Laboratory ¹
BIOL 1	General Biology ¹
BIOL 2	Plant and Animal Biology ¹
BIOL 3	Ecology and Field Biology ¹
BIOL 4	Biology for Majors ¹
BIOL 4H	Biology for Majors - Honors ¹
BIOL 6	Humans and the Environment
BIOL 6L	Humans and the Environment Laboratory ¹
BIOL 8	Cell and Molecular Biology ¹
BIOL 17	Neurobiology and Behavior
BIOL 20	Marine Biology
BIOL 21	Marine Biology Laboratory ¹
BIOL 25	Conservation Biology
BIOL 34	Fundamentals of Genetics
BIOL 34L	Fundamentals of Genetics Laboratory ¹
MICR 1	Principles of Microbiology ¹
MICR 22	Microbiology ¹
PSYC 1B	Biological Psychology
ZOOL 3	Fundamentals of Zoology

B-3: Lab Science

This requirement is met by taking one of the lab courses above. Lab must be a corresponding section to the lecture course taken. ¹

B-4: Mathematics

Select at least one course from the following:

BUSC 17	Applied Business Statistics
ENGR 285	Differential Equations and Linear Algebra for Engineers
MATH 100	Survey of College Mathematics
MATH 110	Elementary Statistics
MATH 110H	Elementary Statistics - Honors
MATH 120	Finite Mathematics
MATH 130	College Algebra
MATH 140	Calculus for Business
MATH 150	Trigonometry
MATH 160	Precalculus Mathematics
MATH 180	Calculus and Analytic Geometry
MATH 181	Calculus and Analytic Geometry
MATH 260	Linear Algebra
MATH 280	Calculus and Analytic Geometry
MATH 285	Linear Algebra and Differential Equations
MATH 290	Differential Equations
PSYC 10	Statistics for the Behavioral Sciences
SOC 23	Introduction to Statistics in Sociology and Social Sciences

Area C: Arts, Literature, Philosophy and Foreign Languages

Course Prefix	Course Name	Units
Choose three courses, with at least one course from "Arts" and one course from "Humanities":		9

C-1: Arts

AHIS 1	Introduction to the Visual Arts and Art History
or ARTB 1	Introduction to the Visual Arts and Art History
AHIS 3	History of Women and Gender in Art ²
AHIS 3H	History of Women and Gender in Art - Honors ²
AHIS 4	History of Western Art: Prehistoric Through Gothic
AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors
AHIS 5	History of Western Art: Renaissance Through Modern
AHIS 5H	History of Western Art: Renaissance Through Modern - Honors
AHIS 6	History of Modern Art
AHIS 6H	History of Modern Art - Honors

AHIS 7	Global Contemporary Visual Culture
AHIS 8	History of Medieval Art and Architecture
AHIS 9	History of Asian Art and Architecture ²
AHIS 10	A History of Greek and Roman Art and Architecture
AHIS 11	History of African, Oceanic, and Native American Art ²
AHIS 11H	History of African, Oceanic, and Native American Art - Honors ²
AHIS 12	History of Precolumbian Art and Architecture ²
AHIS 12H	History of Precolumbian Art and Architecture - Honors ²
AHIS 13	World Art and Visual Culture ²
AHIS 14	Rome: The Ancient City ²
AHIS 15	Culture and Art of Pompeii ²
ARCH 250	World Architecture: Prehistory to the Middle Ages
ARCH 251	World Architecture: Renaissance through the Contemporary Era
ARTB 14	Basic Studio Arts
ARTD 15A	Drawing: Beginning
ARTD 20	Design: Two-Dimensional
ARTD 25A	Beginning Painting I
ARTD 46A	Printmaking: Introduction to Monotype
ARTD 47A	Printmaking: Photo and Alternative Processes
ARTG 20	Art, Artists, and Society
ARTS 22	Design: Three-Dimensional
ARTS 30A	Ceramics: Beginning I
ARTS 40A	Sculpture: Beginning
DN-T 20	History and Appreciation of Dance
FASH 9	History of Fashion
ID 14	History of Furniture and Decorative Arts
MUS 12	History of Jazz
MUS 14A	World Music
MUS 14B	American Folk Music
MUS 15	Rock Music History and Appreciation
MUS 15H	Rock Music History and Appreciation - Honors
MUS 100	Introduction to Western Classical Music
MUS 100H	Introduction to Western Classical Music - Honors
MUS 101	Women in Music
MUS 103	Music and Culture of Hip Hop
MUS 103H	Music and Culture of Hip-Hop - Honors
MUS 105	Western Music History I: Antiquity to 1750
MUS 106	Western Music History II: 1750 to Present
MUS 110	Music Fundamentals
PHOT 15	History of Photography
SPCH 4	Performance of Literature
THTR 9	Introduction to Theater Arts
THTR 10	History of Theater Arts
THTR 11	Principles of Acting I
C-2: Humanities	
ARAB 1	Elementary Arabic
ARAB 2	Continuing Elementary Arabic
CHIN 1	Elementary Chinese
CHIN 2	Continuing Elementary Chinese
CHIN 3	Intermediate Chinese
CHIN 4	Continuing Intermediate Chinese
ENGL 1B	English - Introduction to Literary Types
ENGL 1BH	English - Introduction to Literary Types - Honors
FRCH 1	Elementary French
FRCH 2	Continuing Elementary French
FRCH 3	Intermediate French
FRCH 4	Continuing Intermediate French

FRCH 60	French Culture Through Cinema
GERM 1	Elementary German
GERM 2	Continuing Elementary German
GERM 3	Intermediate German
GERM 60	German Culture through Cinema
HIST 1	History of the United States ²
HIST 3	World History: Prehistoric to Early Modern ²
HIST 3H	World History: Prehistoric to Early Modern - Honors ²
HIST 4	World History: Early Modern to the Present ²
HIST 4H	World History: Early Modern to the Present - Honors ²
HIST 7	History of the United States to 1877 ²
HIST 7H	History of the United States to 1877 - Honors ²
HIST 8	History of the United States from 1865 ²
HIST 8H	History of the United States from 1865 - Honors ²
HIST 9	Asian American and Pacific Islander History ²
HIST 10	History of Premodern Asia ²
HIST 10H	History of Premodern Asia - Honors ²
HIST 11	History of Modern Asia ²
HIST 11H	History of Modern Asia - Honors ²
HIST 16	The Wild West - A History, 1800-1890 ²
HIST 18	History of Latin America ²
HIST 19	History of Mexico ²
HIST 30	History of the African American 1619-1877 ²
HIST 31	History of the African American ²
HIST 35	History of Africa ²
HIST 36	Women in American History ²
HIST 39	California History ²
HIST 40	History of the Mexican American ²
HIST 44	History of Native Americans ²
HUMA 1	Humanities and the Human Experience
HUMA 1H	Humanities and the Human Experience - Honors
ITAL 1	Elementary Italian
ITAL 2	Continuing Elementary Italian
ITAL 3	Intermediate Italian
ITAL 4	Continuing Intermediate Italian
ITAL 60	Italian Culture Through Cinema
ITAL 61	Italian Culture through Food
JAPN 1	Elementary Japanese
JAPN 2	Continuing Elementary Japanese
JAPN 3	Intermediate Japanese
JAPN 4	Continuing Intermediate Japanese
JAPN 5	Advanced Japanese
JAPN 62	Japanese Culture Through Anime and Manga
KORE 4	Continuing Intermediate Korean
LATN 1	Elementary Latin
LATN 1H	Elementary Latin - Honors
LATN 2	Continuing Elementary Latin
LATN 2H	Continuing Elementary Latin - Honors
LING 2	Languages, Gender, and Power
LING 3	Languages, Cultures, and Writing in East Asia
LIT 1	Early American Literature
LIT 2	Modern American Literature
LIT 3	Multicultural American Literature
LIT 6A	Survey of English Literature
LIT 6B	Survey of English Literature
LIT 10	Survey of Shakespeare
LIT 11A	World Literature to 1650

LIT 11B	World Literature from 1650
LIT 14	Introduction to Modern Poetry
LIT 15	Introduction to Cinema
LIT 20	African American Literature
LIT 25	Contemporary Mexican American Literature
LIT 36	Introduction to Mythology
LIT 40	Children's Literature
LIT 46	The Bible As Literature: Old Testament
LIT 47	The Bible As Literature: New Testament
PHIL 5	Introduction to Philosophy
PHIL 5H	Introduction to Philosophy - Honors
PHIL 12	Introduction to Ethics
PHIL 12H	Introduction to Ethics - Honors
PHIL 15	Major World Religions
PHIL 15H	Major World Religions - Honors
PHIL 20A	Introduction to Ancient Philosophy
PHIL 20AH	Introduction to Ancient Philosophy - Honors
PHIL 20B	Introduction to Modern Philosophy
PHIL 20BH	Introduction to Modern Philosophy - Honors
POLI 5	Political Theory I - Ancient to Contemporary ²
POLI 7	Political Theory II - Early Modern to Contemporary ²
PUBH 20	History of Western Medicine
SIGN 101	American Sign Language 1
SIGN 101H	American Sign Language 1 - Honors
SIGN 102	American Sign Language 2
SIGN 103	American Sign Language 3
SIGN 104	American Sign Language 4
SIGN 202	American Deaf Culture
SPAN 1	Elementary Spanish
SPAN 1S	Spanish for the Spanish Speaking
SPAN 2	Continuing Elementary Spanish
SPAN 2S	Continuing Spanish for the Spanish Speaking
SPAN 3	Intermediate Spanish
SPAN 4	Continuing Intermediate Spanish

Area D: Social, Political, and Economic Institutions and Behavior; Historical Background

Course Prefix	Course Name	Units
Choose a minimum of six units:		6
AABS 35	African American/Black Politics	
AGAG 1	Food Production, Land Use, and Politics - A Global Perspective	
AHIS 3	History of Women and Gender in Art ²	
AHIS 3H	History of Women and Gender in Art - Honors ²	
AHIS 9	History of Asian Art and Architecture ²	
AHIS 11	History of African, Oceanic, and Native American Art ²	
AHIS 11H	History of African, Oceanic, and Native American Art - Honors ²	
AHIS 12	History of Precolumbian Art and Architecture ²	
AHIS 12H	History of Precolumbian Art and Architecture - Honors ²	
AHIS 13	World Art and Visual Culture ²	
AHIS 14	Rome: The Ancient City ²	
AHIS 15	Culture and Art of Pompeii ²	
ANTH 4	Archaeology	
ANTH 5	Cultural Anthropology	
ANTH 5H	Cultural Anthropology - Honors	
ANTH 6	Language and Culture: An Introduction to Linguistic Anthropology	
ANTH 15	Peoples and Cultures of Latin America and the Caribbean	
ANTH 16	Peoples and Cultures of South Asia	
ANTH 17	Peoples and Cultures of the Middle East	

ANTH 30	The Native American
ANTH 50	Introduction to Science, Technology, and Society
BUSC 1A	Principles of Economics - Macroeconomics
BUSC 1AH	Principles of Economics - Macroeconomics - Honors
BUSC 1B	Principles of Economics - Microeconomics
BUSC 1BH	Principles of Economics - Microeconomics - Honors
BUSL 100	American Law and Democracy
CHLD 1	Child, Family, School and Community
CHLD 10	Child Growth and Lifespan Development ²
CHLD 10H	Child Growth and Lifespan Development - Honors ²
CHLD 11	Child and Adolescent Development ²
FASH 14	Dress, Culture, and Identity
GEOG 2	Human Geography
GEOG 2H	Human Geography - Honors
GEOG 5	World Regional Geography
GEOG 8	Urban Geography
GEOG 30	Geography of California
HIST 1	History of the United States ²
HIST 3	World History: Prehistoric to Early Modern ²
HIST 3H	World History: Prehistoric to Early Modern - Honors ²
HIST 4	World History: Early Modern to the Present ²
HIST 4H	World History: Early Modern to the Present - Honors ²
HIST 7	History of the United States to 1877 ²
HIST 7H	History of the United States to 1877 - Honors ²
HIST 8	History of the United States from 1865 ²
HIST 8H	History of the United States from 1865 - Honors ²
HIST 9	Asian American and Pacific Islander History ²
HIST 10	History of Premodern Asia ²
HIST 10H	History of Premodern Asia - Honors ²
HIST 11	History of Modern Asia ²
HIST 11H	History of Modern Asia - Honors ²
HIST 16	The Wild West - A History, 1800-1890 ²
HIST 18	History of Latin America ²
HIST 19	History of Mexico ²
HIST 30	History of the African American 1619-1877 ²
HIST 31	History of the African American ²
HIST 35	History of Africa ²
HIST 36	Women in American History ²
HIST 39	California History ²
HIST 40	History of the Mexican American ²
HIST 44	History of Native Americans ²
JOUR 100	Introduction to Mass Communications
JOUR 107	Race, Culture, Gender, and Mass Media Images
LCAS 25	Latino Politics in the United States
NF 28	Cultural and Ethnic Foods ²
POLI 1	Introduction to American Government and Politics
POLI 1H	Introduction to American Government and Politics - Honors
POLI 2	Comparative Politics
POLI 5	Political Theory I - Ancient to Contemporary ²
POLI 7	Political Theory II - Early Modern to Contemporary ²
POLI 9	International Relations
POLI 10	Environmental Politics
POLI 25	Latino Politics in the United States
POLI 35	African American/Black Politics
PSYC 1A	Introduction to Psychology
PSYC 1AH	Introduction to Psychology - Honors
PSYC 14	Developmental Psychology ²

PSYC 14H	Developmental Psychology - Honors ²
PSYC 15	Introduction to Child Psychology ²
PSYC 19	Abnormal Psychology
PSYC 20	Introduction to Social Psychology
PSYC 25	The Psychology of Women ²
R-TV 01	Introduction to Electronic Media
SOC 1	Introduction to Sociology
SOC 1H	Introduction to Sociology - Honors
SOC 2	Contemporary Social Problems
SOC 2H	Contemporary Social Problems - Honors
SOC 4	Introduction to Gerontology
SOC 5	Introduction to Criminology
SOC 5H	Introduction to Criminology - Honors
SOC 12	Introduction to Research Methods in the Social Sciences
SOC 14	Marriage and the Family
SOC 14H	Marriage and the Family - Honors
SOC 15	Child Development ²
SOC 20	Introduction to Race and Ethnicity
SOC 20H	Introduction to Race and Ethnicity - Honors
SOC 40	Introduction to Sex and Gender Roles
SOC 110	Introduction to Social Justice
SOC 130	Introduction to LGBTQ Studies
SPCH 7	Intercultural Communication
SPCH 7H	Intercultural Communication - Honors
SPCH 26	Interpersonal Communication ²
SPCH 26H	Interpersonal Communication - Honors ²
SPCH 30	Introduction to Communication Theory
SPCH 30H	Introduction to Communication Theory - Honors

Area E: Lifelong Understanding & Self Development

Course Prefix	Course Name	Units
Choose at least one course		3
AD 3	Addiction: Prevention, Intervention, and Recovery	
BIOL 5	Contemporary Health Issues	
BIOL 13	Human Reproduction, Development and Aging	
BIOL 15	Human Sexuality	
BIOL 15H	Human Sexuality - Honors	
CHLD 10	Child Growth and Lifespan Development ²	
CHLD 10H	Child Growth and Lifespan Development - Honors ²	
CHLD 11	Child and Adolescent Development ²	
COUN 2	College Success Strategies	
COUN 5	Career and Life Planning	
FCS 41	Life Management	
KIN 34	Fitness for Living	
LEAD 55	Exploring Leadership	
NF 10	Nutrition for Health and Wellness	
NF 12	Sports Nutrition	
NF 25	Introduction to Nutrition Science	
NF 25H	Introduction to Nutrition Science - Honors	
NF 28	Cultural and Ethnic Foods ²	
PSYC 14	Developmental Psychology ²	
PSYC 14H	Developmental Psychology - Honors ²	
PSYC 15	Introduction to Child Psychology ²	
PSYC 25	The Psychology of Women ²	
PSYC 26	Psychology of Sexuality	
PSYC 33	Psychology for Effective Living	
PUBH 24	Introduction to Public Health	

SOC 15	Child Development ²
SPCH 26	Interpersonal Communication ²
SPCH 26H	Interpersonal Communication - Honors ²
STDY 100	University-level Practices for Academic Success

Area F: Ethnic Studies

Course Prefix	Course Name	Units
Choose one course		3
AABS 1	Introduction to Black Studies	
APIS 1	Introduction to Asian American Studies	
ETHS 1	Introduction to Ethnic Studies	
ETHS 2	Race and Racism in Education	
LCAS 1	Introduction to Chicanx Studies	

² Courses may not be double counted to satisfy more than one area, even if a course is listed in more than one area.

Notes

- Upper division transfer students (60-70 semester baccalaureate units), will need to have at least 30 semester units of general education. Within those 30 units, Area A (9) semester units and Mathematics (3) semester units must be completed with grades of "C-" or better.
- Courses on this list have been approved by the CSU Office of the Chancellor for Fall 2022 and beyond. If a course was completed prior to approval, it cannot be certified for CSU General Education–Breadth requirements.
- Some majors require specific general education courses. Students planning to transfer are advised to plan their schedules carefully in order to maintain progress.

CSU Graduation Requirement in U.S. History, Constitution and American Ideals

It is recommended that you use one of the options below as part of the units required in General Education Area C or D.

Course Prefix	Course Name	Units
Option 1		
HIST 7	History of the United States to 1877	
or HIST 7H	History of the United States to 1877 - Honors	
Plus		
HIST 8	History of the United States from 1865	
or HIST 8H	History of the United States from 1865 - Honors	

If Option 1 is selected, DO NOT select another History course as your third General Education Area D course.

Option 2

Choose one course from U.S. History plus one course from American Institutions:

United States History		
HIST 1	History of the United States	
HIST 7	History of the United States to 1877	
HIST 7H	History of the United States to 1877 - Honors	
HIST 8	History of the United States from 1865	
HIST 8H	History of the United States from 1865 - Honors	
HIST 9	Asian American and Pacific Islander History	
HIST 30	History of the African American 1619-1877	
HIST 31	History of the African American	
HIST 36	Women in American History	
HIST 40	History of the Mexican American	
HIST 44	History of Native Americans	
American Institutions		
AABS 35	African American/Black Politics	
LCAS 25	Latino Politics in the United States	
POLI 1	Introduction to American Government and Politics	
POLI 1H	Introduction to American Government and Politics - Honors	
POLI 25	Latino Politics in the United States	
POLI 35	African American/Black Politics	

The University of California

Upper Division Transfer Admission Requirements

The vast majority of transfer students come to UC at the junior level from California community colleges. To be considered for UC admission as a junior, you must fulfill both of the following:

- Complete 60 semester (90 quarter) units of transferable college credit with a GPA of at least 2.4 (2.8 for nonresidents). No more than 14 semester (21 quarter) units may be taken Pass/Not Pass.
- Complete the following course pattern requirements, and earn a grade of C or better in each course:
 - Two transferable college courses (3 semester or 4-5 quarter units each) in English composition
 - One transferable college course (3 semester or 4-5 quarter units) in mathematical concepts and quantitative reasoning
 - Four transferable college courses (3 semester or 4-5 quarter units each) chosen from at least two of the following subject areas:
 - Arts and Humanities
 - Social and Behavioral Sciences
 - Physical and Biological Sciences

Note: Meeting these minimum requirements does not guarantee admission to the campus or major of your choice. Many campuses and majors receive more applications than they have spaces available. To be competitive, you should work toward meeting the specific requirements for the campuses and majors that interest you. Consult university websites, counselors/advisors, and visit Mt. SAC Transfer Services for more information. Also, visit www.assist.org (<http://www.assist.org>) to find community college courses that fulfill major requirements.

Lower Division Transfer Admission Requirements

While all UC campuses welcome a large pool of junior-level transfers, most admit only a very limited number of lower-division transfers (students with fewer than 60 units). You may establish eligibility for lower division transfer:

- If you were eligible for admission to UC when you graduated from high school, meaning you satisfied the subject, examination and scholarship requirements, you are eligible for transfer if you have a 2.0 GPA in your transferable college coursework (2.8 GPA for non-residents). Visit the UC admissions website for more information about these requirements: www.universityofcalifornia.edu/admissions (<http://www.universityofcalifornia.edu/admissions/>).

If you met the scholarship requirement in high school, but did not satisfy the 15-course subject requirement, you must take transferable college courses in the missing subjects, earn a grade of C or better in each required course and have an overall 2.0 GPA in all transferable coursework to be eligible to transfer (a 2.8 GPA is required for nonresidents).

Intersegmental General Education Transfer Curriculum (IGETC) 2022-2023

The requirements listed below are for the 2022-2023 academic year and are based upon information available at the time of catalog publication.

Completion of the IGETC will permit a student to transfer from Mt. SAC to a campus in either the University of California (UC) system or California State University (CSU) without the need, after transfer, to take additional lower-division general education courses to satisfy university general education requirements. It should be noted that completion of the IGETC is not an admission requirement for transfer to UC or CSU, nor is it the only way to fulfill the lower-division general education requirements of UC or CSU prior to transfer. Students pursuing majors that require extensive lower-division preparation may not find the IGETC option to be advantageous (i.e. Engineering, Sciences).

The requirements listed below must be completed in their entirety for full certification to the UC and CSU. For students who have completed coursework at multiple campuses, the campus of last attendance prior to transfer to UC or CSU will certify the coursework. Mt. SAC will certify coursework from other campuses according to the IGETC list of the originating campus. A minimum grade of "C" is required in each course. (A grade of "C-" is not acceptable.)

Students beginning Fall 2022 must follow 2022-2023 IGETC requirements. Courses are approved for the academic year in which they were completed.

Area1: English Communication

Course Prefix	Course Name	Units
Choose one course from each group:		
Group A: English Composition		
AMLA 1A	College Composition for Non-Native English Speakers	
ENGL 1A	Freshman Composition	
ENGL 1AH	Freshman Composition - Honors	
ENGL 1AM	College Composition for Non-Native English Speakers	
Group B: Critical Thinking - Composition		
ENGL 1C	Critical Thinking and Writing	
ENGL 1CH	Critical Thinking and Writing - Honors	
ENGR 1C	Engineering Critical Thinking	

PHIL 9	Critical Thinking and Writing
PHIL 9H	Critical Thinking and Writing - Honors
Group C: Oral Communication	
CSU Requirements Only	
SPCH 1A	Public Speaking
SPCH 1AH	Public Speaking - Honors
SPCH 2	Survey of Communication Studies

Correction: AMLA 1A and ENGL 1AM were added Area 1 Group A. 8/25/2022

Area 2: Mathematical Concepts and Quantitative Reasoning

Course Prefix	Course Name	Units
Choose one course from the following:		
BUSC 17	Applied Business Statistics	
ENGR 285	Differential Equations and Linear Algebra for Engineers	
MATH 100	Survey of College Mathematics	
MATH 110	Elementary Statistics	
MATH 110H	Elementary Statistics - Honors	
MATH 120	Finite Mathematics	
MATH 130	College Algebra	
MATH 140	Calculus for Business	
MATH 160	Precalculus Mathematics	
MATH 180	Calculus and Analytic Geometry	
MATH 181	Calculus and Analytic Geometry	
MATH 260	Linear Algebra	
MATH 280	Calculus and Analytic Geometry	
MATH 285	Linear Algebra and Differential Equations	
MATH 290	Differential Equations	
PSYC 10	Statistics for the Behavioral Sciences	
SOC 23	Introduction to Statistics in Sociology and Social Sciences	

Correction: BUSC 17 and ENGR 285 were added to Area 2. 8/25/2022

Area 3: Arts and Humanities

Course Prefix	Course Name	Units
Choose three courses minimum, at least one course from the Arts group and one course from the Humanities group:		
Arts Courses		
AHIS 1	Introduction to the Visual Arts and Art History	
or ARTB 1	Introduction to the Visual Arts and Art History	
AHIS 3	History of Women and Gender in Art ¹	
AHIS 3H	History of Women and Gender in Art - Honors ¹	
AHIS 4	History of Western Art: Prehistoric Through Gothic	
AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors	
AHIS 5	History of Western Art: Renaissance Through Modern	
AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	
AHIS 6	History of Modern Art	
AHIS 6H	History of Modern Art - Honors	
AHIS 7	Global Contemporary Visual Culture	
AHIS 8	History of Medieval Art and Architecture	
AHIS 9	History of Asian Art and Architecture	
AHIS 10	A History of Greek and Roman Art and Architecture	
AHIS 11	History of African, Oceanic, and Native American Art ¹	
AHIS 11H	History of African, Oceanic, and Native American Art - Honors ¹	
AHIS 12	History of Precolumbian Art and Architecture	
AHIS 12H	History of Precolumbian Art and Architecture - Honors	
AHIS 13	World Art and Visual Culture ¹	
AHIS 14	Rome: The Ancient City	
AHIS 15	Culture and Art of Pompeii	

ARCH 250	World Architecture: Prehistory to the Middle Ages
ARCH 251	World Architecture: Renaissance through the Contemporary Era
DN-T 20	History and Appreciation of Dance
MUS 12	History of Jazz
MUS 14A	World Music
MUS 14B	American Folk Music
MUS 15	Rock Music History and Appreciation
MUS 15H	Rock Music History and Appreciation - Honors
MUS 100	Introduction to Western Classical Music
MUS 100H	Introduction to Western Classical Music - Honors
MUS 105	Western Music History I: Antiquity to 1750
MUS 106	Western Music History II: 1750 to Present
THTR 10	History of Theater Arts
Humanities Courses	
CHIN 3	Intermediate Chinese
CHIN 4	Continuing Intermediate Chinese
ENGL 1B	English - Introduction to Literary Types
ENGL 1BH	English - Introduction to Literary Types - Honors
FRCH 3	Intermediate French
FRCH 4	Continuing Intermediate French
FRCH 60	French Culture Through Cinema
GERM 3	Intermediate German
GERM 60	German Culture through Cinema
HIST 1	History of the United States ¹
HIST 3	World History: Prehistoric to Early Modern ¹
HIST 3H	World History: Prehistoric to Early Modern - Honors ¹
HIST 4	World History: Early Modern to the Present ¹
HIST 4H	World History: Early Modern to the Present - Honors ¹
HIST 7	History of the United States to 1877 ¹
HIST 7H	History of the United States to 1877 - Honors ¹
HIST 8	History of the United States from 1865 ¹
HIST 8H	History of the United States from 1865 - Honors ¹
HIST 9	Asian American and Pacific Islander History ¹
HIST 10	History of Premodern Asia ¹
HIST 10H	History of Premodern Asia - Honors ¹
HIST 11	History of Modern Asia ¹
HIST 11H	History of Modern Asia - Honors ¹
HIST 16	The Wild West - A History, 1800-1890 ¹
HIST 18	History of Latin America ¹
HIST 19	History of Mexico ¹
HIST 30	History of the African American 1619-1877 ¹
HIST 31	History of the African American ¹
HIST 35	History of Africa ¹
HIST 36	Women in American History ¹
HIST 39	California History ¹
HIST 40	History of the Mexican American ¹
HIST 44	History of Native Americans ¹
HUMA 1	Humanities and the Human Experience
HUMA 1H	Humanities and the Human Experience - Honors
ITAL 3	Intermediate Italian
ITAL 4	Continuing Intermediate Italian
ITAL 60	Italian Culture Through Cinema
ITAL 61	Italian Culture through Food
JAPN 3	Intermediate Japanese
JAPN 4	Continuing Intermediate Japanese
JAPN 5	Advanced Japanese
JAPN 62	Japanese Culture Through Anime and Manga

LING 2	Languages, Gender, and Power
LING 3	Languages, Cultures, and Writing in East Asia
LIT 1	Early American Literature
LIT 2	Modern American Literature
LIT 3	Multicultural American Literature
LIT 6A	Survey of English Literature
LIT 6B	Survey of English Literature
LIT 10	Survey of Shakespeare
LIT 11A	World Literature to 1650
LIT 11B	World Literature from 1650
LIT 14	Introduction to Modern Poetry
LIT 15	Introduction to Cinema
LIT 20	African American Literature
LIT 25	Contemporary Mexican American Literature
LIT 36	Introduction to Mythology
LIT 46	The Bible As Literature: Old Testament
LIT 47	The Bible As Literature: New Testament
PHIL 5	Introduction to Philosophy
PHIL 5H	Introduction to Philosophy - Honors
PHIL 12	Introduction to Ethics
PHIL 12H	Introduction to Ethics - Honors
PHIL 15	Major World Religions
PHIL 15H	Major World Religions - Honors
PHIL 20A	Introduction to Ancient Philosophy
PHIL 20AH	Introduction to Ancient Philosophy - Honors
PHIL 20B	Introduction to Modern Philosophy
PHIL 20BH	Introduction to Modern Philosophy - Honors
POLI 5	Political Theory I - Ancient to Contemporary ¹
POLI 7	Political Theory II - Early Modern to Contemporary ¹
PUBH 20	History of Western Medicine
SIGN 104	American Sign Language 4
SIGN 202	American Deaf Culture
SPAN 3	Intermediate Spanish
SPAN 4	Continuing Intermediate Spanish

Correction: HIST 9, HIST 10H, HIST 11H, HIST 18, ITAL 61, JAPN 62, LING 2, LING 3, PUBH 20 were added Area 3 Humanities. 8/25/2022

Area 4: Social and Behavioral Sciences

Course Prefix	Course Name	Units
Choose three courses total from a minimum of two different subject areas:		
AABS 35	African American/Black Politics	
AHIS 3	History of Women and Gender in Art ¹	
AHIS 3H	History of Women and Gender in Art - Honors ¹	
AHIS 9	History of Asian Art and Architecture ¹	
AHIS 11	History of African, Oceanic, and Native American Art ¹	
AHIS 11H	History of African, Oceanic, and Native American Art - Honors ¹	
AHIS 12	History of Precolumbian Art and Architecture ¹	
AHIS 12H	History of Precolumbian Art and Architecture - Honors ¹	
AHIS 13	World Art and Visual Culture ¹	
AHIS 14	Rome: The Ancient City ¹	
AHIS 15	Culture and Art of Pompeii ¹	
ANTH 4	Archaeology	
ANTH 5	Cultural Anthropology	
ANTH 5H	Cultural Anthropology - Honors	
ANTH 6	Language and Culture: An Introduction to Linguistic Anthropology	
ANTH 15	Peoples and Cultures of Latin America and the Caribbean	
ANTH 16	Peoples and Cultures of South Asia	

ANTH 17	Peoples and Cultures of the Middle East
ANTH 30	The Native American
ANTH 50	Introduction to Science, Technology, and Society
BUSC 1A	Principles of Economics - Macroeconomics
BUSC 1AH	Principles of Economics - Macroeconomics - Honors
BUSC 1B	Principles of Economics - Microeconomics
BUSC 1BH	Principles of Economics - Microeconomics - Honors
BUSL 100	American Law and Democracy
GEOG 2	Human Geography
GEOG 2H	Human Geography - Honors
GEOG 5	World Regional Geography
GEOG 8	Urban Geography
GEOG 30	Geography of California
HIST 1	History of the United States ¹
HIST 3	World History: Prehistoric to Early Modern ¹
HIST 3H	World History: Prehistoric to Early Modern - Honors ¹
HIST 4	World History: Early Modern to the Present ¹
HIST 4H	World History: Early Modern to the Present - Honors ¹
HIST 7	History of the United States to 1877 ¹
HIST 7H	History of the United States to 1877 - Honors ¹
HIST 8	History of the United States from 1865 ¹
HIST 8H	History of the United States from 1865 - Honors ¹
HIST 9	Asian American and Pacific Islander History ¹
HIST 10	History of Premodern Asia ¹
HIST 10H	History of Premodern Asia - Honors ¹
HIST 11	History of Modern Asia ¹
HIST 11H	History of Modern Asia - Honors ¹
HIST 16	The Wild West - A History, 1800-1890 ¹
HIST 18	History of Latin America ¹
HIST 19	History of Mexico ¹
HIST 30	History of the African American 1619-1877 ¹
HIST 31	History of the African American ¹
HIST 35	History of Africa ¹
HIST 36	Women in American History ¹
HIST 39	California History ¹
HIST 40	History of the Mexican American ¹
HIST 44	History of Native Americans
LCAS 25	Latino Politics in the United States
NF 28	Cultural and Ethnic Foods
POLI 1	Introduction to American Government and Politics
POLI 1H	Introduction to American Government and Politics - Honors
POLI 5	Political Theory I - Ancient to Contemporary ¹
POLI 7	Political Theory II - Early Modern to Contemporary ¹
POLI 9	International Relations
POLI 10	Environmental Politics
POLI 25	Latino Politics in the United States
POLI 35	African American/Black Politics
PSYC 1A	Introduction to Psychology
PSYC 1AH	Introduction to Psychology - Honors
PSYC 14	Developmental Psychology
PSYC 14H	Developmental Psychology - Honors
PSYC 15	Introduction to Child Psychology
PSYC 19	Abnormal Psychology
PSYC 20	Introduction to Social Psychology
PSYC 25	The Psychology of Women
SOC 1	Introduction to Sociology
SOC 1H	Introduction to Sociology - Honors

SOC 2	Contemporary Social Problems
SOC 2H	Contemporary Social Problems - Honors
SOC 4	Introduction to Gerontology
SOC 5	Introduction to Criminology
SOC 5H	Introduction to Criminology - Honors
SOC 12	Introduction to Research Methods in the Social Sciences
SOC 20	Introduction to Race and Ethnicity
SOC 20H	Introduction to Race and Ethnicity - Honors
SOC 40	Introduction to Sex and Gender Roles
SOC 110	Introduction to Social Justice
SOC 130	Introduction to LGBTQ Studies
SPCH 7	Intercultural Communication
SPCH 7H	Intercultural Communication - Honors
SPCH 26	Interpersonal Communication
SPCH 26H	Interpersonal Communication - Honors
SPCH 30	Introduction to Communication Theory

1-Courses may not be double counted to satisfy more than one area, even if a course is listed in more than one area.

AABS 35, ANTH 15, ANTH 16, ANTH 17, ANTH 30, ANTH 50, GEOG 5, HIST 9, HIST 10H, HIST 11H, HIST 18, LCAS 25 were added to Area 4. 8/25/2022

Area 5: Physical and Biological Sciences

Course Prefix	Course Name	Units

Choose two courses, one physical and one biological science; at least one must include a laboratory. Laboratory must be a corresponding section to the lecture course taken.²

Physical Science	
ASTR 5	Introduction to Astronomy
ASTR 5H	Introduction to Astronomy - Honors
ASTR 5L	Astronomical Observing Laboratory ²
ASTR 7	Geology of the Solar System
ASTR 8	Introduction to Stars, Galaxies, and the Universe
CHEM 9	Chemistry of Everyday Life
CHEM 10	Chemistry for Allied Health Majors ²
CHEM 20	Introductory Organic and Biochemistry ²
CHEM 40	Introduction to General Chemistry ²
CHEM 50	General Chemistry I ²
CHEM 50H	General Chemistry I - Honors ²
CHEM 51	General Chemistry II ²
CHEM 51H	General Chemistry II - Honors
CHEM 55	Chemistry for Engineers ²
GEOG 1	Physical Geography
GEOG 1H	Physical Geography - Honors
GEOG 1L	Physical Geography Laboratory ²
GEOG 1LH	Physical Geography Laboratory - Honors ²
GEOL 1	Physical Geology ²
GEOL 2	Historical Geology ²
GEOL 7	Geology of California
GEOL 8	Earth Science
GEOL 8H	Earth Science - Honors
GEOL 8L	Earth Science Laboratory ²
GEOL 9	Environmental Geology
GEOL 9L	Environmental Geology Laboratory ²
GEOL 10	Natural Disasters
GEOL 30	Global Climate Change
METO 3	Weather and the Atmospheric Environment
METO 3L	Weather and Atmospheric Environment Laboratory ²
OCEA 10	Introduction to Oceanography
OCEA 10H	Introduction to Oceanography - Honors

OCEA 10L	Introduction to Oceanography Laboratory ²
PHSC 3	Energy Science ²
PHSC 9	Physical Science ²
PHYS 1	Physics ²
PHYS 2AG	General Physics ²
PHYS 2BG	General Physics ²
PHYS 4A	Engineering Physics ²
PHYS 4B	Engineering Physics ²
PHYS 4C	Engineering Physics ²
PHYS 6A	General Physics with Calculus ²
PHYS 6B	General Physics with Calculus ²
Biological Science	
ANAT 10A	Introductory Human Anatomy ²
ANAT 10B	Introductory Human Physiology ²
ANAT 35	Human Anatomy ²
ANAT 36	Human Physiology ²
ANTH 1	Biological Anthropology
ANTH 1H	Biological Anthropology - Honors
ANTH 1L	Biological Anthropology Laboratory ²
BIOL 1	General Biology ²
BIOL 2	Plant and Animal Biology ²
BIOL 3	Ecology and Field Biology ²
BIOL 4	Biology for Majors ²
BIOL 4H	Biology for Majors - Honors ²
BIOL 6	Humans and the Environment
BIOL 6L	Humans and the Environment Laboratory ²
BIOL 8	Cell and Molecular Biology ²
BIOL 20	Marine Biology
BIOL 21	Marine Biology Laboratory ²
BIOL 25	Conservation Biology
BIOL 34	Fundamentals of Genetics
BIOL 34L	Fundamentals of Genetics Laboratory ²
MICR 1	Principles of Microbiology ²
MICR 22	Microbiology ²
PSYC 1B	Biological Psychology
ZOOL 3	Fundamentals of Zoology

Correction: ZOOL 3 was added to Area 5 Biological Sciences. 8/25/2022

Notes

UC limits transfer credit for some courses. Students may review the UC Transfer Course Agreement (TCA) with an educational advisor or counselor in the Student Services Center. Students must see an educational advisor or counselor for preliminary IGETC certification. For IGETC certification, the course must be on the list during the year taken. Students from non-English speaking countries should see a counselor for language proficiency equivalences.

UC Requirement Only

Language other than English

The minimum proficiency required is met by completing one of the courses listed below or by completion of two years of high school study in the same language.

Course Prefix	Course Name	Units
ARAB 1	Elementary Arabic	
CHIN 1	Elementary Chinese	
FRCH 1	Elementary French	
GERM 1	Elementary German	
ITAL 1	Elementary Italian	
JAPN 1	Elementary Japanese	

KORE 1	Elementary Korean
LATN 1	Elementary Latin
LATN 1H	Elementary Latin - Honors
SIGN 101	American Sign Language 1
SIGN 101H	American Sign Language 1 - Honors
SPAN 1	Elementary Spanish
SPAN 1S	Spanish for the Spanish Speaking

CSU Requirements Only

CSU Graduation Requirement in U.S. History, Constitution, and American Ideals

Note: UCSB requires a college-level U.S. history or government course.

It is recommended that you use one of the options below as part of required courses in IGETC Area 3 or 4.

Course Prefix	Course Name	Units
Option 1		
HIST 7	History of the United States to 1877	
or HIST 7H	History of the United States to 1877 - Honors	
HIST 8	History of the United States from 1865	
or HIST 8H	History of the United States from 1865 - Honors	
If Option 1 is selected, DO NOT select another History course as your third IGETC Area 3 course.		
Option 2		
Choose one course from U.S. History plus one course from American Institutions:		
United States History		
HIST 1	History of the United States	
HIST 7	History of the United States to 1877	
HIST 7H	History of the United States to 1877 - Honors	
HIST 8	History of the United States from 1865	
HIST 8H	History of the United States from 1865 - Honors	
HIST 9	Asian American and Pacific Islander History	
HIST 30	History of the African American 1619-1877	
HIST 31	History of the African American	
HIST 36	Women in American History	
HIST 40	History of the Mexican American	
HIST 44	History of Native Americans	
American Institutions		
AABS 35	African American/Black Politics	
LCAS 25	Latino Politics in the United States	
POLI 1	Introduction to American Government and Politics	
POLI 1H	Introduction to American Government and Politics - Honors	
POLI 25	Latino Politics in the United States	
POLI 35	African American/Black Politics	

DEFINITION OF TERMS

Definition of Terms	Column 2
Advisory	An advisory is a course which is advised, but not required, to be taken either before or in conjunction with enrollment in a course.
Associate Degree	Associate in Science degrees and Associate in Arts degrees in Liberal Arts and Sciences with Emphases are referred to as Associate degrees.
Certificate of Achievement	Certificates of Achievement are certificates of at least 16 units.
Corequisite	A corequisite is a course which is required to be taken simultaneously in order to enroll in another course.
Course Identification Numbering System (C-ID)	The Course Identification Numbering System (C-ID) is a statewide numbering system independent from the course numbers assigned by local California community colleges. A C-ID number next to a course signals that participating California colleges and universities have determined that courses offered by other California community colleges are comparable in content and scope to courses offered on their own campuses, regardless of their unique titles or local course number. Thus, if a schedule of classes or catalog lists a course bearing a C-ID number, for example ENGL 100, students at that college can be assured that it will be accepted in lieu of a course bearing the C-ID ENGL 100 designation at another community college. In other words, the C-ID designation can be used to identify comparable courses at different community colleges. However, students should always go to www.assist.org (http://www.assist.org) to confirm how each college's course will be accepted at a particular four-year college or university for transfer credit. The C-ID numbering system is useful for students attending more than one community college and is applied to many of the transferable courses students need as preparation for transfer. Because these course requirements may change and because courses may be modified and qualified for or deleted from the C-ID database, students should always check with a counselor to determine how C-ID designated courses fit into their educational plans for transfer. Students may consult the ASSIST database at www.assist.org (http://www.assist.org) for specific information on C-ID course designations. Counselors are also available in the Counseling Center to help students interpret this information.
CSU Transfer	Courses designated "CSU" are baccalaureate level and will transfer to all of the California State Universities and count toward graduation at Mt. San Antonio College.
Eligibility	In listing a prerequisite for enrolling in a course, an "eligibility" may also be listed. An eligibility requirement specifies the course level the student must qualify to enroll in—not that the course has to be completed prior to enrollment. For example, the prerequisite "eligibility for English 68" requires that the student must qualify to enroll in English 68 in order to enroll in the particular course.
Degree Applicable	Courses designated "Degree Applicable" are college-level classes which are a part of an associate degree or certificate program.
Prerequisite	A prerequisite is a course which must be taken as preparation for enrolling in another course.
Skills Certificate	Skills Certificates are certificates of less than 16 units.
Transfer Degree	Associate in Arts for Transfer and Associate in Science for Transfer are referred to as Transfer degrees.
UC Credit for Kinesiology Activity Courses	A maximum of four semester units of UC Credit will be awarded for Kinesiology Activity Courses. Courses of a vocational nature will not be awarded UC credit.
UC Credit Limitation	UC limits credit for some courses. Students contemplating transfer to UC should consult with a counselor and review www.assist.org (http://www.assist.org) for course credit limitations and changes.
UC Transfer	Courses Designated "UC" are baccalaureate level and will transfer to all of the University of California campuses and California State Universities, and will count toward graduation at Mt. San Antonio College.

UC Credit Limitation Courses

UC limits credit for the following courses. Students contemplating transfer to UC should consult with a counselor and review www.assist.org (<http://www.assist.org>) for course credit limitations and changes.

Course Prefix	Course Name	Units
AGOR 29	Ornamental Plants - Herbaceous	
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	
AMLA 1A	College Composition for Non-Native English Speakers	
AMLA 90	Accelerated Writing for English Language Learners	
ANAT 10A	Introductory Human Anatomy	

ANAT 10B	Introductory Human Physiology
ANAT 35	Human Anatomy
ANAT 36	Human Physiology
BIOL 1	General Biology
BIOL 2	Plant and Animal Biology
BIOL 4	Biology for Majors
BIOL 4H	Biology for Majors - Honors
BTNY 3	Plant Structures, Functions, and Diversity
BUSC 17	Applied Business Statistics
BUSL 18	Business Law
BUSL 19	Advanced Business Law
CHEM 9	Chemistry of Everyday Life
CHEM 10	Chemistry for Allied Health Majors

CHEM 20	Introductory Organic and Biochemistry	KINI 25	Mixed Martial Arts
CHEM 40	Introduction to General Chemistry	KINI 27A	Jeet Kune Do - Beginning
CHEM 50	General Chemistry I	KINI 27B	Jeet Kune Do - Intermediate
CHEM 80	Organic Chemistry I	KINI 29	Self Defense and Martial Arts
CHLD 10	Child Growth and Lifespan Development	KINI 30A	Filipino Martial Arts - Beginning
CHLD 10H	Child Growth and Lifespan Development - Honors	KINI 30B	Filipino Martial Arts - Intermediate
CHLD 11	Child and Adolescent Development	KINI 31A	JiuJitsu - Beginning
CISB 11	Computer Information Systems	KINI 31B	JiuJitsu - Intermediate
CSCI 110	Fundamentals of Computer Science	KINI 33A	Kickboxing Beginning
COUN 1	Introduction to College	KINI 33B	Kickboxing Intermediate
COUN 1H	Introduction to College - Honors	KINI 34	Women's Self Defense
COUN 2	College Success Strategies	KINI 37A	Tai Chi Chuan - Beginning
DNCE 39	Pilates Fundamentals	KINI 37B	Tai Chi Chuan - Intermediate
DNCE 40	Conditioning Through Dance	KINI 37C	Tai Chi Chuan - Advanced
DNCE 41	Pilates I	KINI 40A	Tennis - Beginning
DNCE 42	Pilates II	KINI 40B	Tennis - Intermediate
DNCE 43	Pilates III	KINI 40C	Tennis - Advanced
ENGL 1A	Freshman Composition	KINI 47	Wrestling
ENGL 1AH	Freshman Composition - Honors	KINI 50A	Yoga
ENGL 1AM	College Composition for Non-Native English Speakers	KINI 50B	Yoga - Intermediate
GEOL 8	Earth Science	KINL 2	Physical Fitness for the Physically Limited
GEOL 8H	Earth Science - Honors	KINL 18	Weight Training for the Physically Limited
GEOL 8L	Earth Science Laboratory	KINS 2A	Basketball Beginning
HIST 1	History of the United States	KINS 2B	Basketball Intermediate
HIST 7	History of the United States to 1877	KINS 10A	Beginning Soccer
HIST 7H	History of the United States to 1877 - Honors	KINS 10B	Soccer Intermediate
HIST 8	History of the United States from 1865	KINS 12A	Beginning Baseball
HIST 8H	History of the United States from 1865 - Honors	KINS 12B	Intermediate Baseball
JOUR 101	Beginning Writing and Reporting for the Mass Media	KINS 16A	Co-Ed Slow Pitch Softball
JOUR 102	Intermediate Writing and Reporting for Mass Media	KINS 16B	Co-Ed Slow Pitch Softball Intermediate
KIN 13	Sports Officiating	KINS 24A	Volleyball - Beginning
KIN 44	Theory of Coaching	KINS 24B	Volleyball - Intermediate
KINA 8A	Swimming - Beginning	KINS 24C	Volleyball - Advanced
KINA 8B	Swimming - Intermediate	KINS 26A	Beach Volleyball - Beginning
KINA 8C	Swimming - Advanced	KINS 26B	Beach Volleyball - Intermediate
KINA 14	Water Polo	KINX 2	Beach Volleyball - Women
KINA 20	Aquatic Fitness	KINX 6	Baseball - Men
KINF 4	Cardiovascular Conditioning	KINX 8	Basketball - Men
KINF 10A	Weight Training - Beginning	KINX 9	Conditioning for Sports
KINF 10B	Weight Training - Intermediate	KINX 10	Basketball - Women
KINF 19	Strength Training	KINX 11	Cross Country - Men
KINF 25	Core Performance and Foundation Movement	KINX 12	Cross Country - Women
KINF 34A	Cardiorespiratory Training Beginning	KINX 16	Football - Men
KINF 34B	Cardiorespiratory Training Intermediate	KINX 18	Golf - Men
KINF 36A	Circuit Training Beginning	KINX 19	Golf - Women
KINF 36B	Circuit Training Intermediate	KINX 24	Soccer - Men
KINF 38A	Aerobics - Beginning	KINX 25	Soccer - Women
KINF 38B	Aerobics - Intermediate	KINX 26	Softball - Women
KINI 4A	Badminton - Beginning	KINX 28	Swimming - Men
KINI 4B	Badminton - Intermediate	KINX 30	Swimming - Women
KINI 4C	Badminton - Advanced	KINX 32	Tennis - Men
KINI 18A	Golf - Beginning	KINX 34	Tennis - Women
KINI 18B	Golf - Intermediate	KINX 38	Track and Field - Men
KINI 18C	Golf - Advanced	KINX 42	Track and Field - Women
		KINX 46	Volleyball - Women
		KINX 48	Water Polo - Men
		KINX 49	Water Polo - Women

KINX 50	Wrestling - Men
KINX 51	Wrestling - Women
KINX 70	Pep Squad
KINX 88	Pre-Season Athletics
KINX 99	Off-Season Athletics
LIBR 1	Library Research Methods and Resources
LIBR 1A	Introduction to Library Research
MATH 110	Elementary Statistics
MATH 110H	Elementary Statistics - Honors
MATH 130	College Algebra
MATH 140	Calculus for Business
MATH 160	Precalculus Mathematics
MATH 180	Calculus and Analytic Geometry
MICR 1	Principles of Microbiology
MICR 22	Microbiology
NF 12	Sports Nutrition
NF 25	Introduction to Nutrition Science
NF 25H	Introduction to Nutrition Science - Honors
PHYS 1	Physics
PHYS 2AG	General Physics
PHYS 2BG	General Physics
PHYS 4A	Engineering Physics
PHYS 4B	Engineering Physics
PHYS 4C	Engineering Physics
PHYS 6A	General Physics with Calculus
PHYS 6B	General Physics with Calculus
PSYC 10	Statistics for the Behavioral Sciences
PSYC 14	Developmental Psychology
SOC 15	Child Development
SOC 23	Introduction to Statistics in Sociology and Social Sciences
SPAN 1	Elementary Spanish
SPAN 1S	Spanish for the Spanish Speaking
SPAN 2	Continuing Elementary Spanish
SPAN 2S	Continuing Spanish for the Spanish Speaking



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Access (ACCS)

ACCS 25 Language Development for Deaf Students in ASL and English

2 Units (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 108

Formerly DSPS 25.

Language Development to improve written English and ASL communication for Deaf or hard of hearing students who use sign language.

ACCS 26 Language Enhancement for Deaf Students in ASL and English

2 Units (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 108

Advisory: ACCS 25 or DSPS 25

Formerly DSPS 26

Language enhancement for Deaf or hard of hearing students who use sign language to improve written English and ASL communication

ACCS 30 Academic Success Strategies for Students with Disabilities

1 Unit (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 54

Formerly DSPS 30

Strategies for academic success intended for students with physical or learning-related disabilities. Addresses techniques to improve language, memory, and reasoning that can be applied to specific courses.

ACCS 31 Memory Strategies for Students with Disabilities

3 Units (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 54

Advisory: Eligibility for READ 80. Student should have at least one other academic class for application of strategies.

Formerly DSPS 31

Principles of the memory process as it applies to academic coursework. Focuses on the memory process, improving specific memory components, identifying key concepts to memorize, and the independent application of memory strategies to other academic courses.

ACCS 33 Strategies for Success in Math for Students with Disabilities

3 Units (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 54

Advisory: Concurrent enrollment in MATH 50 to MATH 130

Formerly DSPS 33

Strategies for students currently in math courses for academic success in relationship to disabilities. Emphasis on effects of and strategies for processing, language expression, memory, reasoning, and processing speed as they relate to math.

ACCS 34 Writing Strategies

3 Units (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 54

Strategies for success for students who struggle with writing and are concurrently enrolled in an English class. These strategies are applied to student's English writing assignments by supporting the student's strengths and compensating for their weaknesses in writing.

Addiction Counseling (AD)

AD 1 Alcohol and Drug Dependency

3 Units (Degree Applicable, CSU, C-ID #: ADS 110 X)

Lecture: 54

Presents an overview of alcohol and chemical dependencies and ramifications. Explores the impact these dependencies have upon the individual's social, psychological, economic, and physiological well-being as well as community and family concerns. Examines the myths, images, and stereotypes about substances and substance abusers. Explores various approaches to recovery. Includes familiarization with terms.

AD 2 Physiological Effects of Alcohol and Drugs

3 Units (Degree Applicable, CSU, C-ID #: ADS 140X)

Lecture: 54

Examines effects of alcohol and drugs on the human body. Includes tolerance, habituation, cross-tolerance, and synergistic effect.

AD 3 Addiction: Prevention, Intervention, and Recovery

3 Units (Degree Applicable, CSU)

Lecture: 54

Provides a comprehensive overview of theories, practices, and outcomes of the most generally accepted and scientifically supported models of prevention, intervention, treatment, and recovery for addiction and other substance-related problems. Primary, secondary, and tertiary methods of prevention will be introduced and assessed. Strategies such as education, public policies, media/information dissemination, ethnic, cultural, gender-specific approaches, environmental risk reduction, and alternatives will be presented and assessed for their application to different target populations.

AD 4 Issues in Domestic Violence

3 Units (Degree Applicable)

Lecture: 54

History, law, and psychology of domestic violence. Cultural, social aspects, and relationship to substance abuse explored.

AD 5 Chemical Dependency: Prevention and Education

1.5 Units (Degree Applicable, CSU)

Lecture: 27

Reviews and examines drug abuse prevention effectiveness, at both the private and public level. Evaluates current drug abuse prevention programs and the necessary steps for developing, funding, and managing a program.

AD 6 Co-Occurring Disorders

3 Units (Degree Applicable, CSU, C-ID #: ADS 190 X)

Lecture: 54

Overview of the complex interactions of mental disorders and chemical dependency. Reviews and examines the key areas involving co-occurring disorders: definition, diagnosis, treatment, and aftercare.

AD 8 Group Process and Leadership

3 Units (Degree Applicable, C-ID #: ADS 130X)

Lecture: 54

Advisory: (AD 1 and AD 2 and AD 3 and AD 4 and AD 5 and AD 6) taken prior or concurrently

Theory and practice of group counseling, the group process, and dynamics of group interaction.

AD 9 Family Counseling**3 Units** (Degree Applicable, C-ID #: ADS 180 X)

Lecture: 54

Advisory: (AD 1 and AD 2 and AD 3) taken prior and (AD 4 and AD 5 and AD 6) taken prior or concurrently

Theory and practice of family counseling, family systems and dynamics, effects of chemical dependency, and counseling techniques.

AD 10 Case Management and Documentation**3 Units** (Degree Applicable, C-ID #: ADS 170 X)

Lecture: 54

Prerequisite: AD 1 and AD 2 and AD 3

Corequisite: (AD 4 and AD 5 and AD 6) taken prior or concurrently

The importance of record keeping and how to complete comprehensive documentation to meet clinical and legal regulations. Students will gain hands on experience with a variety of current, industry accepted documents with an emphasis on state and federal expectations impacting substance abuse treatment records.

AD 11 Techniques of Interviewing and Counseling**3 Units** (Degree Applicable, C-ID #: ADS 120 X)

Lecture: 54

Advisory: (AD 1 and AD 2 and AD 3) taken prior and (AD 4 and AD 6) taken prior or concurrently

Introduction to theories, models, and the basic principles of interviewing and counseling that promote helping relationships within a diverse treatment population. Students will learn and practice basic skills in attentive listening, assessing, crisis intervention, and recognizing and responding to different levels of communication as it pertains to paraprofessionals. Specific emphasis is placed on self-awareness and self-care.

AD 15A Introduction to Laws and Ethics for Addictions Counselors**1 Unit** (Degree Applicable, CSU)

Lecture: 18

Prerequisite: AD 1 and AD 2 and AD 3 and AD 4 and AD 5 and AD 6

Corequisite: AD 82

Introduction to ethical, legal, and clinical standards for addictions counselors.

AD 15B Law and Ethics for Addictions Counselors**1 Unit** (Degree Applicable, CSU)

Lecture: 18

Prerequisite: AD 15A

Corequisite: AD 82

Seminar in professional ethics, laws, and clinical practice standards for addiction counselors. Students will become proficient in the ethical and legal requirements for addiction counselors. Students will become proficient in the identification and application of clinical practice standards for addiction counselors. Requires concurrent enrollment in AD 82.

AD 82 Work Experience in Addiction Counseling**2 Units** (Degree Applicable, CSU)

(May be taken two times for credit)

(May be taken for Pass/No Pass only)

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Corequisite: AD 15A or AD 15B

Work experience in an addiction treatment program or facility. Students will gain actual work experience by observing and performing the core functions of an addictions counselor. Students must complete a minimum of 252 hours in two semesters. 126 hours in two separate semesters is required. Students must take this course twice in order to complete the 252 hours required for the certificate.

Administration of Justice: Law Enforcement (ADJU)

ADJU 1 The Administration of Justice System**3 Units** (Degree Applicable, CSU, UC, C-ID #: AJ 110)

Lecture: 54

History and philosophy of the justice system, subsystems, roles, relationships and theories of crime causation and correction.

ADJU 2 Principles and Procedures of the Justice System**3 Units** (Degree Applicable, CSU, C-ID #: AJ 122)

Lecture: 54

Due process in criminal proceedings from pre-arrest through trial and appeal using statutory law and legal precedent.

ADJU 3 Concepts of Criminal Law**3 Units** (Degree Applicable, CSU, UC, C-ID #: AJ 120)

Lecture: 45 Lab: 27

Classification of crime, elements of crimes, common and statutory law, and evidence as observed through the study of case law decisions by state and federal courts.

ADJU 4 Legal Aspects of Evidence**3 Units** (Degree Applicable, CSU, C-ID #: AJ 124)

Lecture: 54

Criminal evidence, including admissibility, witness competency, privileged communication, hearsay, and collection and preservation of evidence.

ADJU 5 Community Relations**3 Units** (Degree Applicable, CSU, UC, C-ID #: AJ 160)

Lecture: 54

Examines the complex, dynamic relationship between communities and the justice system in addressing crime and conflict with an emphasis on the challenges and prospects of administering justice within a diverse multicultural population.

ADJU 6 Police Patrol Tactics and Strategy**3 Units** (Degree Applicable)

Lecture: 54

Foundation issues of police tactics, operations and the complex role of the uniform police officer in the community. The history and development of approaches, decision making processes, and officer conduct evaluation.

ADJU 9 Introduction to Homeland Security**3 Units** (Degree Applicable, CSU)

Lecture: 54

Public management policies and issues relevant to the security of the United States. Roles and responsibilities of federal, state, and local law enforcement agencies. Emphasis on the role of first responders to threats and events through theories, concepts, and case studies.

ADJU 10 Introduction to Correctional Sciences**3 Units** (Degree Applicable, CSU, C-ID #: AJ 200)

Lecture: 54

The philosophy behind past and present practices used in the criminal justice and correctional processes. Includes the analysis of punishment and alternatives including their impact in corrections within the criminal justice system. The examination of the types of clients within correctional institutions and various contemporary correctional issues.

ADJU 13 Concepts of Traffic Services**3 Units** (Degree Applicable)

Lecture: 54

Traffic management, collision reconstruction, collision factors including law violations and human factors, collision evidence, traffic enforcement techniques and traffic management specialization. Emphasis is placed on service to the motoring public.

ADJU 20 Principles of Investigation**3 Units** (Degree Applicable, CSU, C-ID #: AJ 140)

Lecture: 45 Lab: 27

Investigation, 4th Amendment issues including crime scene search and recording, collection and preservation of physical evidence, modus operandi, suspect profiling scientific aids, sources of information, use of informants, interviews and interrogation, follow up, and case preparation.

ADJU 38 Narcotics Investigation**3 Units** (Degree Applicable)

Lecture: 54

Investigation and arrest techniques for drug enforcement. Drug effects, use of informants, constitutional issues, and handling of evidence.

ADJU 50 Introduction to Forensics for Criminal Justice**3 Units** (Degree Applicable, CSU, C-ID #: AJ 150)

Lecture: 45 Lab: 27

Collecting, preserving, and analyzing physical evidence. Focuses on the reliability of physical evidence for the purpose of establishing facts and proof.

ADJU 59 Gangs and Corrections**3 Units** (Degree Applicable, CSU)

Lecture: 54

Contemporary street and prison gang issues, including historical and current perspectives, gang dynamics, identification of characteristics, and cultural differences of gang philosophy. Includes law enforcement and correction's role in intervention and suppression.

ADJU 68 Administration of Justice Report Writing**3 Units** (Degree Applicable)

Lecture: 45 Lab: 27

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Techniques for proper documentation of crime reports and related law enforcement records. Use of simulations and role-playing.

ADJU 74 Vice Control**3 Units** (Degree Applicable)

Lecture: 54

Code and case law dealing with vice detection and suppression, apprehension and prosecution of violators, gambling, prostitution, and sex crimes.

ADJU 90 Work Experience in Administration of Justice**1-4 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Prior approval by ADJU department faculty and compliance with Work Experience regulations as designated in the College Catalog

Provides actual on-the-job experience at an approved work site which is related to classroom instruction in Administration of Justice. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester is required for each one unit of credit. If this is a volunteer program on or off campus, a minimum number hours per month will be required as part of the 60 hour total. Students who repeat this course will have an opportunity to create a performance contract with a supervisor and the end of the course which will detail specific learning objectives to achieve during the next phase.

Aeronautics (AERO)

AERO 98 Introduction to Aviation Careers**1.5 Units** (Degree Applicable)

Lecture: 27

Aviation industry career preparation for pilots, air traffic controllers, aircraft dispatchers, aircraft maintenance technicians, flight attendants, airport operation specialists, airport security specialists, and unmanned aircraft specialists. In this course students will explore the fundamentals of aircraft operations, as well as history and development of the aviation industry. Students will also explore and learn the requirements for completing the Associate degree in commercial flight, aviation science, and other degrees. This course is developed in conjunction with industry partners to address emerging industry needs. Field trips may be required for completion of this course.

AERO 100 Primary Pilot Ground School**4 Units** (Degree Applicable, CSU)

Lecture: 72

Aerodynamics, aircraft performance, Federal Aviation Regulations, aviation weather factors, and cross-country navigation procedures; provides introductory material on radio navigation, aeromedical factors, and radio communications procedures. Meets the preparation requirements for the FAA Private Pilot knowledge examination and FAA Air Traffic Control Basics.

AERO 102 Aviation Weather**3 Units** (Degree Applicable, CSU)

Lecture: 54

Weather elements, atmosphere, weather mechanics, weather disturbances, weather analysis and forecasts. Evaluation of aviation weather reports and forecasts.

AERO 104 Federal Aviation Regulations**3 Units** (Degree Applicable, CSU)

Lecture: 54

Federal Aviation Regulations (FAR), pertaining to pilot certification, aircraft maintenance, and general operating rules. Air traffic control practices and procedures and reporting of aircraft accidents.

AERO 120 Flying Team Fundamentals**1.5 Units** (Not Degree Applicable)

Lecture: 18 Lab: 27

Prerequisite: Member of the Mt. SAC Flying Team

Participation in one or more intercollegiate competitions as part of the Mt. SAC Flying Team. Instructions in preparatory procedures for these competitions including techniques in precision flying and aviation academic testing. Student has option to choose areas of interest. Competition attendance required outside regularly scheduled class hours. Students who repeat this course will benefit from additional competition experiences. Field trips are required.

AERO 150 Commercial Pilot Ground School**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: AERO 23 or AERO 100

Federal Aviation Administration (FAA) Commercial Pilot certification requirements, including aerodynamics, commercial pilot maneuvers, complex aircraft operations, multi-engine aircraft operations, aircraft weight and balance, aircraft performance charts, and radio navigation using advanced instrumentation. Prepares students for completion of the FAA Commercial Pilot Computerized Knowledge Examination.

AERO 152 Air Transportation**3 Units** (Degree Applicable, CSU)

Lecture: 54

Survey course of the air transportation industry. Topics include an introduction to air transportation, structure and economics of the airlines, general aviation operations, and aviation career planning.

AERO 160 Unmanned Aircraft Systems Basic**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Advisory: AERO 100

Piloting of Unmanned Aircraft Systems. This class includes instruction toward Remote Pilot certification Federal Aviation Administration (FAA) Part 107 licensing. Students will receive instruction on the principles of operating unmanned aircraft systems, pre-flight, flight, and post-flight operations and procedures. Meets the preparation requirements for the FAA Remote Pilot knowledge examination. Field trips are required for this course.

AERO 200 Aviation Safety and Human Factors**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: AERO 23 or AERO 100

Evaluation and analysis of factors leading to aircraft accidents as it relates to the environment of the pilot and air traffic controller.

AERO 202 Aircraft and Engines**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: AERO 100

Aircraft design, subsystems, repair, and maintenance. Principles of internal combustion engines, fuel system, engine construction and design, lubrication and cooling methods, ignition system, and basic troubleshooting. Turbine engine basic design and operational characteristics.

AERO 210 Unmanned Aircraft Systems Advanced**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Prerequisite: AERO 160

Advanced skills in operating unmanned aircraft systems. Topics include analyzing flight characteristics, utilizing flight planning software, sensor selection and software use, spectrum analysis, safety practices and risk analysis, incident reporting, and data analysis. Field trips are required.

AERO 250 Navigation**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: AERO 100

Dead reckoning navigation procedures. Aeronautical computers and their application in cross-country flying. Use of radio navigation aids, flight planning, flight directors, global positioning system, and electronic flight instrumentation systems.

AERO 252 Instrument Ground School**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: (AERO 23 or AERO 100) and (AERO 26 or AERO 102)

Instrument Flight Rules (IFR), Air Traffic Control communications and procedures, air navigation radio aids, instrument landing systems, flight instruments, aircraft performance, aeronautical publications, instrument approach procedures, IFR cross-country navigation, and instrument weather. Meets the preparation requirements for the FAA Instrument Pilot computerized knowledge exam.

AERO 254 Aircraft Dispatcher Operations**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Prerequisite: AERO 100, and AERO 102, and AERO 104, and AERO 150, and AERO 152, and AERO 200, and AERO 202, and AERO 250, and AERO 252

Elements and techniques of aircraft dispatch operations. Includes aircraft dispatcher briefings to a simulated flight crew. This course prepares students to enter employment as a certified aircraft dispatcher in the airline industry, air-medical industry, corporate aircraft operators, and aviation weather service companies. Successful completion of this course enables students to take the Federal Aviation Administration (FAA) written, oral, and practical tests for the FAA Aircraft Dispatcher Certificate. Students who pass the FAA Aircraft Dispatcher Knowledge Test will qualify to take the FAA Oral and Practical Examination for the FAA aircraft dispatcher certificate.

AERO 256 Flight Instructor Ground School**3 Units** (Degree Applicable)

Lecture: 54

Advisory: (AERO 25 or AERO 150) and (AERO 30 or AERO 252)

Basic teaching principles and application of those principles in teaching student pilots. Analysis of flight maneuvers and instruments. Prepares students for Federal Aviation Administration (FAA) knowledge tests for Flight Instructors.

AERO 258 Large Aircraft Systems**4 Units** (Degree Applicable)

Lecture: 72

Advisory: AERO 252 and AERO 100

This Boeing 737-NG aircraft course is designed for students desiring to become pilots, aircraft dispatchers, or technicians on large aircraft typically flown in the airline industry. Design features and operational characteristics with emphasis on aircraft and engine systems. Off-campus trips are required.

AERO 260 Work Experience in Aeronautics**1-4 Units** (Not Degree Applicable)

(May be taken four times for credit)

(May be taken for Pass/No Pass only)

Prerequisite: Prior approval by AERO department faculty and compliance with Work Experience regulations as designated in the College Catalog

Provides on-the-job experience in aeronautics at an approved work site which is related to classroom instruction. A minimum of five hours per week of supervised work 60 non-paid clock hours or 75 paid clock hours per semester is required for each one unit of credit.

African American/Black Studies (AABS)

AABS 1 Introduction to Black Studies**3 Units** (Degree Applicable, CSU)

Lecture: 54

This interdisciplinary survey course broadly and deeply approaches the heterogeneous experience of Black life in the United States through analysis of the historical, political, social, economic, educational, and cultural experiences and expressions of Black people. This course is largely constructed around the words and voices used by Black people to inspire, and effect change in the United States. Key topics covered are: African Origins, African Diaspora, colonization, race, racialization, anti-Black racism, identity, white supremacy, power, slavery, education, mass incarceration, cultural expression, Jim Crow, migration, Civil Rights, Black Empowerment, Black Feminist discourse, Black Queer discourse, resistance, equity, self-determination, decolonization, liberation movements, and the intersection of racial, ethnic, gender, and sexual identities.

AABS 35 African American/Black Politics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Methods and strategies employed by African American and Black American populations in their quest to gain equal access and participation in American institutions. Students may not earn credit for both AABS 35 and POLI 35.

Agriculture: Animal Health Technology (AGHE)

AGHE 54 Veterinary Office Procedures**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Veterinary medical records, client relations, medical terminology, filing of governmental reports, legal responsibilities of registered veterinary technicians, and veterinary medical ethics.

AGHE 60 Medical Nursing and Animal Care**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Prerequisite: AGHE 86 and AGHE 64 and formal admittance to the Registered Veterinary Technology Program
Corequisite: AGHE 62A (may have been taken previously)

Animal examination for health and disease conditions in the animal hospital, including sanitation, administration of medicine, emergency treatment, therapeutic techniques, dental prophylaxis, venipuncture, electrocardiology, and application of casts, splints, and other appliances. Includes diseases both infectious and zoonotic, their causes and effects, and immunology of animals. Formal admittance to the Registered Veterinary Technology program required.

AGHE 61 Animal Surgical Nursing**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Prerequisite: AGHE 60

Surgical preparation, surgical assistance, post-operative care, administering and monitoring anesthesia, dentistry, cardiopulmonary resuscitation (CPR), sterilization, and the maintenance of a sterile environment.

AGHE 62A Clinical Pathology**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: AGHE 86 and Formal Admittance to the Registered Veterinary Technology Program

Hematology, clinical chemistries, internal parasites, immunology, serology, and vaginal cytology of domestic animals.

AGHE 62B Clinical Pathology**2 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 54

Prerequisite: AGHE 86 and Formal Admittance to the Registered Veterinary Technology Program

Bacteriology, clinical chemistry, urinalysis, external parasites and cytology of domestic animals.

AGHE 64 Veterinary Pharmacology**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: AGHE 86 and (MATH 71, MATH 71B, or MATH 71X)

Pharmaceuticals and biologics commonly used in the maintenance of animal health. Includes generic terminology, abbreviations for prescriptions, labeling requirements, state and federal laws, classification of materials, weights and measures, drug dosage flow rates, pharmacological mathematics and the metric system, side effects, and drug interactions.

AGHE 65 Veterinary Radiography**2 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 54

Prerequisite: AGAN 51 and AGHE 86 and AGHE 64

Concepts and skills of veterinary positioning of canine, feline, avian, reptilian species, and livestock for radiography; processing of the radiograph; radiation safety; technique and instrumentation; contrast radiography, dental radiology and advanced imaging such as ultrasound, MRI, CT scan, nuclear isotopes scans. Emphasizes performance of x-ray procedures for the veterinary practitioner.

AGHE 79 Laboratory Animal Medicine and Care**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: AGAN 51

Laboratory animal medicine, care, and procedures. Rules and regulations governing laboratory animals.

AGHE 83A Work Experience in Veterinary Technology**1-4 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: AGAN 51 and Compliance with Work Experience regulations as designated in the College Catalog

This course is designed to provide Registered Veterinary Technician majors with actual on-the-job experience at an approved work station which is related to classroom instruction. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester is required for each one unit of credit. It is recommended that the hours per week are equally distributed throughout the semester. Instructor approval required.

AGHE 84B Applied Animal Health Procedures**1 Unit** (Degree Applicable)

Lab: 54

Prerequisite: AGAN 51 and AGHE 64

A field study course that emphasizes practical experience in applied clinical procedures and techniques, including treatments, preventive health care, and minor surgical procedures with school owned domestic farm animals. Experiences with animals will vary due to seasonal changes and different husbandry practices during fall and spring.

AGHE 85 Seminar in Registered Veterinary Technology**1 Unit** (Degree Applicable)

Lecture: 18

Prerequisite: AGHE 60 and completion of the Registered Veterinary Technology Program.

Prepares students for national and state veterinary technician registration examinations. Includes exposure to the types of questions encountered in registration examinations, question analysis strategies, and review of important anatomical, physiological, and nursing concepts.

AGHE 86 Anatomy and Physiology of Domestic Animals**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Advisory: BIOL 1

Analyzes the body structures and systems, comparing domestic animals commonly found in veterinary medicine. The physiology section will emphasize functions of internal organs and body systems.

Agriculture: Animal Science (ASCI)

ASCI 1 Animal Science**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Formerly AGAN 1

A scientific approach to the livestock industry encompassing aspects of animal anatomy, physiology, nutrition, genetics, and epidemiology. Emphasis on the origin, characteristics, adaptations, and contributions of livestock to the modern agriculture industry. Field trips may be required.

ASCI 2 Animal Nutrition**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Formerly AGAN 2

Composition of feeds and their utilization by domestic animals including digestive physiology, animal assessment, feed appraisal and compiling of rations.

ASCI 2L Animal Nutrition Laboratory**0.5 Units** (Degree Applicable)

Lab: 27

Corequisite: ASCI 2

Animal nutrition laboratory course emphasizing the composition and analysis of feeds and their utilization by domestic animals, including evaluation of economic trends and current feed industry technology.

ASCI 12 Exotic Animal Management**3 Units** (Degree Applicable)

Lecture: 54

Formerly AGLI 12

Care and management of exotic and alternative livestock species with emphasis on identification, health maintenance, handling techniques, nutrition, and reproduction. Includes analysis of industry trends and principal marketing uses of exotic animals.

ASCI 14 Swine Production**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Formerly AGLI 14

Study of the principles and practices in the purebred and commercial pork production industries; emphasis on the importance of breeds, breeding principles, selection, nutrition, environmental management, health, marketing and recordkeeping to ensure scientifically-based management decisions and consumer product acceptance.

ASCI 16 Horse Production and Management**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Formerly AGLI 16

Selection, utilization, and management of the light horse. Emphasis is on evaluation, health care, and handling skills.

ASCI 17 Sheep Production**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Formerly AGLI 17

Survey of the sheep and goat industries; management of commercial, purebred and small farm flocks; selecting, feeding, breeding, and basic care of small ruminants plus marketing of sheep, goats and their products. Laboratory and field trips required.

ASCI 18 Horse Ranch Management**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Formerly AGLI 18

Skills and procedures used in the management of an equine business. Includes business plans and record keeping, staff and financial management, horse care and training, and farm design for a variety of horse operations.

ASCI 19 Horse Hoof Care**2 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 54

Formerly AGLI 19

Proper horse hoof care; shoeing, trimming, and disease recognition and control.

ASCI 20 Horse Behavior and Training**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

Prerequisite: ASCI 16

Formerly AGLI 20

Breaking and starting young horses. Concentrates on halter training of foals, ground work on yearlings, and green-breaking two-year-olds and up. Includes lunging techniques, driving, and breaking to a saddle. Training in collection, turning, backing, leads, and trailer loading.

ASCI 30 Beef Production**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Formerly AGLI 30

Purebred and commercial beef cattle production; emphasis on the importance of breeds, breeding principles, selection, nutrition, environmental management, health, marketing, and recordkeeping to ensure scientifically based management decisions and consumer product acceptance as applied to beef cattle. Laboratory required. Field trips required.

ASCI 34 Livestock Judging and Selection**2 Units** (Degree Applicable, CSU, UC)

Lecture: 18 Lab: 54

Formerly AGLI 34

Study of form and appearance of farm animals as related to their function. Includes judging of breeding and terminal livestock as well as carcass evaluation. May require field trip.

ASCI 51 Animal Handling and Restraint**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Formerly AGAN 51

Methods of proper handling for large and small animals including chemical and physical techniques of restraint. Field trips required.

ASCI 59 Work Experience in Agriculture**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Formerly AGAG 59

This course is designed to provide Animal Science majors with actual on-the-job experience in an approved work station which is related to classroom instruction. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester is required for each one unit of credit. It is recommended that the hours per week are equally distributed throughout the semester. Instructor approval required.

ASCI 70 Pet Shop Management**3 Units** (Degree Applicable)

Lecture: 54

Formerly AGPE 70

Pet shop operations and the economic aspects of the pet industry. Organization and operation of pet shops, animal care practices, and sound business management practices.

ASCI 71 Canine Management**3 Units** (Degree Applicable)

Lecture: 54

Formerly AGPE 71

Selection, feeding, housing, breeding and management of dogs, including commercial aspects of the dog as a domestic pet. Laboratory work will include practical experience in the handling and training of dogs. May include field trips.

ASCI 72 Feline Management**3 Units** (Degree Applicable)

Lecture: 54

Formerly AGPE 72

Care and management of cats including breed identification and characteristics, grooming, showing, nutrition, practical care, behavior, breeding, and housing.

ASCI 73 Tropical and Coldwater Fish Management**2 Units** (Degree Applicable)

Lecture: 36

Formerly AGPE 73

Care and keeping of marine and freshwater aquarium fishes, plants, and invertebrates. Guidance on setting up aquariums, choosing compatible species, feeding, health care, breeding, and raising fish.

ASCI 74 Reptile Management**2 Units** (Degree Applicable)

Lecture: 36

Formerly AGPE 74

Care and maintenance of reptiles and amphibians, including snakes, lizards, turtles, tortoises, newts, salamanders and frogs. Identification and characteristics of reptiles commonly kept as pets. Housing, feeding, health maintenance, breeding, and raising of reptiles.

ASCI 76 Aviculture - Cage and Aviary Birds**3 Units** (Degree Applicable)

Lecture: 54

Formerly AGPE 76

Cage and aviary birds marketed in the wholesale and retail pet trade. Identification, nutrition, breeding, disease prevention and control, and aviary construction. Psittacines, soft bills, finches, game birds, poultry, and ornamental waterfowl.

ASCI 94 Animal Breeding**3 Units** (Degree Applicable)

Lecture: 54

Formerly AGAN 94

The science of animal breeding including fundamentals of inheritance, reproduction, and breeding systems for domestic animals. Artificial insemination, embryo manipulation, and current topics in reproductive biotechnology will also be included.

ASCI 96 Animal Sanitation and Disease Control**3 Units** (Degree Applicable, CSU)

Lecture: 54

Formerly AGLI 96

Prevention and control of infectious diseases affecting domestic animals including basic disease concepts, transmission of infectious diseases, principles of sanitation, and fundamentals of immunology.

ASCI 96L Animal Sanitation and Disease Control Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: ASCI 96 or AGLI 96

Formerly AGLI 96L

Application and development of biosecurity protocols, stressing humane handling and housing, use of disinfectants, and parasite control of domestic animals in the animal sanitation and control lab.

ASCI 97 Artificial Insemination of Livestock**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Formerly AGLI 97

Theory and application of artificial insemination of domestic animals including semen evaluation and processing, heat synchronization, and pregnancy diagnosis.

Agriculture: General Subjects (AGAG)

AGAG 1 Food Production, Land Use, and Politics - A Global Perspective**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Surveys the world's food producing systems in terms of economic, political, and cultural forces. Emphasizes ethical, sustainable food producing agriculture.

AGAG 99 Special Projects in Agriculture**2 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lecture: 36

Offers selected students recognition for their academic interests and ability and the opportunity to explore their disciplines in greater depth. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Instructor authorization is required to enroll.

Agriculture: Ornamental Horticulture (AGOR)

AGOR 1 Horticultural Science**3 Units** (Degree Applicable, CSU, C-ID #: AG-PS 104)

Lecture: 54

Horticulture skills and techniques for use in gardening, nursery, and landscape applications. Emphasis on propagation, cultural practices, and the study of plant relationships, structure, growth and development. Off-campus meetings required.

AGOR 2 Plant Propagation/Greenhouse Management**3 Units** (Degree Applicable, CSU, C-ID #: AG-EH 116 L)

Lecture: 36 Lab: 54

Plant propagation and production practices with emphasis on florists' plants, woody ornamentals, and fruits. Commercial techniques include seed propagation, cuttings, grafting and budding, layering, fern sporing, and division. Stresses greenhouses and other environmental structures for plant propagation and production.

AGOR 5 Park Facilities**3 Units** (Degree Applicable)

Lecture: 54

Management and operation of different types of park facilities. Includes the management of sports fields, recreation centers, campgrounds, aquatic facilities, and golf courses.

AGOR 13 Landscape Design**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 54

Landscape design for residential and small commercial sites including the design process, drafting, graphics, site evaluation, landscaping materials, and plant usage. Field trips and off-campus assignments required.

AGOR 14 Advanced Landscape Design**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: AGOR 13

Computer Assisted Design and Drafting (CAD) with applications for landscape horticultural businesses. Includes applied CAD for plan, detail, elevation, and section drawings with exposure to CAD associated databases and plant selection programs. Field trips required.

AGOR 15 Interior Landscaping**3 Units** (Degree Applicable)

Lecture: 54

Design, installation, and maintenance practices used in interior landscaping. Includes identification, culture, and care of plants suitable for interior use.

AGOR 24 Integrated Pest Management**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Common agricultural pests in Southern California and physical, biological, and chemical pest control principles and practices, including integrated pest management (IPM). Stresses use, safety, equipment, laws, and regulations of pesticides. Field trips are required.

AGOR 29 Ornamental Plants - Herbaceous**3 Units** (Degree Applicable, CSU, UC, C-ID #: AG-EH 108 L)

UC Credit Limitation

Lecture: 36 Lab: 54

Identification, growth habits, culture, and ornamental use of landscape annuals, biennials, perennials, ferns, indoor plants, groundcovers, and vines adapted to climates of California. Plants emphasized will come from the California Association of Nurseries and Garden Centers (CANGC) and California Landscape Contractors Association (CLCA) certification test plant lists. Off campus meetings required.

AGOR 30 Ornamental Plants - Trees and Woody Shrubs**3 Units** (Degree Applicable, CSU, UC, C-ID #: AG-EH 112 L)

UC Credit Limitation

Lecture: 36 Lab: 54

Identification, growth habits, culture, and ornamental use of landscape trees and shrubs adapted to climates of California. Plants emphasized will come from the California Association of Nurseries and Garden Centers (CANGC) and California Landscape Contractors Association (CLCA) certification test plant lists. Off campus meetings required.

AGOR 32 Landscaping and Nursery Management**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Operation and management of wholesale and retail nurseries. Includes site location and layout of areas, greenhouse management, soil mixes, proper use of fertilizers, insecticides, fungicides, herbicides, growth regulators, irrigation, mechanization, financing, personnel management, retail displays, advertising, customer relationships, federal, state, and local laws and regulations. Field trips are required.

AGOR 35 Ornamental Plants for Southwest Climates**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Identification, growth habits, culture, and ornamental use of annuals, perennials, groundcovers, shrubs, trees, cacti, and succulents which are native to California and the Southwest, or drought tolerant in Southern California.

AGOR 39 Turf Grass Production and Management**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Cultivation, maintenance, and management of turfgrasses utilized for athletic fields, golf courses, parks, cemeteries, and commercial and residential lawns. Identification, installation, cultural requirements, and maintenance practices are emphasized. Field trips required.

AGOR 40 Sports Turf Management**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Prepares students to work in the sports turf industry. Emphasizes turf cultural techniques used in sports turf management. Includes turf surfaces used on baseball, football, soccer, tennis, golf courses, driving ranges, and other sports fields in both professional and amateur sports. Field trips required.

AGOR 50 Soil Science and Management**3 Units** (Degree Applicable, CSU, UC, C-ID #: AG-PS 128 128 L)

Lecture: 36 Lab: 54

Principles of soil management, including management of air, water, nutrients, organic matter. Study of soil including physical, chemical, and biological properties, classification, derivation, use, function, and management including erosion, moisture retention, structure, cultivation, organic matter, and microbiology as they pertain to optimized plant growth. Laboratory topics include soil type, classification, soil reaction, soil fertility, and physical properties of soil. Laboratory required. Field trips are required.

AGOR 51 Tractor and Landscape Equipment Operations**3 Units** (Degree Applicable, CSU, C-ID #: AG-MA 108 L)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Selection, operation, repair, and maintenance of power equipment used in the agriculture and landscape industry. Includes two- and four-wheel drive tractors, skip loaders, skid steer loaders, backhoes, lawnmowers, edgers, weed eaters, blower vacuums, rototillers, chainsaws, spraying equipment, and all-terrain vehicles. Laboratory includes use of this equipment.

AGOR 53 Small Engine Repair I**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Principles and repair of small engines used in landscape, industrial and agricultural applications. Includes repairs of lawnmowers, chainsaws, 2-cycle engines, 4-cycle engines, spraying equipment, all-terrain vehicles, and other related gas-powered equipment.

AGOR 62 Irrigation Principles and Design**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Principles of irrigation, design techniques, sprinkler system components, and hydraulic principles used in nursery management, interior design, residential, and commercial landscapes. Special emphasis is given to water conservation. Field trips are required.

AGOR 63 Irrigation Systems Management**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Systematic approach to water conservation in landscapes. Soil-plant-water relationships, evapotranspiration, irrigation schedules, salinity and drainage, and irrigation efficiency. Water measurement, soil moisture measurement, irrigation systems, and practical constraints affecting scheduling. California water supply and budget, water rights, local, state, and federal water institutions, and California water issues. Irrigation efficiency testing will be incorporated to demonstrate proper methods of water audits and system evaluation. Field trips are required.

AGOR 64 Irrigation - Drip and Low Volume**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Conservation of water in landscapes by utilization of drip and low-flow irrigation practices. Design, installation techniques, operation, and maintenance of drip and low-flow irrigation systems, including determination of irrigation requirements, selection of emitters and low-flow devices, and uniformity of water distribution. Includes hands-on experience in design and installation techniques. Field trips are required.

AGOR 71 Construction Fundamentals**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Construction techniques and tools used in landscaping with construction projects that include surveying techniques, utilities (gas, water, and electricity), woodworking, and masonry.

AGOR 72 Landscape Hardscape Applications**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Landscape construction pertaining to hardscape featured in the landscape. Estimation and installation of fences, walks, planters, patios, lighting, barbecues, gazebos, decks, ponds, spas, fountains and pools. Students will gain hands-on experience in the laboratory activities.

AGOR 73 Landscaping Laws, Contracting, and Estimating**3 Units** (Degree Applicable, CSU)

Lecture: 54

Landscape laws, contracting, and estimating as they pertain to landscape construction. Information covered will be helpful for the Landscape Contractor's (C-27 classification) licensing exam administered by the state of California. Off campus assignments required.

AGOR 75 Urban Arboriculture**3 Units** (Degree Applicable, CSU, C-ID #: AG-EH 130 000 X)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Care and management of ornamental trees. Includes pruning techniques, fruit tree care, bracing, cabling, and pest control. Safe practices in the use of equipment including the use of ropes, chippers, boom trucks, chain saws, and identification and evaluation of common trees. Prepares students for the tree worker and arborist certification(ISA)exams.

AGOR 91 Work Experience in Horticulture**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Three units of any AGOR course, with the exception of AGOR 1, must be taken prior to or concurrent with AGOR 91. Compliance with work experience regulations as designated in the College Catalog.

This course is designed to provide majors with actual on-the-job experience at an approved work site using skills and knowledge from classroom instruction. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester is required for each one unit of credit. It is recommended that the hours per week are equally distributed throughout the semester.

Air Conditioning & Refrigeration (AIRC)

AIRC 10 Technical Mathematics in Air Conditioning and Refrigeration**2 Units** (Degree Applicable)

Lecture: 27 Lab: 27

Develops mathematical skills required for the study and application of air conditioning and refrigeration, including measurements and equations applied to heat loads, air distribution, electricity, and the design of air conditioning and refrigeration equipment.

AIRC 11 Welding for Air Conditioning and Refrigeration**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

Fundamentals of welding related to the field of air conditioning and refrigeration with emphasis on the sterile techniques and skills required for joining copper refrigerant lines and the procedures for light fabrication.

AIRC 12 Air Conditioning Codes and Standards**3 Units** (Degree Applicable)

Lecture: 54

Building codes and standards as they apply to the air conditioning and refrigeration industry. Develops skills necessary to read and interpret building codes and resolve installation and service problems as they apply to the construction industry.

AIRC 20 Refrigeration Fundamentals**4 Units** (Degree Applicable)

Lecture: 54 Lab: 71

Principles of mechanical refrigeration based on the refrigeration cycle and associated mechanical components. Develops skills for interpreting service gauge pressures and sensible temperatures, system dehydration techniques, and the safe handling and containment of refrigerants.

AIRC 25 Electrical Fundamentals for Air Conditioning and Refrigeration**5 Units** (Degree Applicable)

Lecture: 72 Lab: 54

Electrical principles and practices used in air conditioning, refrigeration, and heat pump systems as applied to the development and interpretation of schematics and the sequential approach to wiring circuits including power supplies, motors, and controls. Develops skills for designing electrical circuits, and electrical trouble shooting.

AIRC 26 Gas Heating Fundamentals**2 Units** (Degree Applicable)

Lecture: 36

Advisory: AIRC 25 and AIRC 12

Theory, operation, and application of natural gas and propane heating systems used in residential and light commercial heating installations, including the properties of fuel gasses, gas combustion, furnace construction, pilot proving devices, and ignition systems.

AIRC 30 Heat Load Calculations and Design**4 Units** (Degree Applicable)

Lecture: 72

Advisory: AIRC 20

Heat loss and heat gain will be examined, developed, and applied to residential dwellings air conditioning systems. Equipment sizing, selection, and duct design based on the Heat Load of the structure. Heat Load calculation software will be explored and used to aid in the process.

AIRC 31 Commercial Electrical for Air Conditioning and Refrigeration**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Advisory: AIRC 25

Electrical control of commercial air conditioning and refrigeration equipment emphasizing time clocks, defrost, three phase transformers, three phase motors, Variable Frequency Drives, and troubleshooting of three phase systems.

AIRC 32A Air Properties and Measurement**1.5 Units** (Degree Applicable)

Lecture: 27

Advisory: AIRC 20 and AIRC 30

Investigates the air-side operating theory and application of comfort cooling systems. This course will broaden the student's understanding of air conditioning systems by addressing psychrometrics to include the measurement of dry bulb and wet bulb temperatures, relative humidity, dew point temperatures, and sensible and latent heat processes.

AIRC 34 Commercial Systems**4 Units** (Degree Applicable)

Lecture: 63 Lab: 27

Advisory: AIRC 20 and AIRC 25

This course is designed for the advanced student to gain familiarity with commercial systems, which are not limited to air handlers, cooling towers, water pumps, chillers, and thermal storage. Students will also increase their understanding of how large complex buildings are to be conditioned.

AIRC 61 Building Automation Fundamentals**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Advisory: AIRC 20 and AIRC 25 and AIRC 31 and AIRC 34

Basics of commercial heating, ventilation, and air conditioning (HVAC) control theory as it applies to control systems. Building automation systems (BAS) controller wiring for power, communication, inputs, and outputs. Navigating the computer operating system environment, BAS software, and applications. Word processing, spreadsheets, and flow-charts for use with BAS systems.

AIRC 65 Building Automation Networks and Programming**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Advisory: AIRC 61

Programming heating, ventilation, and air conditioning (HVAC) direct digital controllers using line (text) programming, icon based programming, and block programming. Stresses good programming practices including complete program documentation.

AIRC 67 Energy Management**4 Units** (Degree Applicable)

Lecture: 72

Advisory: AIRC 31 and AIRC 34 and AIRC 65

Principles and practical applications for energy cost reduction and strategies. Emphasis on the use of Building Automation Systems to achieve control over energy costs. Includes theory for sustainable Green Building Technologies with introduction to Energy Star buildings and Leadership in Energy and Environmental Design (LEED) programs.

AIRC 95 Work Experience in Air Conditioning and Refrigeration**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Prerequisite: Approval of college Work Experience supervisor and compliance with Work Experience regulations as designated in the College Catalog.

Work experience in Air Conditioning & Refrigeration at an approved work site with related classroom instruction. This work experience may be during a regular semester or during a summer session. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester is required for each one unit of credit. It is recommended that the hours per week are equally distributed throughout the semester. Instructor approval required.

Aircraft Maintenance Technology (AIRM)

AIRM 65A Aircraft Powerplant Theory

13 Units (Degree Applicable, CSU)

Lecture: 108 Lab: 378

Advisory: AIRM 71

Theory and overhaul of aircraft reciprocating and turbine powerplants. Approved and required for the FAA powerplant certification.

AIRM 65B Aircraft Powerplant Systems

13 Units (Degree Applicable, CSU)

Lecture: 108 Lab: 378

Prerequisite: AIRM 65A

Advisory: AIRM 71

Reciprocating and turbine engine systems and components. Approved and required for the Federal Aviation Administration (FAA) powerplant certification.

AIRM 66A Aircraft Airframe Maintenance Structures

13 Units (Degree Applicable, CSU)

Lecture: 108 Lab: 378

This course is approved by the Federal Aviation Administration and meets requirements for all Aircraft Powerplant and Airframe Maintenance Technology majors. Structure topics span nomenclature and aerodynamics, set back and bend allowance, riveting, wood, fabric, paint, repairing aluminum, plastics, composites, rigging, and periodic inspections.

AIRM 66B Aircraft Airframe Maintenance Systems

13 Units (Degree Applicable, CSU)

Lecture: 108 Lab: 378

Airframe systems in hydraulics, landing gear, pneumatics, pressurization, instruments, fuel, fire, communication, navigation, autopilots, and RADAR. Approved by the Federal Aviation Administration (FAA).

AIRM 70A Aircraft Maintenance Electricity and Electronics

3 Units (Degree Applicable)

Lecture: 36 Lab: 71

Advisory: AIRM 71

Electrical theory, series and parallel circuits, batteries, and electrical measuring instruments. Required for Federal Aviation Administration (FAA) certification.

AIRM 70B Aircraft Maintenance Electricity and Electronics

3 Units (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: AIRM 70A

Advisory: AIRM 71

Principles of alternating current electricity with emphasis on components and circuits. Required for FAA certification.

AIRM 71 Aviation Maintenance Science

6 Units (Degree Applicable)

Lecture: 108

Federal aviation regulations, interpretation of aircraft drawings, basic physics, technical mathematics, and aircraft weight and balance computations. Federal Aviation Administration (FAA) approved course required of all aircraft powerplant and airframe maintenance technology majors.

AIRM 72 Aircraft Materials and Processes

2 Units (Degree Applicable)

Lecture: 22 Lab: 54

Advisory: AIRM 71

Part 147 Federal Aviation Administration (FAA) approved course covering aviation materials, non-destructive testing, basic heat-treating and machining.

AIRM 74 Aircraft Maintenance Technology - Work Experience

2 Units (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 120-150

Prerequisite: Compliance with work experience regulations as designated in the College Catalog.

Combines aircraft maintenance experience in addition to classroom instruction for college credit. Two units of credit will be earned as a result of 150 unpaid or 120 paid work hours. The employer and evaluator will have the student perform aircraft maintenance work under direct supervision at a maintenance facility.

AIRM 80 Laboratory Studies in Aircraft Maintenance Technology

0.5-1 Units (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 27-54

Additional lab instruction for students lacking Federal Aviation Authority (FAA) mandated hours to complete a training certificate, required remediation of program modules, or laboratory assignments.

AIRM 90A Airframe Theory

3 Units (Degree Applicable)

Lecture: 27 Lab: 81

Advisory: AIRM 70A or AIRM 70B or AIRM 71 or AIRM 72 or AIRM 73

A Federal Aviation Administration (FAA) approved course covering aircraft flight, flight control, and construction methods and procedures.

AIRM 90B Airframe Wood, Fabric, and Paint

3 Units (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 90A

Aircraft structural designs, wood structures, fabric covering, and aircraft finishes. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

AIRM 91A Airframe Aluminum Repair and Plastics

3 Units (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 90A and AIRM 90B

Aircraft structural repair of aluminum and aircraft plastics. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

AIRM 91B Airframe Composites, Rigging, and Inspection**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 90A and AIRM 90B and AIRM 91A

Composite materials used in aircraft construction, rigging, and inspection. Approved by the Federal Aviation Association (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

AIRM 92A Airframe Hydraulics and Pneumatics**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 90A and AIRM 90B and AIRM 91A and AIRM 91B

Aircraft hydraulic and pneumatic power systems, landing gear, and wheel and brake systems. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

AIRM 92B Airframe Fuel and Environmental Systems**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 92A

Aircraft environmental systems, instrument systems, and fuel systems. Approved by the Federal Aviation Association (FAA) and required for the Aircraft Airframe and Powerplant Maintenance Technology major.

AIRM 93A Airframe Warning and Fire Systems**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 92A and AIRM 92B

Federal Aviation Administration (FAA) approved course covering aircraft cabin heating and cooling, communication and navigation systems, and ice and rain control systems in small and large aircraft.

AIRM 93B Aircraft Communication, Navigation, Radar, and Autopilot Systems**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 92A and AIRM 92B and AIRM 93A

Aircraft navigation and communication systems, radar systems, and autopilot systems. Course approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

AIRM 95A Aircraft Powerplant Theory**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Advisory: AIRM 70A and AIRM 70B and AIRM 71 and AIRM 72 and AIRM 73

Federal Aviation Administration (FAA) approved course covering piston powerplant theory. Includes calculations and construction methods.

AIRM 95B Aircraft Powerplant Inspection and Maintenance**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 95A

Federal Aviation Administration (FAA) approved course covering piston engine overhaul, inspection, and troubleshooting procedures.

AIRM 96A Aircraft Turbine Engines**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 95A and AIRM 95B

Aircraft turbine engine history, construction, thrust formulas and turbine engine types. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology Major. Required for FAA certification.

AIRM 96B Aircraft Propellers**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 95A and AIRM 95B and AIRM 96A

Propeller theory, nomenclature, application, constant speed devices, and propeller controls. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology Major. Required for FAA certification.

AIRM 97A Aircraft Powerplant Instrumentation**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 95A and AIRM 95B and AIRM 96A and AIRM 96B

Federal Aviation Administration (FAA) approved course covering instrumentation, fire and smoke detection, and fire suppression systems used in small and large aircraft.

AIRM 97B Aircraft Powerplant Fuel Systems**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 97A

Reciprocating engine and turbine engine fuels, fuel metering devices, and system operation. Approved by the Federal Aviation Administration (FAA).

AIRM 98A Aircraft Powerplant Ignition Systems**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 97A and AIRM 97B

Reciprocating and turbine engine ignition system theory and maintenance. Approved by the Federal Aviation Administration (FAA).

AIRM 98B Aircraft Powerplant Lubricating Systems**3 Units** (Degree Applicable)

Lecture: 27 Lab: 81

Prerequisite: AIRM 97A and AIRM 97B and AIRM 98A

Reciprocating and turbine engine lubricants and lubricating systems. Approved by the Federal Aviation Administration (FAA).

Air Traffic Control (AIRT)

AIRT 151 Aircraft Recognition and Performance

3 Units (Degree Applicable, CSU)

Lecture: 54

Advisory: AERO 100

Designed for students who want to become air traffic controllers for the Federal Aviation Administration (FAA). Students will learn to recognize the distinctive features of aircraft, identify types of aircraft, classify aircraft as to FAA category and class, and analyze aircraft for performance characteristics required for air traffic control separation. Commercial Pilot majors are encouraged to take the class as an elective course.

AIRT 201 Terminal Air Traffic Control

3 Units (Degree Applicable, CSU)

Lecture: 54

Advisory: AERO 23 or AERO 100 and AIRT 41 or AIRT 151

Designed for students who want to become air traffic controllers for the Federal Aviation Administration (FAA). Students will learn about aircraft operation in the National Airspace System, control tower operations, terminal radar control, radio communication techniques and phraseology, and responding to emergencies.

AIRT 201L Air Traffic Control Laboratory

1 Unit (Degree Applicable)

Lab: 54

Advisory: AERO 100

Concepts, procedures, and skills related to air traffic control. Microphone technique, voice control, phraseology, facility and interfacility coordination, strip markings, airport traffic control, weather observing, and control tower functions.

AIRT 203 Enroute Air Traffic Control

3 Units (Degree Applicable, CSU)

Lecture: 54

Advisory: (AERO 23 or AERO 100) and (AIRT 41 or AIRT 151)

Enroute air traffic control operations in the National Airspace System. Includes radar and non-radar separation rules, enroute air traffic control clearances, emergencies and search & rescue, and future air traffic control technologies. This course is designed for students who want to become air traffic controllers for the Federal Aviation Administration (FAA).

AIRT 203L Enroute Radar Laboratory

1 Unit (Degree Applicable)

Lab: 54

Advisory: AERO 100

Simulation of an air traffic control radar facility concentrating on air route traffic control, and approach and departure procedures using appropriate phraseology, flight progress strip markings and radar separation standards.

AIRT 251 Air Traffic Control Team Skills

1.5 Units (Degree Applicable, CSU)

Lecture: 27

Advisory: AIRT 201 or AIRT 42A

Leadership skills for aviation professionals, with emphasis on FAA Crew Resource Management. This course will introduce students to the skills required to work in an aviation group environment. Students will be able to identify personality types and temperaments, analyze skills necessary to manage and improve individual performance, work effectively in the team environment, and recognize human factors that affect air traffic control, identify 'threat and error' countermeasures.

American Language (AMLA)

Correction: AMLA 98 course is Degree Applicable. 9/02/2022

AMLA 1A College Composition for Non-Native English Speakers

4 Units (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 72

Prerequisite: ENGL 68 or AMLA 90 or appropriate placement

Engages non-native English students in the reading and writing process with emphasis on college-level reading, critical analysis, research skills, and expository and argumentative composition mindful of purpose and audience while developing an awareness of fundamental principles of cultural competence and linguistic awareness that are inherent in language learning. Students may only earn credit for one: AMLA 1A, ENGL 1A, or ENGL 1AM.

AMLA 70 Basic to Intermediate Writing and Reading

5 Units (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 90

Advisory: Guided self-placement tool or completion of noncredit ESL Level 4

Basic to intermediate level accelerated writing and reading for non-native speakers with an emphasis on preparation for academic writing, critical thinking, and vocabulary development.

AMLA 71 American Language Basic Reading

4 Units (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Advisory: AMLA 70

Formerly AMLA 31R

Basic reading and vocabulary for non-native English speakers.

AMLA 72 American English Pronunciation

2 Units (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Formerly AMLA 21S

Pronunciation for English language learners with emphasis on analysis of individual strengths and weaknesses. Focus on improving articulation, stress, intonation patterns, and listening.

AML 80 Intermediate to Advanced Writing and Reading**5 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 90

Advisory: AML 70

Intermediate to advanced accelerated writing and reading for non-native speakers with an emphasis on preparation for academic writing, critical thinking, and vocabulary development.

AML 81 American Language Intermediate Reading**4 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Prerequisite: AML 80 (May be taken concurrently)

Formerly AML 32R

Intermediate reading and vocabulary for English language learners.

AML 82 American Language Interpersonal Communication**2 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Advisory: AML 80

Formerly AML 22S

Enhances ability of non-native speakers to communicate in personal and academic situations. Emphasis on grammatical accuracy and sophistication as well as increasing confidence in communication.

AML 83 Idiomatic English**2 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Advisory: AML 80

Formerly AML 24

Intermediate course in the study of idiomatic language, including common American idioms and proverbs, as used in everyday language situations.

AML 87 AML Grammar Foundations for English Language Learners**2 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Focuses on beginning to intermediate grammar topics for the academic success of English language learners, with an emphasis on usage that improves writing and speaking. Topics covered include most frequently used verb forms and tenses, sentence parts, sentence types and sentence structure, as well as the writing process and editing skills in writing.

AML 90 Accelerated Writing for English Language Learners**5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 90

Prerequisite: AML 80 or eligibility for AML 90

Introduce advanced English Language Learners to academic reading, writing, and communicating in a thematic context while nurturing metacognitive and critical thinking skills for engaging in college-level course work. Students complete substantial writing assignments based on readings in different genres, utilize synthesized information from on a variety of class sources and library research, and establish authorship and voice in academic English.

AML 91 American Language Advanced Reading for English Language Learners**4 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Advisory: AML 90

Formerly AML 33R

Advanced reading and vocabulary for English Language Learners, with special attention to strategies that increase comprehension, vocabulary development, and critical thinking

AML 92 American Language Formal Speaking**2 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Advisory: AML 90

Formerly AML 23S

Enhances the ability of non-native speakers to listen effectively and speak formally. Emphasis is on note taking, outlining, organizing speeches, and verbal articulation of ideas.

AML 93 American Language Colloquial English for English Language Learners**2 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Prerequisite: AML 90 (May be taken concurrently)

Advanced course in the study of colloquial English, including common American idioms and proverbs, slang, professionalisms, body language, language-appropriate communication, online English, and jargon, as used in everyday language situations to understand American intelligibility in a variety of informal settings.

AML 97 AML Advanced Grammar for English Language Learners**2 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Advisory: Eligibility for AML 90

Focus on advanced grammar topics for English Language Learners, with an emphasis on constructions that improve writing and speaking. Topics covered will include level of diction, importance of word choice, sentence sophistication, sentence connectors, sentence variety, verb tense review, modals, verbals, passive voice, and coherence devices.

AMLA 98 American Culture for English Language Learners**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Advisory: AMLA 90 (May have been taken previously)

Introduction to various aspects of American culture, including beliefs, lifestyles, attitudes, values, college culture, and issues for English Language Learners. This course is designed to promote a better understanding and awareness of American culture to help students not only succeed in college but to integrate into society and add to the fabric of the community. The course contextualizes social, political, religious, intellectual, technological, and economic facets of the prism of American life.

Anatomy & Physiology (ANAT)

ANAT 10A Introductory Human Anatomy**4 Units** (Degree Applicable, CSU, UC, C-ID #: BIOL 110B)

UC Credit Limitation

Lecture: 54 Lab: 54

Advisory: BIOL 1

Macroscopic and microscopic structures of the human body. Emphasis on cell structures, skeletal, muscular, respiratory, circulatory, nervous, digestive, excretory, endocrine, and reproductive systems. Comparison of normal, aging, and diseased structures.

ANAT 10B Introductory Human Physiology**4 Units** (Degree Applicable, CSU, UC, C-ID #: BIOL 120B)

UC Credit Limitation

Lecture: 54 Lab: 54

Prerequisite: ANAT 10A or ANAT 35

Advisory: (CHEM 10 or CHEM 40) and BIOL 1

Integrated study of the function of and interaction between the skeletal, muscular, respiratory, circulatory, nervous, digestive, excretory (including electrolyte and acid-base balance), endocrine, and reproductive systems (including human genetics and embryology).

ANAT 35 Human Anatomy**5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 108

Prerequisite: BIOL 1 or BIOL 4 or BIOL 4H

ANAT 36 Human Physiology**5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 108

Prerequisite: (BIOL 1 or BIOL 4 or BIOL 4H) and ANAT 35 and (CHEM 10 or CHEM 40)

Human physiology at the cellular and molecular levels covering muscular, nervous, circulatory, respiratory, renal, digestive, endocrine, and reproductive systems. Includes regulation and integration of organ systems where appropriate.

ANAT 38 Pathophysiology**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: (ANAT 10B or ANAT 36) and (MICR 1 or MICR 22)

Alterations in homeostasis and cellular function and diseases of bodily systems. Emphasis is placed on a comparison between disease states and structure and function in healthy individuals.

ANAT 40A Human Prosection**2 Units** (Degree Applicable, CSU)

Lab: 108

Prerequisite: ANAT 35

Techniques for human prosection. Regional exploration of superficial and deep human muscles at the gross level. Students can only earn the Human Prosection Certificate by taking ANAT 40A and ANAT 40B.

ANAT 40B Human Prosection**2 Units** (Degree Applicable, CSU)

Lab: 108

Prerequisite: ANAT 40A

Techniques for human prosection. Regional exploration of the human organ systems at the gross level with emphasis on the organs, blood vessels and nerves of the body cavities.

ANAT 99 Special Projects in Anatomy**2 Units** (Degree Applicable, CSU)

Lecture: 36

Prerequisite: Approved Independent Study Learning Contract

Offers selected students recognition for their academic interest in anatomy and the opportunity to explore the discipline of anatomy in greater depth. The content of the course and the methods of study vary from semester to semester and depend on the particular project under consideration. Instructor's authorization is required to enroll in this course.

Anthropology (ANTH)

ANTH 1 Biological Anthropology**3 Units** (Degree Applicable, CSU, UC, C-ID #: ANTH 110)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Evolutionary biology of primates with particular emphasis on hominid evolution and behavior. The genetic and evolutionary mechanisms underlying evolution, human variation, primate field studies, and the hominid paleontological record are stressed.

ANTH 1H Biological Anthropology - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: ANTH 110)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Advisory: ANTH 1L taken concurrently

Evolutionary biology of primates with particular emphasis on hominid evolution and behavior. The genetic and evolutionary mechanisms underlying evolution, human variation, primate field studies, and the hominid paleontological record are stressed. An honors course designed to provide an enriched experience. Students may not receive credit for both ANTH 1 and ANTH 1H.

ANTH 1L Biological Anthropology Laboratory**1 Unit** (Degree Applicable, CSU, UC, C-ID #: ANTH 115 L)

Lab: 54

Corequisite: ANTH 1 or ANTH 1H (May have been taken previously)

Scientific study of human evolution. Students will generate and test hypotheses using the techniques and materials of biological anthropology. Includes genetic observations and calculations, osteological techniques and measurements, and primate behavior observations. One field trip to a zoo for primate observation is required.

ANTH 4 Archaeology**4 Units** (Degree Applicable, CSU, UC, C-ID #: ANTH 150)

Lecture: 54 Lab: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or AMLA 1A

Concepts, theories, data, models, and ethics of anthropological archaeology that contribute to our knowledge of the human past. The nature of scientific inquiry; history and interdisciplinary nature of archaeological research; dating techniques; methods of survey, excavation, analysis, and interpretation; cultural resource management; professional ethics; and selected cultural sequences. Hands-on learning in lab component.

ANTH 5 Cultural Anthropology**3 Units** (Degree Applicable, CSU, UC, C-ID #: ANTH 120)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Anthropological approach to the study of culture and human behavior from a cross-cultural and comparative perspective. Concept of culture and the theories and methods used to study it. Language, subsistence, economics, social and political organization, marriage, kinship systems, religion, world views, the arts, and patterns of change across the world's diverse cultures.

ANTH 5H Cultural Anthropology - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: ANTH 120)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Anthropological approach to the study of culture and human behavior from a cross-cultural and comparative perspective. Concept of culture and the theories and methods used to study it. Language, subsistence, economics, social and political organization, marriage, kinship systems, religion, world views, the arts, and patterns of change across the world's diverse cultures. This is an Honors course. Students may not receive credit for both ANTH 5 and ANTH 5H.

ANTH 6 Language and Culture: An Introduction to Linguistic Anthropology**3 Units** (Degree Applicable, CSU, UC, C-ID #: ANTH 130)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Surveys three core areas in linguistic anthropology. Structural linguistics examines phonetics, phonology, morphology and syntax, as well as the biocultural basis of language. Historical linguistics examines origins, evolution and change, dialects, language families, and linguistic diversity. Sociocultural linguistics examines language acquisition in cultural context, emphasizing the relationship between language and culture and issues of language conservation and loss.

ANTH 15 Peoples and Cultures of Latin America and the Caribbean**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

A holistic, anthropological approach to the comparison of human populations and their diverse cultural traditions within Latin America and the Caribbean. Special attention is given to the effects of colonialism and global inequality. Students are introduced to the main theories and methods of anthropology through an intensive focus on this vital region.

ANTH 16 Peoples and Cultures of South Asia**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

A holistic, anthropological approach to the comparison of human populations and their diverse cultural traditions within the South Asian region (Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, Sri Lanka, and Afghanistan). Special attention is given to the effects of colonialism and global inequality. Students are introduced to the main theories and methods of anthropology through an intensive focus on this culture area.

ANTH 17 Peoples and Cultures of the Middle East**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

A holistic, anthropological approach to the comparison of human populations and their diverse cultural traditions within the Middle East, broadly defined to include the nations of North Africa, the eastern Mediterranean, Arabian Peninsula, and the Islamic societies of Central Asia. Special attention is given to the effects of colonialism and global inequality. Students are introduced to the main theories and methods of anthropology through an intensive focus on this vital region.

ANTH 30 The Native American**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Advisory: Eligibility for READ 100

Prehistory and history of Native Americans. Overview of the classification system used to organize particular groups into culture areas related to adaptive strategies. Identification of world contributions and contemporary issues for modern Native Americans.

ANTH 50 Introduction to Science, Technology, and Society**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 90 or Eligibility for ENGL 1A

Introduction to the emerging field of Science, Technology, and Society. Multidisciplinary field draws on insights and methods of philosophy, anthropology, sociology, and gender studies, among others. Considers science and technology as culturally and historically specific practices, investigating ways that social, cultural, political, economic, and ecological contexts shape the course of scientific research and technological innovation, as well as the impacts of different sciences and technologies on human life. Addresses all the core components of this field: philosophy of science, history of science and technology, ethics and equity in science, and science and technology policymaking.

ANTH 99 Special Projects in Anthropology**1-2 Units** (Degree Applicable, CSU)

Lecture: 18-36

Prerequisite: Instructor authorization needed prior to enrollment

Advisory: An introductory course in one of the subfields of anthropology (biological anthropology, archaeology, cultural anthropology, or linguistic anthropology), or at least one other anthropology course, is recommended prior to undertaking independent research in that area.

To offer selected students recognition for their academic interests and ability and the opportunity to explore their disciplines to greater depth, the various departments from time to time offer Special Projects courses. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Instructor authorization needed prior to enrollment.

Arabic (ARAB)

ARAB 1 Elementary Arabic**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Intended for students with little or no previous exposure to Arabic. Begins to develop elementary reading, writing, and speaking skills in Modern Standard Arabic. Focuses on mastery of Arabic script, pronunciation, simple grammatical structures, and basic vocabulary, along with an introduction to Arab culture.

ARAB 2 Continuing Elementary Arabic**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: ARAB 1

Continues to develop elementary reading, writing, and speaking skills in Modern Standard Arabic. Emphasizes verbs, word patterns, and vocabulary building; introduces short authentic texts. Includes some exposure to a dialect in Arabic.

Architectural Technology (ARCH)

ARCH 99 Special Projects in Environmental Design**1-3 Units** (Degree Applicable)

Lab: 54-162

Prerequisite: Instructor authorization needed prior to enrollment

Extended laboratory experiences pursuing specialized and directed projects in Environmental Design and Architecture. The extended experiences are supplementary to those available in the regular program and allow the student to focus on laboratory projects and experiments of specialized interest. Portfolio pieces will be produced. Students will be able to pursue more advanced and complex laboratory projects and experiments. The content of the course and the methods of study vary from semester to semester and depend on the particular project under consideration. Instructor authorization is needed prior to enrollment. Field trips required.

ARCH 101 Design I - Elements of Design**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Corequisite: ARCH 121

Design and design process including conceptualization, visualization, form making, presentation, expression, and site analysis of physical, contextual, and cultural aspects of design and the urban environment. Portfolio will be produced. Field trips are required.

ARCH 102 Design II - Architectural Design**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Corequisite: ARCH 122 or ARCH 23

Advisory: (ARCH 10 and ARCH 11) or (ARCH 101 and ARCH 141)

Second level architectural design studio with a focus on site analysis, design conceptualization, form making, program development and presentation. Emphasis is on critical thinking and problem solving integrated with the artistic design process. Investigations will stress symbolic expression, aesthetics, craftsmanship, technical skills, vocabulary and physical object making through the design of multi-family residential, institutional and cultural buildings. Field trips are required.

ARCH 121 CADD and Digital Design Media Level I**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Corequisite: ARCH 101

CADD (Computer Aided Design and Drafting) Level 1 and computer applications in architecture, engineering, and related fields including spreadsheet, drawing, and presentation application. Field trips required.

ARCH 122 Architectural Presentations**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Corequisite: ARCH 21 or ARCH 102

Advisory: (ARCH 10 and ARCH 11) or (ARCH 101 and ARCH 141)

Analysis and preparation of architectural presentation projects, including schematic and final design, architectural models, oral presentation techniques, board layouts using hand-drawn and computer-aided techniques, and development of project portfolio. Field trips required.

ARCH 141 Design Drawing and Communication**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Architectural drawing techniques including graphic standards, scales, orthographic, paraline, and perspective projections. Field trips required.

ARCH 142 Architectural Materials and Specifications**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Advisory: Eligibility for MATH 51

Building materials and specifications used in architecture and construction. Includes a lab component of common building material applications. Field trips required.

ARCH 145 Building and Zoning Codes**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: ARCH 11 or ARCH 141

Building and zoning codes, including code requirements related to architectural design and construction documentation. Process of obtaining design approvals and building permits from proper authorities having jurisdiction.

ARCH 146 Architectural Drawings and Fabrications**3 Units** (Degree Applicable, CSU)

Lecture: 53 Lab: 53

Advisory: ARCH 141 or ARCH 11

Architectural working drawings and construction documents for light frame construction. Field trips required.

ARCH 147 Architectural CAD and BIM**3 Units** (Degree Applicable, CSU)

Lecture: 53 Lab: 53

Advisory: ARCH 141 or ARCH 121

3-D Computer Aided Design and Drafting (CAD) and Building Information Modeling (BIM) for architectural design and design development. Portfolio of 3-D building models and extracted 2-D drawings will be produced. Field trips required.

ARCH 180 Science Concepts for Sustainable Design and Environmental Control**3 Units** (Degree Applicable, CSU)

Lecture: 54

Simplified and contextualized science concepts focused on sustainable design and environmental control. Applicable elements from several disciplines will be brought together and investigated in a non-mathematical and experiential format. Topics such as human thermal comfort, thermal energy, solar geometry, insolation, and energy conservation will be examined in the context of the built environment.

ARCH 201 Design III - Environmental Design**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Corequisite: ARCH 221

Advisory: ARCH 102

Theory and principles of environmental design as applied to architecture, landscape architecture, urban design, urban planning, and civil engineering. Portfolio will be produced. Field trips required.

ARCH 202 Design IV - Sustainable Design Advanced Project**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Corequisite: ARCH 222

Advisory: ARCH 201

Fourth level architectural design studio focusing on sustainability, energy efficiency, and environmental conservation. Emphasis is on critical thinking and problem solving involving material selection, envelope design, advanced space planning, and the development of designs from complex building programs. Investigations will stress logical organization, craftsmanship, technical skills, vocabulary, and physical object making through the design complex building types. Field trips are required.

ARCH 221 Architectural Rendering and Illustration**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Corequisite: ARCH 201

Advisory: ARCH 122

Architectural and interior illustration including perspective drawing, sketching, shades and shadows, entourage, and color application utilizing various media and development of project portfolio. Field trips required.

ARCH 222 Advanced Digital Media, Generative, and Algorithmic Design and Illustration**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Corequisite: ARCH 202

Architectural computational and algorithmic design. Course focuses on design mathematics, visual interface coding, and the development of digital models from computational definitions. Computer Aided Design (CAD), 3 dimensional (3-D) illustration and modeling. Development of interior and exterior 3-D models and how they interact with solar lighting.

ARCH 247 Architectural CAD Working Drawings**3 Units** (Degree Applicable)

Lecture: 53 Lab: 53

Advisory: ARCH 146 or ARCH 147

Architectural Computer Aided Design (CAD) for design development and working drawings. Portfolio of working drawings using Building Information Modeling (BIM) and CAD applications of integrated 3-D and 2-D BIM/CAD models will be produced. Field trips required.

ARCH 250 World Architecture: Prehistory to the Middle Ages**3 Units** (Degree Applicable, CSU, UC)

Lecture: 45 Lab: 27

Development of world architecture from pre-history to the Middle Ages. Influence of geography, religion, and socio-economic background on architecture from ancient Egypt, Europe through the Middle Ages, and classic civilizations of Asia and the Americas. Field trips required.

ARCH 251 World Architecture: Renaissance through the Contemporary Era**3 Units** (Degree Applicable, CSU, UC)

Lecture: 45 Lab: 27

Development of world architecture from the Renaissance to the present. Influence of environment, religion, and socio-economic movements on modern architecture. Field trips required.

ARCH 280 Structural Design Level I**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: Eligibility for MATH 71

Theories of structural design and the relationship of structure to form, function, and economics. Analysis of structural systems including statics, strength of materials, and structural properties as well as the demonstration of forces and stresses.

ARCH 290 Architectural Work Experience**1-2 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-150

Prerequisite: Compliance with work experience regulations as designated in the College Catalog

Provide work experience in architecture at an approved work site related to classroom instruction. A minimum of 75 paid or 60 non-paid)clock hours per semester of supervised work is required for each unit of credit. Field trips are required

Art History (AHIS)

AHIS 1 Introduction to the Visual Arts and Art History**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Visual art, art history and visual culture, and the role art plays in various contexts. Field trips may be required. Students may not earn credit for both ARTB 1 and AHIS 1.

AHIS 3 History of Women and Gender in Art**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Roles of women and gender in cultural creation and production with a focus on the visual arts. A historical and global survey, covering the role of women artists in the history of art and the representation of gender in a variety of cultures and time periods. Field trips may be required.

AHIS 3H History of Women and Gender in Art - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Roles of women and gender in cultural creation and production with a focus on the visual arts. A historical and global survey, covering the role of women artists in the history of art and the representation of gender in a variety of cultures and time periods. Field trips may be required. Students may not receive credit for both AHIS 3 and AHIS 3H.

AHIS 4 History of Western Art: Prehistoric Through Gothic**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTH 110)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Western art from the Prehistoric through Gothic periods, demonstrating the relationship of various visual art forms to each other and to the cultural context in which they were produced.

AHIS 4H History of Western Art: Prehistoric Through Gothic - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTH 110)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Western art from the Prehistoric through Gothic periods, demonstrating the relationship of various visual art forms to each other and to the cultural context in which they were produced. This is an honors course designed to provide an enriched experience. Students may not receive credit for both AHIS 4 and AHIS 4H.

AHIS 5 History of Western Art: Renaissance Through Modern**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTH 120)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Western art from the Renaissance through Modern periods, demonstrating the relationship of various visual art forms to each other and to the cultural context in which they were produced. Off-campus assignments may be required.

AHIS 5H History of Western Art: Renaissance Through Modern - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTH 120)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Western art from the Renaissance through Modern periods demonstrating the relationship of various visual art forms to each other and to the cultural context in which they were produced. An honors course designed to provide an enriched experience. Students may not receive credit for both AHIS 5 and AHIS 5H. Off-campus assignments may be required.

AHIS 6 History of Modern Art**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTH 150)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Artistic movements, influences, and individuals who have formed the Modern tradition. Emphasis is on the 20th century; the international and multicultural character of Modern art will be explored. Off campus trips may be required.

AHIS 6H History of Modern Art - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTH 150)

Lecture: 54

Artistic movements, influences, and individuals who have formed the Modern tradition. Emphasis is on the 20th century; the international and multicultural character of Modern art will be explored. Off campus trips may be required. Students may not receive credit for both AHIS 6 and AHIS 6H.

AHIS 7 Global Contemporary Visual Culture**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH or ENGL1AM or AMLA 1A

Survey of contemporary global art and visual culture from 1980 to the present; includes discussion and critical decoding of various media such as painting, installation, and performance. Intersections between art, technology, transnationalism, diaspora, and decoloniality will be examined in theoretical and cultural contexts.

AHIS 8 History of Medieval Art and Architecture**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Medieval art and architecture in Europe and the Mediterranean. Jewish, Christian, and Islamic arts will be studied in their cultural contexts.

AHIS 9 History of Asian Art and Architecture**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Asian artistic traditions. Major monuments of painting, sculpture, architecture, and other visual art forms are studied within their religious and cultural contexts.

AHIS 10 A History of Greek and Roman Art and Architecture**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

History of Greek and Roman art and architecture before 500 Common Era (CE) will be examined in their cultural contexts. Historical perceptions of Classical art and culture and their impact on Europe and America.

AHIS 11 History of African, Oceanic, and Native American Art**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTH 140)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Traditional, colonial, and contemporary arts of Africa, Oceania, Australia, and Indigenous North America. Visual arts including painting, sculpture, architecture, body decoration, and postcolonial visual culture will be studied.

AHIS 11H History of African, Oceanic, and Native American Art - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Traditional, colonial, and contemporary arts of Africa, Oceania, Australia, and Indigenous North America. Visual arts including painting, sculpture, architecture, body decoration, and postcolonial visual culture will be studied. This is an Honors course. Students may not receive credit for both AHIS 11 and AHIS 11H.

AHIS 12 History of Precolumbian Art and Architecture**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for English 68

The arts of Pre-Columbian Mesoamerica and Andean South America. Major monuments of sculpture, painting, architecture, ceramics, and textiles from civilizations including the Maya, Aztecs, and Inca will be studied in their cultural contexts.

AHIS 12H History of Precolumbian Art and Architecture - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

The arts of Pre-Columbian Mesoamerica and Andean South America. Major monuments of sculpture, painting, architecture, ceramics, and textiles from civilizations including the Maya, Aztecs, and Inca will be studied in their cultural contexts. An honors course designed to provide an enriched experience. Students may not receive credit for both AHIS 12 and AHIS 12H.

AHIS 13 World Art and Visual Culture**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Thematic survey of the art and visual culture of Asia, Africa, the Islamic world, Oceania, and the Americas, covering the ancient, traditional, post-colonial, and contemporary art of each region. Artistic and cultural traditions will be examined in context. Methodologies of contemporary and global visual culture will be studied. Field trips may be required.

AHIS 14 Rome: The Ancient City**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

The art and culture of the ancient city of Rome. Major works of art and architecture will be studied in cultural and historical context. The importance of Rome and the Romans to later cultures will be explored.

AHIS 15 Culture and Art of Pompeii**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Art, architecture, and culture of Pompeii and neighboring cities destroyed in the volcanic eruption of 79 CE. Major monuments and archaeological remains will be studied in cultural and historical context.

AHIS 99 Special Projects in Art History**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Offers selected students recognition for their academic interest and ability and the opportunity to explore the discipline in greater depth. The content of this course and the methods of study vary and depend on the particular project under consideration. Instructor authorization needed prior to enrollment.

Art: Animation (ANIM)

ANIM 99i Independent Studies in Animation**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

Prerequisite: Approved Independent Study Learning Contract.

ANIM 100 Digital Paint and Ink**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Illustration skills used in digital animation and game production. Focuses on digital illustration tools, including painting and drawing using vector and bitmap for animation environments.

ANIM 101A Drawing - Gesture and Figure**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Contemporary and traditional approaches to sketching the human figure using drawing techniques for rapid visualization. Emphasizes and develops perceptual and technical skills for capturing basic visual mechanics of motion and gesture.

ANIM 101B Figure Gesture - Design**3 Units** (Degree Applicable)

Lecture: 36

Prerequisite: ANIM 101A

Contemporary and traditional approaches to sketching the human figure using drawing techniques for rapid visualization. Emphasizes and develops elements of design for the purposes of visual communication and storytelling.

ANIM 101C Figure Gesture Expressive Design**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ANIM 101A

Contemporary and traditional approaches to sketching the human figure using drawing techniques for rapid visualization. Emphasizes and develops personal interpretation, individual expression, and media exploration.

ANIM 104 Drawing Fundamentals**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Creative expression through the use of drawing media and techniques. Emphasis is placed on use of construction, light logic, atmospheric and linear perspective, and gesture directed toward animation. Includes basic drawing skills and methods of achieving compositional integrity through objective analysis and synthesis. May require off-campus assignments.

ANIM 107 Figure in Motion**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ANIM 101A or ARTD 17A

Drawing human figures in motion. Anatomical landmarks, proportion, light and shadow, line composition, figure-ground relationship, the interaction of form and content, and the expressive potential of the human figure will be explored.

ANIM 108 Principles of Animation**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Principles of drawing for traditional animation concentrating on the mechanics of movement, timing, and emotion for the creation of expressive line drawings.

ANIM 109 Advanced Principles of Animation**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ANIM 108

Advanced principles of animation applied to the process of creating an animated film. Includes mechanics of motion, weighted movement, lip sync and expression applied to story, staging, and character development. Focus will be on the animated film process from script to storyboards, timing sheets, key posing, inbetweening, and clean-up through the completion of a final animated short film.

ANIM 110 Animal Drawing**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ARTD 15A or ANIM 104

Traditional and contemporary approaches to sketching and drawing animals for visual communication and storytelling. Gesture, anatomical structure, proportion, line, and action analysis will be explored. Requires off-campus field trips.

ANIM 115 Storyboarding**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ANIM 100

Storyboarding with emphasis on storytelling, cinematography, drawing, and notation as it relates to the animation industry.

ANIM 116 Character Development**1.5 Units** (Degree Applicable)

Lecture: 18 Lab: 36

Prerequisite: ARTD 15A or ANIM 104

Drawing and development of characters for animation. Observation of details for character attitude, personality, movement, posing, dialogue, mouth positions, body language, and consistent drawing techniques for model sheets will be explored.

ANIM 122 Introduction to Virtual Reality Design and Technology**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Virtual Reality (VR) tools and technologies for the beginner. Through a series of hands-on projects, the student learns techniques, tools, and the thinking involved in constructing games, narratives, and visual communication using VR.

ANIM 130 Introduction to 3D Modeling**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Three-dimensional (3D) modeling techniques using animation and gaming industry-standard software.

ANIM 131 Introduction to Game Design**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Introduction to game art and game development including the principles, tools, and technologies for designing analog and computer games.

ANIM 132 Intermediate 3D Modeling**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ANIM 130

3D modeling and texturing methods used in the film and game industries. Topics covered include modeling, materials, UV unwrapping, real time texture painting, lighting, and rendering techniques.

ANIM 137A Work Experience in New Digital Media**1-3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-225

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Work experience in areas of new digital media at an approved worksite related to a certificate or degree program of study. A minimum of 60 non-paid clock hours or 75 paid clock hours of supervised work per semester is required for each unit of credit. Instructor approval required.

ANIM 140 Introduction to 3D Animation**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Three dimensional (3D) character animation including staging, posing, timing, and motion as used in games, film, and television. Through a series of lectures and projects, the student gets an introduction to the 3D animation industry workflow and thinking.

ANIM 141 Game Level Design**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ANIM 131

Intermediate level design of computer game levels with a greater emphasis on art, animation, and gameplay to support a narrative.

ANIM 146 Intermediate 3D Animation**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ANIM 140

Team based course in three-dimensional (3D) animation production focusing on the animation production process including, story development, assets creation, animation, rendering, sound design, and post processing. Students work in teams focusing on one of the areas of responsibilities to create a short animation production by the end of the program.

ANIM 148 Demo Reel**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: Completion of a minimum of 9 semester units in one of the following programs: Graphic Design, Illustration, Animation, Web Design, Architectural Design, Art, Fashion Merchandising, Industrial Design, Interior Design, or Photography.

Production of a demo reel and portfolio representative of interest, strength and skills for entry into animation fields, professional schools or baccalaureate institutions.

ANIM 151 Game Art Development**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ANIM 130

Designing and developing complex 2D and 3D art assets including environments and props for use in game engines.

ANIM 167 Visual Development**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ARTC 163 or (ANIM 101A and ARTD 16)

Development of conceptual designs for illustration in video games, film, animation, and comic books, using composition, shape, value, and color as visual tools for storytelling. Students cannot receive credit for both ARTC 167 and ANIM 167.

ANIM 172 Motion Graphics, Compositing and Visual Effects**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTC 100 or ANIM 100

Elements of motion graphics, motion art, and visual effects including design, animation, character art, typography, compositing, and editing in a production environment (i.e. TV, film, DVD, or web). Focuses on using Adobe After Effects and other industry standard software. ANIM 172 and ARTC 272 cannot both be taken for credit.

ANIM 175 Digital Animation**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ANIM 100

Principles of animation using digital software for multimedia.

ANIM 210 Building Worlds in Virtual Reality**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ANIM 131 or ANIM 141 or ANIM 151

Design, planning, and processes to build immersive three dimensional (3D) worlds using Virtual Reality (VR). The successful student would come away with a complex VR world designed and built to immerse a user with interactive elements, 3D geometry, and sound while effectively communicating a story or a message.

Art: Basic Studio Arts (ARTB)

ARTB 1 Introduction to the Visual Arts and Art History**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Visual art, art history and visual culture, and the role art plays in various contexts. Field trips may be required. Students may not earn credit for ARTB 1 and AHIS 1.

ARTB 14 Basic Studio Arts**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: Eligibility for ENGL 68

Creative expression through the visual and applied arts. Painting, drawing, printmaking, and sculpture are explored. May require field trips.

Art: Gallery & Professional Practices (ARTG)

ARTG 20 Art, Artists, and Society

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Art and artists studied through class lectures and required field trips. Public art display and exhibition design, with an overview of art movements, styles, symbols, theories, and terms.

ARTG 21A Introduction to Exhibition Production

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ARTG 20 and ARTG 23

Concepts and hands-on applications of curatorial processes, management skills, and gallery operations. The professional side of the arts with emphasis on contemporary art, theories, and media will be explored. Field trips required.

ARTG 21B Intermediate Exhibition Production

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ARTG 21A

Exhibition planning, research, operation and management. Art as a profession, with emphasis on historical and contemporary terms, theories, movements and media in the context of an art exhibition production. Field trips required.

ARTG 22A Exhibition Design and Art Gallery Operation Work Experience

1-3 Units (Degree Applicable)

Lab: 60-225

Prerequisite: ARTG 21B

Provides on-the-job experience in exhibition design and art gallery operation at an approved work site related to the classroom-based learning. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester is required for each one unit of credit. It is recommended that the hours per week are equally distributed throughout the semester.

ARTG 23 Art Writing

1.5 Units (Degree Applicable)

Lecture: 27

Prerequisite: ENGL 1A and ARTG 20 or ARTD 15A or ARTD 25A or ARTD 43A or ARTS 30A or ARTS 33 or ARTS 40A or ARTS 41A

Basic art-exhibition writing skills and analyses. Topics include art-specific terminology, formal and contextual visual analyses, journals and influences, understanding theory, criticism, exhibition reviews, artist statements, and other contemporary art writing.

ARTG 24 Shop Practices for Art Careers

1.5 Units (Degree Applicable)

Lecture: 18 Lab: 36

Prerequisite: ARTG 20 or ARTD 15A or ARTD 25A or ARTD 43A or ARTS 30A or ARTS 33 or ARTS 40A or ARTS 41A

Current practices specific to art culture for machine and hand tools, materials handling, and safety procedures. Lectures, demonstrations, and hands-on experience will familiarize students with machinery and equipment. Students will develop basic construction projects relevant to art culture.

Art: Graphic Design and Illustration (ARTC)

ARTC 100 Fundamentals of Graphic Design

3 Units (Degree Applicable, CSU, C-ID #: ARTS 250)

Lecture: 36 Lab: 71

Advisory: ARTD 15A and ARTD 20

Fundamentals of graphic design for the commercial art industry. Technology, creativity, design, and production. Adobe Photoshop to produce effective commercial art.

ARTC 120 Print Design and Advertising

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ARTC 100

Corequisite: ARTD 20 (May be taken previously)

Theories, concepts, and skills for the design and layout of printed commercial art. Covers typical printed products including advertisements, flyers, brochures, posters, books, and catalogs. Focuses on using Adobe InDesign with additional exposure to Adobe Photoshop and Adobe Illustrator.

ARTC 140 Vector Design and Illustration

3 Units (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ARTC 100

Corequisite: ARTD 20 (may have been taken previously)

Theories, concepts, and skills for the design and illustration of vector commercial art. Students design and produce vector illustration projects including characters, products, posters, and info graphics. Adobe Illustrator is the primary development tool.

ARTC 160 Typography

3 Units (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTC 100

Corequisite: ARTD 20 (may have been taken previously)

Design and use of basic letterforms, type families, characteristics, history, and principles of typography in graphic design. Traditional and digital skills for the art of typeface design, typographic layout, expressive typography, and conceptual thinking.

ARTC 163 Dynamic Sketching

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ARTD 15A or ANIM 104

Tools to conceptualize, communicate, and express creative ideas dynamically through the art of sketching. Emphasis on problem solving through the sketching process for illustrators, animators, entertainment designers, and fine artists. Off-campus meetings required.

ARTC 165 Illustration**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ARTD 15A or ANIM 104

Corequisite: ARTD 20 or ARTD 21 or ARTD 17A or ANIM 101A (any of which may have been taken previously)

Contemporary illustration with an emphasis on story, editorial, and advertising applications. Proper uses of illustrative rendering techniques in traditional drawing and painting media, paper, and their integration to electronic media. Using professional illustration software, peripherals, and color laser printing, students advance to produce more complex illustrations.

ARTC 167 Visual Development**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ARTC 163 or (ANIM 101A and ARTD 16)

Development of conceptual designs for illustration in video games, film, animation, and comic books, using composition, shape, value, and color as visual tools for storytelling. Students cannot receive credit for both ARTC 167 and ANIM 167.

ARTC 169 Contemporary Illustration**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ARTD 15A and (ARTD 25A or ARTC 165)

Advisory: ANIM 101A

Development of visual concepts to create unique and provocative illustrations based on social, cultural, and political issues. Exploration of personal style and media with emphasis on contemporary art trends.

ARTC 200 Web Design**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: ARTC 100

Corequisite: ARTD 20 (may have been taken previously)

Theories, concepts, and skills for the design and production of websites. Covers usability, interactivity, responsive design, web animation, multimedia integration, Hypertext Markup Language (HTML), Cascading Style Sheet (CSS), and JavaScript. Focuses on using Adobe Dreamweaver and Adobe Photoshop as the primary development tools.

ARTC 210 Corporate Identity and Branding**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ARTC 140 and ARTC 160

Creative techniques, design theory, and process methods for developing effective logos, corporate identity systems, and brands.

ARTC 220 Creative Design and Compositing**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ARTC 100 and ARTD 20

Advisory: ARTC 140

Advanced creative and compositing skills for graphic designers. Covers advanced photo editing and photo retouching techniques for the development of photo-illustrations, editorial compositions, advertisements, and other commercial art. Focuses on using Adobe Photoshop as the primary development tool with some exposure to Adobe Illustrator.

ARTC 230 Web Design II**3 Units** (Not Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ARTC 200

Intermediate level design, usability, production, and marketing of websites, mobile sites, and mobile apps.

ARTC 272 Motion Graphics, Compositing and Visual Effects**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTC 100 or ANIM 100

Elements of motion graphics, motion art, and visual effects including design, animation, character art, typography, compositing, and editing in a production environment (i.e. TV, film, DVD, or web). Focuses on using Adobe After Effects and other industry standard software. ANIM 172 and ARTC 272 cannot both be taken for credit.

ARTC 290 Portfolio**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: Completion of a minimum of 15 semester units in one of the following programs: Graphic Design, Illustration, Animation and Gaming, Architectural Design, Art, Fashion Merchandising, Industrial Design, Interior Design, or Photography.

Selection, preparation, and assembly of a portfolio, book, or package of works of art, including digital and multimedia formats, that represent individual interests and strengths of students from the visual arts disciplines for use in entering a four-year institution, professional art school, or professional field of choice. Also includes cover letter and resume preparation. The instructor will verify that the prerequisite has been met.

ARTC 299 Work Experience in Graphic Design**1-3 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-225

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Advisory: ARTD 20 and PHOT 58 and ARTC 100 and ARTC 120 and ARTC 140 and ARTC 160 (Graphic Design - Level 1 Certificate)

Work experience in graphic design, web design, media design, advertising design, illustration or other graphic design related field in an approved work site. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester is required for each unit of credit. It is recommended that the hours per week are equally distributed throughout the semester.

Art: Special Studio Arts (ARTZ)

ARTZ 50 Specialized Studio-Art Studies**2 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 54

Allows the student to pursue more advanced studio projects and experiments in an area of interest in studio arts specialization. Professor authorization needed prior to enrollment.

Art: Three-Dimensional Studio Arts (ARTS)

ARTS 22 Design: Three-Dimensional

3 Units (Degree Applicable, CSU, UC, C-ID #: ARTS 101)

Lecture: 36 Lab: 71

Prerequisite: Eligibility for ENGL 68

Develops perception and enhances design decision making within the three-dimensional world. Emphasis is placed on concept development and artistic expression utilizing principles and elements of three-dimensional design as well as practical experiments with a variety of materials.

ARTS 30A Ceramics: Beginning I

3 Units (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Investigation of clay processes, glazing, and firing through lecture and projects in hand building and on the wheel. Emphasis on developing skills, vocabulary, analysis of form, function, and aesthetics through projects, and oral and written criticism. Field trip required.

ARTS 30B Ceramics: Beginning II

3 Units (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 71

Prerequisite: ARTS 30A

Clay processes, glazing, and firing. Emphasis is on repetition of forms, integrating hand building, and wheel work for a single object, using up to 5 pounds of clay and developing vocabulary, skill, and aesthetics. Field trip required.

ARTS 31 Ceramics: Intermediate Studio

2 Units (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Prerequisite: ARTS 30B

Intermediate study of ceramics with emphasis on integrating form and surface with content, developing skill, and a personal style. Familiarity with kilns and variety of firing temperatures included. Field trips required.

ARTS 33 Ceramics: Hand Construction

3 Units (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Investigation of clay processes, glazing, and firing through projects that are hand built. Emphasis on developing skills, vocabulary, and analysis of form, function, and craftsmanship through projects, discussion, and oral and written criticism. Field trip required.

ARTS 34 The Sculptural Vessel

3 Units (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 71

Prerequisite: ARTS 30A

Advisory: ARTS 33

Advanced study of the ceramic vessel through the integration of technique, form, and content. Field trips required.

ARTS 40A Sculpture: Beginning

3 Units (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Traditional and contemporary approaches to sculpture. Principles of sculptural design, concept development, technique, and materials as an integral part of creative expression.

ARTS 40B Sculpture: Intermediate

3 Units (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 71

Prerequisite: ARTS 40A

Sculpture projects in subtractive, additive, and manipulative approaches.

ARTS 40C Sculpture: Carving

3 Units (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 71

Prerequisite: ARTS 40A

Advanced projects in stone or wood carving offering the opportunity to further explore carving using hand, power, and pneumatic tools. Emphasis is on individual interpretation.

ARTS 41A Sculpture: Life

3 Units (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Modeling from the human figure with emphasis on composition, gesture, motion, and human anatomy as it informs sculptural form. Development of perceptual and technical skills in clay modeling from the human figure.

ARTS 41B Sculpture: Intermediate Life

3 Units (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTS 41A

Sculptural study of the human figure with emphasis on artistic development and stylistic exploration of human anatomy using materials and techniques suitable for the human form.

ARTS 42 Sculpture: Mold Making

3 Units (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 71

Construction and use of flexible and plaster molds.

ARTS 46A Sculpture: Special Effects Makeup

3 Units (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 71

Advisory: ARTS 42

Modeling, molding, casting of makeup appliances and masks to the human figure.

ARTS 46B Sculpture: Special Effects Makeup

3 Units (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 71

Prerequisite: ARTS 46A

Sculpture special effects modeling, molding, and casting techniques and materials applied to create appliances for the full human head, torso or mouth.

ARTS 96 Special Studies: Mold Making**2 Units** (Degree Applicable)

Lab: 108

Prerequisite: ARTS 42 and requires instructor permission

Extended mold making experiences supplementary to those available in sculpture mold making course. Allows the student to pursue more advanced and complex mold making projects with emphasis on the development of an individual creative direction. Content of each course and the methods of study vary from semester to semester. Requires instructor permission.

ARTS 97 Special Studies: Special Effects Makeup**2 Units** (Degree Applicable)

Lab: 108

Prerequisite: ARTS 46B and requires instructor permission

Extended sculpture special effects makeup experiences supplementary to those available in sculpture special effects makeup courses. Allows the student to pursue more advanced and complex special effects makeup projects with emphasis on the development of an individual creative direction. Content of each course and the methods of study vary from semester to semester. Requires instructor permission.

ARTS 98 Special Studies: Life Sculpture**2 Units** (Degree Applicable)

Lab: 108

Prerequisite: ARTS 41B and requires instructor permission

Extended figure sculpture experiences supplementary to those available in ARTS 41B Sculpture: Intermediate Life. Allows the student to pursue more advanced and complex figure sculpture projects with emphasis on the development of an individual creative direction. Content of each course and the methods of study vary from semester to semester. Requires instructor permission.

ARTS 99 Sculpture Special Studies**2 Units** (Degree Applicable, CSU)

Lab: 108

Prerequisite: ARTS 22 or ARTS 40A or ARTS 41A

Extended sculpture experiences supplementary to those available in sculpture courses. Allows the student to pursue more advanced and complex sculpture projects with emphasis on the development of an individual creative direction. Content of each course and the methods of study vary from semester to semester. Instructor authorization required to enroll in this course.

Art: Two-Dimensional Studio Arts (ARTD)

ARTD 15A Drawing: Beginning**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTS 110)

Lecture: 36 Lab: 71

An entry-level course emphasizing creative expression through the use of black and white drawing media. Emphasis is placed on basic drawing methods and skills, composition, and exploration of drawing media.

ARTD 15B Drawing: Intermediate**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTS 205)

Lecture: 36 Lab: 71

Prerequisite: ARTD 15A

Drawing course emphasizing perceptual and technical skills to compose in dry and fluid media. Uses the formal elements and principles in black, white, and color in representational and expressionistic styles.

ARTD 16 Drawing: Perspective**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTD 15A or ANIM 104

Linear perspective drawing techniques for artists and illustrators.

ARTD 17A Drawing: Life**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTS 200)

Lecture: 36 Lab: 71

Prerequisite: ARTD 15A or ANIM 104

Contemporary and traditional approaches to drawing the human figure. Surface anatomy, proportion, line, light and shadow, composition, and the expressive potential of the human figure will be explored.

ARTD 17B Drawing: Life-Intermediate**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTD 17A

Contemporary and traditional approaches to drawing the human figure. Anatomy, proportion, line, light and shadow, composition, personal style, and the expressive potential of the human figure will be explored.

ARTD 19A Figure Painting**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ARTD 17A

Painting the draped and nude figure with emphasis on observation and accurate representation. Through poses of various lengths, students will learn to depict the human figure using light logic, color palettes, compositional devices, and painting techniques.

ARTD 20 Design: Two-Dimensional**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTS 100)

Lecture: 36 Lab: 71

Prerequisite: Eligibility for ENGL 68

Two-dimensional composition in achromatic value and color using the elements and principles of art and design. Emphasis on vocabulary, theory, and analysis of the formal elements and principles as they apply to studio projects in design for all disciplines of the arts. Off-campus assignments may be required.

ARTD 21 Design: Color and Composition**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTS 270)

Lecture: 36 Lab: 71

Prerequisite: ARTD 20

Color theory and relationships of pigment and light. Emphasis on color harmonies, color matching, the effects of light, color perception and expression in their application to design and composition and as used in all disciplines of the arts.

ARTD 23A Drawing: Heads and Hands**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTD 15A or ANIM 104

Contemporary and traditional approaches to constructing images of the human head and hands. Anatomy, proportion, light logic, composition, expression, and the interaction of form and content. Field trip may be required.

ARTD 23B Drawing: Intermediate Heads and Hands**3 Units** (Degree Applicable)

Lecture: 36 Lab: 71

Prerequisite: ARTD 23A

Contemporary and traditional approaches to drawing the human head and hands. Emphasizes and develops techniques for rendering as well as capturing a likeness.

ARTD 25A Beginning Painting I**3 Units** (Degree Applicable, CSU, UC, C-ID #: ARTS 210)

Lecture: 36 Lab: 71

Development of basic paint applications in various styles and subjects focusing on the formal elements of composition, light logic, and color.

ARTD 25B Beginning Painting II**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTD 25A

Creation of large paintings through various styles including mixed media. Includes conceptualization and communication of ideas and solving compositional and technical painting problems with a variety of materials.

ARTD 26A Intermediate Painting I**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTD 25B

Creation of large paintings focusing on conceptual issues and art historical influences. Conceptualization of work is done by responding to current and past art movements and popular culture in order to create unique artworks.

ARTD 26B Intermediate Painting II**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTD 26A

Development of a personal style focusing on conceptual issues and art historical influences. Students will conceptualize their work by responding to current and past art movements and popular culture in order to create unique artworks.

ARTD 27 Painting: Watercolor**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 71

Prerequisite: ARTD 15A or ARTD 20 or ARTD 25A

Watercolor techniques as they relate to compositional and technical processes in painting. Emphasis is placed upon painting skills as related to transparent watercolor methods as well as exploration into opaque and mixed-media approaches. Off-campus assignments may be required.

ARTD 43A Introduction to Printmaking**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Techniques in fine art printmaking using relief and intaglio processes. Developing skills, vocabulary and analysis of its aesthetics, historical context, cultural traditions and craftsmanship through projects, discussion, and oral and written criticism. Field trips may be required.

ARTD 43B Intermediate Printmaking in Intaglio and Relief**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 71

Prerequisite: ARTD 43A

Creation of complex editioned color prints in relief and intaglio printmaking from multiple matrices. Focus is on color registration, project collaboration, and learning how to combine different printing techniques in order to realize personal artistic expression. Field trips may be required.

ARTD 44A Printmaking: Introduction to Lithography I**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Creative techniques in planographic printmaking using lithography. Emphasis is on skill development, vocabulary expansion, and critical analysis of aesthetics, historical context, and craftsmanship through projects, discussion, and oral and written criticism. Field trips may be required.

ARTD 45A Printmaking: Introduction to Screenprinting**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Creative techniques in fine art screenprinting printmaking. Emphasis is on developing skills, vocabulary and critical understanding of the different stencil methods used in serigraphy. Screenprinting's aesthetics, historical context and role in contemporary society are examined through projects, discussion of craftsmanship and content by oral and written discussion and criticism. Field trips may be required.

ARTD 45B Printmaking: Intermediate Screenprinting**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 71

Prerequisite: ARTD 45A

Complex multi-color registration in screenprinting. Emphasis on registration of colors, exploration of printing on a variety of substrates, and integration of social and political issues in print design. Field trips may be required.

ARTD 46A Printmaking: Introduction to Monotype**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Painterly printmaking with a focus on monotype, monoprint, and collography printing. Field trips may be required.

ARTD 47A Printmaking: Photo and Alternative Processes**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Contemporary printmaking approaches using a variety of light-sensitive polymer plates, carborundum plates, and other alternatives to classic printmaking processes. Images are prepared by digital and manual means and combine new processes with traditional methods. Emphasis is on teaching graphic art concepts to develop visual statements and commentary, vocabulary, technical skills, and analysis of printmaking aesthetics, historical context, cultural traditions and craftsmanship through projects, discussion, and oral and written criticism. Field trips may be required.

ARTD 48A Letterpress Book Arts**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Personal vision and concepts applied to the book form as contemporary art, the history and aesthetics of the development of letterforms, creation of illustrative imagery, and Gutenberg letterpress printing. Emphasis is on the integration of word and picture in a historic and contemporary context to create visual statements and social commentary through group projects involving analysis of artist book aesthetics, historical context, cultural traditions, vocabulary, technique, discussion, and oral and written criticism. Field trips may be required.

ARTD 75 Anatomy for Artists**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 71

Prerequisite: ARTD 15A or ANIM 104

Artistic representation of human skeletal and muscular systems with emphasis on their functional relationships in the human figure. Students will work from life models, anatomical drawings, and casts.

ARTD 90 Special Studies: Figure Painting**2 Units** (Degree Applicable)

Lab: 108

Prerequisite: ARTD 19A

Exploration of advanced and complex figure painting to develop an individual creative direction. Offers selected students recognition for their academic interest in figure painting. The content of the course and the methods of study vary from semester to semester and depend on the particular project under consideration. Requires instructor permission.

ARTD 91 Special Studies: Illustration**2 Units** (Degree Applicable)

Lab: 108

Prerequisite: ARTC 165 and instructor permission

Exploration of advanced and complex illustration to develop an individual creative direction. Offers selected students recognition for their academic interest in illustration. The content of the course and the methods of study vary from semester to semester and depend on the particular project under consideration. Requires instructor permission.

ARTD 93 Special Studies: Color and Design**2 Units** (Degree Applicable)

Lab: 108

Prerequisite: ARTD 21

Extended experiences in color and design supplementary to those available in Color and Composition (ARTD 21). Allows the student to pursue additional in-depth projects in color and design. Content of each course and the methods of study vary from semester to semester. Requires instructor permission.

ARTD 94 Special Studies: Intaglio and Relief Printmaking**2 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: (ARTD 48A or ARTD 43B or ARTD 45B or ARTD 44A or ARTD 46A or ARTD 47A) and instructor permission

Offers an opportunity for extended exploration of relief and intaglio printmaking to selected students in recognition of their academic interest. Allows the student to pursue more advanced and complex relief and intaglio projects with emphasis on the development of an individual creative direction. Content and the methods of study vary by project. Requires instructor permission.

ARTD 95 Special Studies: Planographic Printmaking**2 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Prerequisite: (ARTD 48A or ARTD 43B or ARTD 45B or ARTD 46A or ARTD 47A or ARTD 44A) and instructor permission

Offers an opportunity for extended exploration of planographic printmaking to selected students in recognition of their academic interest. Allows the student to pursue more advanced and complex planographic printmaking projects with emphasis on the development of an individual creative direction. Content and the methods of study vary by project. Requires instructor permission.

ARTD 96 Special Studies: Letterpress Printmaking**2 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Prerequisite: (ARTD 48A or ARTD 43B or ARTD 45B or ARTD 44A or ARTD 46A or ARTD 47A) and instructor permission

Offers an opportunity for extended exploration of letterpress printmaking to selected students in recognition of their academic interest. Allows the student to pursue more advanced and complex letterpress projects with emphasis on the development of an individual creative direction. Content and the methods of study vary by project. Requires instructor permission.

ARTD 97 Special Studies: Drawing**2 Units** (Degree Applicable)

Lab: 108

Prerequisite: (ARTD 15B or ARTD 27) and instructor permission required

Offers selected students opportunities with exploratory, advanced, and more complex topics related to drawing. Allows students to pursue projects in various dry, wet, and mixed drawing media to develop an individual creative direction. Specific content will vary from semester to semester. Requires instructor permission.

ARTD 99 Figure Drawing Special Studies**2 Units** (Degree Applicable, CSU)

Lab: 108

Prerequisite: ARTD 17A or ANIM 101A or ARTD 23A

Offers selected students recognition for their academic interest in advanced and complex figure drawing and the opportunity to explore the development of an individual creative direction in greater depth. The content of the course and the methods of study vary from semester to semester and depend on the particular project under consideration.

Asian American and Pacific Islander Studies (APIS)

APIS 1 Introduction to Asian American Studies**3 Units** (Degree Applicable, CSU)

Lecture: 54

This course examines how U.S. institutions ideologically constructed the category of Asian-ness and materially engaged with Asian peoples within the United States. Ethnic Studies theory will be applied to describe critical events in Asian American histories, cultures, and intellectual traditions including an examination of how "Asian" communities interact with each other and the other three historically defined racialized core groups (Native Americans, Latinx Americans, and African Americans). This includes a focus on topics ranging from self-determination to imperialism in a move toward building a just and equitable society.

Astronomy (ASTR)

ASTR 5 Introduction to Astronomy**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

An introductory, non-technical survey of the universe. Fundamental concepts and facts of astronomy. Topics include the origin and evolution of planets, stars, and galaxies; results of space exploration and modern cosmology. Enroll in ASTR 5L to receive laboratory science credit. Field trips may be required.

ASTR 5H Introduction to Astronomy - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A; Acceptance into the Honors Program

An honors course designed to provide an enriched experience. An introductory, non-technical survey of the universe. Fundamental concepts and facts of astronomy. Topics include the origin and evolution of planets, stars, and galaxies; results of space exploration and modern cosmology. Enroll in ASTR 5L to receive laboratory science credit. Field trips may be required. Students may not receive credit for both ASTR 5H and ASTR 5.

ASTR 5L Astronomical Observing Laboratory**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Corequisite: ASTR 5 or ASTR 5H or ASTR 7 or ASTR 8 (May have been taken previously)

Advisory: MATH 51

Practical experience in astronomy including use of telescopes and demonstrations in the college planetarium. Occasional evening observing sessions with the telescopes and other field trips are required.

ASTR 7 Geology of the Solar System**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Geological features and evolution in the solar system. Course surveys techniques used to study cratering, tectonic and volcanic activity, weathering, landsliding, erosion, and faulting. Emphasis on solid surfaces other than Earth. Enroll in ASTR 5L to receive lab science credit. Field trips required.

ASTR 8 Introduction to Stars, Galaxies, and the Universe**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Survey of current astronomical models, structure and evolution of stars, galaxies, and the universe. Field trip(s) required. Enroll in ASTR 5L to receive lab science credit.

ASTR 11 Introduction to Astrophysics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: PHYS 2AG

Quantitative introduction to astrophysics. Topics include: Kepler's Laws, radiation, stars, stellar evolution, the Milky Way and other galaxies, cosmology, and extrasolar planets. Evening observations required.

ASTR 99 Special Projects in Astronomy**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

In order to offer students recognition for their academic interests and ability, and the opportunity to explore their disciplines to greater depth, the various departments from time to time offer Special Projects courses. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Student must have instructor's authorization before enrolling in this class. Students who repeat this course will improve skills through further instruction and practice.

ASTR 99A Special Projects in Astronomy - Telescope Research**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Prerequisite: Instructor authorization required.

This course is designed to give students an authentic research experience to help them make long term career decisions. Students will learn how to operate a telescope properly, take research quality data, process it using astronomy research software, write a professional research paper/poster and present their research. Students will also learn specialized concepts and skills that can help them transfer to an astronomy internship program. Students must regularly attend telescope lab until midnight. Instructor authorization required.

ASTR 99B Special Projects in Astronomy - Astrophotography**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Advisory: Instruction authorization required.

Correctly setup and align a telescope as well as use of a DSLR camera to take pictures of the night sky. Techniques in camera settings, filters, stacking, and software processing to get the most of their images. This course includes several overnight field trips to dark sky areas where better images can be taken of the night sky. Instructor authorization required.

ASTR 99C Special Projects in Astronomy - Planetarium**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Advisory: Instructor authorization required

Operate and present a planetarium show focusing on presentation planning, public speaking and presenting skills, and technical programming.

ASTR 99D Special Projects in Astronomy - Research**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Advisory: Instructor authorization required.

Offers select students opportunities to explore astronomy in greater depth. The content of the course and the methods of study vary from semester to semester and depend on the particular project under consideration. This course is designed for students doing research outside of the college through an internship or other research program. Instructor authorization needed prior to enrollment.

Biology (BIOL)

BIOL 1 General Biology**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 54

Prerequisite: Eligibility for ENGL 68

Advisory: READ 90

Major principles and concepts, including cellular biology, energy relationships, biological systems, heredity, evolution and ecology for non-science majors.

BIOL 2 Plant and Animal Biology**4 Units** (Degree Applicable, CSU, UC, C-ID #: BIOL 140)

UC Credit Limitation

Lecture: 54 Lab: 54

Prerequisite: BIOL 1 or BIOL 4 or BIOL 4H and eligibility for MATH 110 or MATH 130

Organismal biology including concepts in systematics, evolution, plant and animal physiology, ecology, and biotic relationships. Field trips are required.

BIOL 3 Ecology and Field Biology**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Advisory: Eligibility for ENGL 1A

Identification and ecological relationships of common local plants and animals. Emphasizes evolutionary relationships; ecology including animal behavior, communities, ecosystems, wilderness and wildlife preservation, and population dynamics. Techniques of collecting and preserving. Many laboratory meetings conducted off campus; most trips require walking and/or hiking. Hiking, weekend and other field trips required.

BIOL 4 Biology for Majors**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 71

Prerequisite: (CHEM 10 or CHEM 40) and MATH 71

Advisory: Eligibility for ENGL 1A

Principles of biology required for advanced study, including cellular and molecular biology, bioenergetics, genetics, reproduction, evolution, biodiversity, and ecology. General Biology for science majors. One hour discussion group per week. Field trips with extensive hiking required.

BIOL 4H Biology for Majors - Honors**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 71

Prerequisite: Acceptance into the Honors Program; (CHEM 40 or CHEM 10) and MATH 71

Principles of biology required for advanced study including concepts of cellular and molecular biology, bioenergetics, genetics, reproduction, evolution, biodiversity and ecology. An honors course designed to provide an enriched experience. Students may not receive credit for both BIOL 4 and BIOL 4H. Field trips with extensive hiking required.

BIOL 5 Contemporary Health Issues**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHS 100)

Lecture: 54

Contemporary health issues known to affect the quality and longevity of life. Topics include sexuality and reproduction, stress management, fitness and nutrition, substance use and abuse, and environmental quality. Emphasis on prevention of illness and injuries.

BIOL 6 Humans and the Environment**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Ecological concepts to aid understanding the Earth's environmental crisis and determining courses of action to correct the problem. Emphasis will be placed on specific problems of population, pollution, preservation of wildlife and wilderness, and open space. A historical appraisal of human attitudes toward the land and of the necessity of developing a new land ethic.

BIOL 6L Humans and the Environment Laboratory**2 Units** (Degree Applicable, CSU, UC)

Lab: 108

Prerequisite: BIOL 6 (may be taken concurrently)

Investigates major principles and problems of humans and the environment in the field and in the biological science laboratory. Most laboratory meetings will be conducted at off-campus locations. Some trips will require significant amounts of walking. Course includes one weekend and one all day field trip.

BIOL 8 Cell and Molecular Biology**4 Units** (Degree Applicable, CSU, UC, C-ID #: BIOL 190)

Lecture: 54 Lab: 54

Prerequisite: (BIOL 4 or BIOL 4H) and (CHEM 50 or CHEM 50H)

Cell and molecular biology including eukaryotic cells, eukaryotic organelles, protein structure and functions; DNA and RNA structure and functions; protein synthesis; genome organization in viruses, prokaryotes, and eukaryotes; gene cloning; protein and DNA technology and applications of genetic engineering.

BIOL 13 Human Reproduction, Development and Aging**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Human Development, from conception to death. Conception, growth, maturation and aging are studied as a natural continuum, influenced by our biophysical and psychosocial environment. Includes developmental theories and scientific methods used to study development. Field trips to several off-campus sites are required

BIOL 15 Human Sexuality**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Surveys biological, behavioral, cultural and ethical aspects of human sexuality. Contains mature and sexually explicit content.

BIOL 15H Human Sexuality - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Surveys biological, behavioral, cultural and ethical aspects of human sexuality. Contains mature and sexually explicit content. An honors course designed to provide an enriched experience. Students may not receive credit for both BIOL 15 and BIOL 15H.

BIOL 17 Neurobiology and Behavior**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

An integrated analysis of the biological, ecological and evolutionary bases of animal behavior (ethology.) Historical and evolutionary contexts are emphasized through a detailed consideration of the psychobiological, ecological, ontological and sociobiological determinants of animal behavior. Field trip required.

BIOL 20 Marine Biology**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Marine environment including the principles of marine science, biology of marine invertebrates and vertebrates, structure and function of marine ecosystems, and human impact on the ocean. Field trip required.

BIOL 21 Marine Biology Laboratory**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Corequisite: BIOL 20 (May have been taken previously)

Field and laboratory aspects of the marine environment. Emphasizes the structure and functional biology of marine invertebrates and vertebrates, ecology of intertidal organisms, and ecology of estuaries. Completion or concurrent enrollment in BIOL 20 is required. Field trips are required.

BIOL 25 Conservation Biology**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Concepts of conservation biology for natural resources, including biogeography, biodiversity and extinction, environmental law, public lands, and conservation organizations. Emphasis on strategies important to addressing biological conservation and sustainable management of natural and managed ecosystems. A field trip is required.

BIOL 34 Fundamentals of Genetics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: BIOL 4 or BIOL 4H

Theory and applications of genetics. Major topics include Mendelian and molecular genetics, mechanisms of inheritance, gene expression, linkage and chromosome mapping, mutations and evolution, population genetics, and ethical and moral implications of biotechnology.

BIOL 34L Fundamentals of Genetics Laboratory**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Corequisite: BIOL 34 (May have been taken previously).

Experiments and problem solving in genetics including Mendelian Genetics, linkage and recombination, cell division, mutation, molecular genetics including use of polymerase chain reaction (PCR) and electrophoresis, population genetics, and bioinformatics.

BIOL 99A Special Projects in Biology**1-2 Units** (Degree Applicable, CSU)

Lecture: 18-36

In order to offer students recognition for their academic interests and ability and the opportunity to explore their disciplines to greater depth, the various departments from time to time offer Special Projects courses. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Students must have instructor's authorization before enrolling in this course.

Botany (BTNY)

BTNY 3 Plant Structures, Functions, and Diversity

5 Units (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 108

Advisory: (BIOL 1 or BIOL 4) and Eligibility for ENGL 1A

Structures, functions, and diversity of plants, fungi, and algae. Includes comparative morphology and phylogenetic relationships of organisms from bacteria to angiosperms with an emphasis on ethnobotany, evolution, classification, ecology, and conservation. Several laboratory meetings are mandatory field trips, conducted off-campus, and students provide their own transportation.

Business: Accounting (BUSA)

BUSA 7 Principles of Accounting - Financial

5 Units (Degree Applicable, CSU, UC, C-ID #: ACCT 110)

Lecture: 90

Prerequisite: BUSA 11 or eligibility for MATH 51

Advisory: Eligibility for ENGL 1A

Financial accounting required of Business Administration and Accounting majors. Defines financial accounting and its relevance to business decision makers, accounting concepts and techniques, analysis and recording of financial transactions, and preparation, analysis and interpretation of financial statements focusing on application of generally accepted accounting practices. Includes asset, liability, and equity valuation, revenue and expense recognition, cash flow, internal controls, ethics, and financial statement analysis. General Ledger Accounting Software program is integrated throughout and used to complete various homework assignments.

BUSA 8 Principles of Accounting - Managerial

5 Units (Degree Applicable, CSU, UC, C-ID #: ACCT 120)

Lecture: 90

Prerequisite: BUSA 7

Managerial accounting concepts and principles. Includes the role of managerial accounting, cost management concepts, cost behavior and relevant costs, job order and process costing, cost-volume-profit analysis, absorption and variable costing, profit planning and budgeting, standard costing and flexible budgeting, responsibility accounting and segment reporting, capital budgeting decisions, activity based costing, and cost management for just-in-time environments. Excel spreadsheet software is used to solve accounting problems and decision making in business.

BUSA 11 Fundamentals of Accounting

3 Units (Degree Applicable)

Lecture: 54

Prerequisite: BUSA 68 or eligibility for MATH 50

Accounting vocabulary and theory, equations to solve word problems, simple and compound interest, present value, consumer and business credit, mortgages, financial statements and ratios, inventory, depreciation, business taxes, and investments.

BUSA 21 Cost Accounting

4 Units (Degree Applicable)

Lecture: 72

Prerequisite: BUSA 7

Advisory: BUSA 8

Practical and theoretical concepts of cost accounting. Includes variable and fixed costs, cost-volume-profit analysis, job order and process costing, activity-based costing, general and flexible budgeting, standard costs, product costing and pricing methods, cost allocation, inventory management, capital budgeting, and transfer pricing.

BUSA 52 Intermediate Accounting I

3 Units (Degree Applicable)

Lecture: 54

Prerequisite: BUSA 7

Advisory: BUSA 8

Accounting concepts and principles and an in-depth examination of the conceptual framework for financial reporting of the balance sheet and income statement. Emphasis is placed on the changing nature of principles and practices, the application of present-value concepts, inventory valuation concepts, the acquisition and disposition of property, plant and equipment, the complexity of transactions that arise in a multifaceted economic environment, and the use of accounting information in decision making.

BUSA 52B Intermediate Accounting II

3 Units (Degree Applicable)

Lecture: 54

Prerequisite: BUSA 7

Advisory: BUSA 52

Intermediate accounting concepts and principles with an emphasis placed on current liabilities and contingencies, long-term liabilities, stockholders' equity, accounting for investments, accounting for income taxes, accounting for pensions and post-retirement benefits, and accounting changes and error analysis.

BUSA 58 Federal Income Tax Law

4 Units (Degree Applicable)

Lecture: 72

Prerequisite: BUSA 7 or BUSA 72

United States Federal and California state income tax law as it relates to individuals, sole proprietorships, and other business entities. This course is certified by the California Tax Education Council (CTEC) as fulfilling the 60-hour qualifying education requirement imposed by the State of California for becoming a registered tax return preparer.

BUSA 59 Volunteer Income Tax Assistance I

1 Unit (Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 18

Prerequisite: BUSA 7 or BUSA 72

Education, software training, and completion of Internal Revenue Service (IRS) Volunteer Income Tax Assistance (VITA) certification exams for preparation of tax returns in the VITA program. This is the first in a sequence of two courses for the VITA program. Upon successful completion of the IRS VITA Basic and Intermediate exams, students will be able to assist low income individuals and families with tax return preparation through the IRS sponsored VITA program.

BUSA 60 Volunteer Income Tax Assistance II**1 Unit** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 54

Prerequisite: BUSA 59

The second in a sequence of two courses designed for students in the Volunteer Income Tax Assistance (VITA) program. Students who successfully passed BUSA 59 will apply their tax knowledge by assisting low income individuals and families with tax return preparation. Current tax preparation software will be used to file tax returns with the IRS under the scope of the VITA program. Students will assist in development of a tax practice administration, a system of quality control, and enhance communication skills through taxpayer interviews and explaining results of tax returns.

BUSA 68 Business Mathematics**3 Units** (Not Degree Applicable)

Lecture: 54

Addition, subtraction, multiplication, division, decimals, percentages, fractions, signed numbers, equations, and problem solving.

BUSA 70 Payroll and Tax Accounting**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: BUSA 68 or Eligibility for MATH 50

On-the-job payroll accounting. Surveys the various tax procedures required by the employer and employee in filing the correct forms for Social Security, federal, and state income taxes and their reconciliation. Laws related to Worker's Compensation, State Disability Benefit Laws, and Fair Employment Practices are discussed.

BUSA 71 Personal Financial Planning**3 Units** (Degree Applicable, CSU)

Lecture: 54

Integrative approach to personal finance focusing on practical financial decision making as well as the social, psychological, and physiological contexts in which those decisions are made. Students will examine their relationships with money, set personal goals, and develop a plan to meet those goals. Topics include consumerism, debt, healthcare, investing, retirement, long-term care, disability, death, and taxes. Students may not earn credit for both BUSA 71 and FCS 80.

BUSA 72 Bookkeeping - Accounting**5 Units** (Degree Applicable)

Lecture: 90

Prerequisite: BUSA 68 or eligibility for MATH 50

Bookkeeping and accounting principles, including the accounting cycle for service and merchandising companies, cash management, payroll, and special journals. Computerized simulations and completion of an accounting project for a company.

BUSA 75 QuickBooks for Accounting**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: BUSA 7 or BUSA 72

Accounting concepts utilizing QuickBooks, a general-ledger software program. Hands-on use of a microcomputer to process accounting transactions, prepare statements and reports, and complete accounting cycle tasks.

BUSA 76 Excel for Accounting**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: BUSA 7 or BUSA 72

Analysis of financial data and preparation of managerial accounting reports using Excel software. The development of comprehensive analysis models using Microsoft Excel formulas, pivot tables, and pivot charts to summarize complex managerial accounting data into information for decision making. Includes manufacturing and consolidation worksheets, financial statement analysis, and statement of cash flows. The ability to demonstrate the use of presentation methods like Microsoft PowerPoint to effectively communicate analysis of managerial accounting information.

BUSA 81 Work Experience in Accounting**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Advisory: BUSA 7 or BUSA 72

Provides accounting students with on-the-job experience in an approved, on-campus or off-campus work site which is related to classroom-based learning. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester is required for each unit of credit. Work experience placement is not guaranteed, but assistance is provided. Students who repeat this course will improve skills through further instruction and practice.

Business : Business Communication (BUSO)

BUSO 5 Business English**3 Units** (Degree Applicable)

Lecture: 54

Advisory: Eligibility for ENGL 1A or AMLA 1A or ENGL 1AM

Skills and techniques of English, as applied to business situations, with emphasis on effective document structure.

BUSO 25 Business Communications**3 Units** (Degree Applicable, CSU, C-ID #: BUS 115)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or AMLA 1A or ENGL 1AM

Written communications, including letters and memos, for a variety of situations in the business environment. Includes writing of good news, bad news, sales, claims, and persuasive correspondence; letters and resumes appropriate to job seeking and application; and practicing oral skills as applied to job interviews and business reports.

BUSO 26 Oral Communications for Business**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Oral communication used in business situations such as training sessions, presentations, professional discussions, and telephone interactions.

Business: Economics (BUSC)

BUSC 1A Principles of Economics - Macroeconomics

3 Units (Degree Applicable, CSU, UC, C-ID #: ECON 202)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A, and successful completion of MATH 71, or MATH 71B, MATH 71X, or higher

Principles of aggregate economic analysis; economic cycles including recession, unemployment, inflation and economic growth; national income accounts; money and financial institutions; monetary and fiscal policy; alternative economic viewpoint; budget deficits and public debts; international trade and finance.

BUSC 1AH Principles of Economics - Macroeconomics - Honors

3 Units (Degree Applicable, CSU, UC, C-ID #: ECON 202)

Lecture: 54

Prerequisite: Acceptance into the Honors Program and MATH 71, or MATH 71B, MATH 71X, or higher

Principles of aggregate economic analysis; economic cycles including recession, unemployment, inflation and economic growth; national income accounts; money and financial institutions; monetary and fiscal policy; alternative economic viewpoint; budget deficits and public debts; international trade and finance. An honors course designed to provide an enriched experience students may not receive credit for both BUSC 1A and BUSC 1AH.

BUSC 1B Principles of Economics - Microeconomics

3 Units (Degree Applicable, CSU, UC, C-ID #: ECON 201)

Lecture: 54

Prerequisite: BUSC 1A or BUSC 1AH

Economic analysis with emphasis on price and distribution theory, scarcity, opportunity costs, supply, demand, elasticity of supply and demand, consumer's behavior, cost theory and output determination under various market structures, factor markets, public choice, income distribution, externalities and government regulation, and comparative economic systems.

BUSC 1BH Principles of Economics - Microeconomics - Honors

3 Units (Degree Applicable, CSU, UC, C-ID #: ECON 201)

Lecture: 54

Prerequisite: BUSC 1A or BUSC 1AH

Economic analysis with emphasis on price and distribution theory, scarcity, opportunity costs, supply, demand, elasticity of supply and demand, consumer's behavior, cost theory and output determination under various market structures, factor markets, public choice, income distribution, externalities and government regulation, and comparative economic systems. This is an honors course designed to provide an enriched experience. Students may not receive credit for both BUSC 1B and BUSC 1BH.

BUSC 17 Applied Business Statistics

3 Units (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Prerequisite: MATH 71 or MATH 71B or appropriate MATH placement

Statistical reasoning and application of primary statistical techniques used in solving managerial problems. Topics include collection and interpretation of data, measures of central tendency and dispersion, probability distributions, sampling and estimation, hypothesis testing, analysis of variance, linear regression, and correlation and index numbers.

Business: Law (BUSL)

BUSL 18 Business Law

3 Units (Degree Applicable, CSU, UC, C-ID #: BUS 125)

UC Credit Limitation

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Principles of business law emphasizing legal setting of business, nature of the law and court procedures, principles of contract law, sales of goods under the Uniform Commercial Code, torts, ethics, the U.S. Constitution, and criminal law.

BUSL 19 Advanced Business Law

3 Units (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Advisory: BUSL 18

Principles of business law emphasizing commercial paper, agency, partnerships, corporations, bankruptcy, regulation of trade, and real property.

BUSL 100 American Law and Democracy

3 Units (Degree Applicable, CSU, UC, C-ID #: LPPS 110)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

An interdisciplinary exploration of themes such as equality, citizenship, civil rights, and access to justice. Critical examination of legal structures and limits on democracy, as well as democracy as a universal value. An exploration of the U.S. Constitution and U.S. law and how they limit and empower democracy.

Business: Management (BUSM)

BUSM 10 Principles of Continuous Quality Improvement

3 Units (Degree Applicable)

Lecture: 54

Advisory: BUSO 5 or eligibility for ENGL 68

History and evolution of thought in Continuous Quality Improvement (CQI), including the theories and methods of Deming, Juran, and Crosby. Practical application of Quality management processes and tools are presented for the continuous improvement of (organizational quality. Relevant case studies are included.

BUSM 20 Principles of Business**3 Units** (Degree Applicable, CSU, UC, C-ID #: BUS 110)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Business and its functions, background, development, organization, and opportunities. Business terms, current trends, methods, contemporary and future problems, and current business practices are covered.

BUSM 50 World Culture: A Business Perspective**3 Units** (Degree Applicable, CSU)

Lecture: 54

An overview of the effects of culture on business communication and interaction. Cultural roles and components are described and related to the business environment and the student's own culture.

BUSM 51 Principles of International Business**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: BUSO 5 or Eligibility for ENGL 68

International business environment with a global perspective. Introduces global viewpoints across the full spectrum of business functions, including, but not limited to: accounting, finance, human resources, management, operations, production, purchasing, and strategic planning.

BUSM 52 Principles of Exporting and Importing**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: BUSO 5 or Eligibility for ENGL 68

Practical information needed to participate in activities related to the exporting and importing of goods and services. Includes vocabulary, acronyms, trends, regulations, regional agreements, documentation, and challenges related to the exporting and importing of goods and services.

BUSM 53 Supply Chain Management**3 Units** (Degree Applicable, CSU)

Lecture: 54

The supply chain and its key elements. Students are exposed to concepts, models, and terminology used in demand planning, inventory planning, material planning, distribution planning, fulfillment planning, and related components of a supply chain.

BUSM 60 Human Relations in Business**3 Units** (Degree Applicable, CSU)

Lecture: 54

Inter-disciplinary study of how people work and relate at the individual, group, and organizational level. Topics include motivation, team work, leadership skill, and how to handle organizational change.

BUSM 61 Business Organization and Management**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: BUSM 20

Functions of management, management concepts, planning, organizing, staffing, and controlling. Theories of management, lines of authority, functions of departments, and the importance of policies, procedures, and controls.

BUSM 62 Human Resource Management**3 Units** (Degree Applicable)

Lecture: 54

Direction of people including guidance, control, supervisory problems, training, job analysis, interviewing, testing, rating, and other functions involving human resources. Designed to improve the overall understanding of the relationship between the individual and the business organization.

BUSM 66 Small Business Management**3 Units** (Degree Applicable, CSU)

Lecture: 54

Organizing, starting, and operating a small business enterprise. Emphasis on entrepreneurial applications in a small business environment.

BUSM 81 Work Experience in Business**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Provides business students with on-the-job experience in an approved, off-campus worksite which is related to classroom-based learning. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester is required for each unit of credit. Work experience placement is not guaranteed, but assistance is provided. Students who repeat this course will improve skills through further instruction and practice.

BUSM 85 Special Issues in Business**2 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Provide business majors with a forum to gain knowledge, develop techniques, problem solve and implement solutions in an actual business situation to add to the creation of a career portfolio.

Business: Real Estate (BUSR)

BUSR 40 Landlord-Tenant Law**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: BUSR 50

Formerly PLGL 40

Landlord-tenant law and creation of legal documentation to represent the landlord-tenant relationship. Examination of the rights and liabilities of the landlord and the tenant.

BUSR 50 Real Estate Principles**3 Units** (Degree Applicable, CSU)

Lecture: 54

Real estate law, public control, property valuation, finance, and real estate practice. Meets some of the California Real Estate Salesperson and Broker License requirements and meets 30 hours toward Basic Appraisal Procedures 2008 Appraiser Qualifications Board (AQB) requirements for certified-residential/certified-general appraiser license. Also provides 30 hours toward Bureau of Real Estate Appraisers (BREA) requirements for state licensing. Required by the Department of Real Estate (DRE) for all real estate salespersons.

BUSR 51 Legal Aspects of Real Estate**3 Units** (Degree Applicable)

Lecture: 54

Advisory: BUSR 50

Real estate contracts, leases, deeds, foreclosures, homesteads, agency, and disclosures. Can be used to meet the additional educational requirements for the salesperson or broker license.

BUSR 52 Real Estate Practice**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: BUSR 50 (May have been taken previously)

Office procedures and practices in listings, advertising, prospecting, financing, exchanges, property management, salesmanship, land utilization, and public relations. Must be completed prior to applying to take the Salesperson License Exam.

BUSR 53 Real Estate Finance**3 Units** (Degree Applicable)

Lecture: 54

Advisory: BUSR 50

Real estate financing sources, loans underwriting, applications, and appraisals. Can be used to meet the additional education requirement of the salesperson or broker license.

BUSR 55 Real Estate Economics**3 Units** (Degree Applicable)

Lecture: 54

Advisory: BUSR 50

International, national, and local factors that determine the value of real estate.

BUSR 59 Real Estate Property Management**3 Units** (Degree Applicable)

Lecture: 54

Advisory: BUSR 50

Property management for owners and managers of residential and commercial income properties. Meets California real estate license requirements for salesperson and broker.

BUSR 60 Real Estate Investment Planning**3 Units** (Degree Applicable)

Lecture: 54

Advisory: BUSR 50

Investment strategies, techniques, systems, and theories involving all forms of real estate with emphasis on research methods needed for successful investing.

BUSR 62 Mortgage Loan Brokering and Lending**3 Units** (Degree Applicable)

Lecture: 54

Advisory: BUSR 50

State and Federal laws that govern the practice of mortgage loan brokerage and lending in California as well as mortgage lending history and process. May be used as an elective for the salesperson or broker license.

BUSR 76 Escrow Procedures I**3 Units** (Degree Applicable)

Lecture: 54

Advisory: BUSR 50

Escrow procedures including processing of case study sale escrows with and without new trust deed financing, including escrow vocabulary, drawing of documents, and other processing details pertinent to handling escrows from inception to closing. May be used as an elective for the salesperson or broker license.

BUSR 81 Appraisal: Principles and Procedures**3.5 Units** (Degree Applicable)

Lecture: 63

Advisory: BUSR 50

Principles and procedures of appraising real property with emphasis on residential properties. Required by Bureau of Real Estate Appraisers (BREA) for all appraisal licenses and by the Department of Real Estate (DRE) for real estate broker license. Provides 60 hours toward BREA requirements for state licensing. Includes all topics listed in Appraisal Qualifications Board (AQB) Basic Appraisal Principles and Basic Appraisal Procedures modules. May be used as the elective course for the salesperson license.

Business: Sales, Merchandising & Marketing (BUSS)

Correction: Removed transfer designation error from BUSS

34. 10/25/2022

BUSS 33 Advertising and Promotion**3 Units** (Degree Applicable, CSU)

Lecture: 54

Characteristics and role of advertising and promotion in business. Emphasis is placed on promotional mix, trend and forecast research, and developing a comprehensive multimedia promotion plan including advertising layout and copy.

BUSS 34 Social Media Marketing**3 Units** (Degree Applicable)

Lecture: 54

An introduction to basic social media marketing concepts, strategies, and techniques in a global online marketplace. A basic understanding of the creation, execution, transmission, and evaluation of social media and social networks concerned with the advertising and promotion of products and services.

BUSS 35 Professional Selling**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 68 or AMLA 90

Principles of selling and the role of a salesperson in the marketing process. Includes characteristics and skills necessary for a successful salesperson, techniques for prospecting and/or qualifying buyers, buyer behavior, and critical steps in the selling process. Students develop and offer a sales presentation for a selected product, service, or concept.

BUSS 36 Principles of Marketing**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Organization and function of system of distributing goods and services from the point of production to the consumer. Preparation of a marketing plan using product, distribution, promotional and pricing strategies.

BUSS 50 Retail Store Management and Merchandising**3 Units** (Degree Applicable, CSU)

Lecture: 54

Principles and practices used in the management and merchandising of retail stores. Includes critical buying function, merchandising, promotional techniques, site selection, layout, staffing, market positioning, and customer service.

BUSS 79 Work Experience in Marketing Management**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Prerequisite: BUSS 33 or BUSS 35 or BUSS 36 or BUSS 50 and compliance with Work Experience regulations as designated in the College Catalog

Job experience in an approved work site relating to classroom-based learning for marketing students. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester.

BUSS 85 Special Issues in Marketing**2 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Provides marketing students with an opportunity to problem solve and develop a marketing plan or related project as requested by a local business to add to the creation of a career portfolio.

Chemistry (CHEM)

CHEM 9 Chemistry of Everyday Life**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Chemistry for non-majors. States of matter, scientific measurements and experimentation, periodic table, nomenclature, atomic and molecular structure, bonding, solubility, reactions, and acids and bases. Emphasis on chemistry principles and the scientific method as applied in medicine, health, environment, and everyday lives.

CHEM 10 Chemistry for Allied Health Majors**5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 72 Lab: 54

Prerequisite: Eligibility for MATH 71

Measurements, structure, nomenclature (includes organic), formulas, reactions, radioactivity, energy, acids, bases, solutions and pH, and properties of solid, liquid, and gas. This course is appropriate for allied health majors. Completion does not give eligibility for CHEM 50.

CHEM 20 Introductory Organic and Biochemistry**5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 108

Prerequisite: CHEM 10 or CHEM 40

Nomenclature, structure, function, and reactions of major classes of organic compounds and of biomolecules, including amino acids, lipids, carbohydrates, nucleic acids (DNA and RNA), and proteins. Structure and function of vitamins, coenzymes, and enzymes. Metabolic pathways and biochemical energy. Recommended for allied health majors.

CHEM 40 Introduction to General Chemistry**5 Units** (Degree Applicable, CSU, UC, C-ID #: CHEM 101)

UC Credit Limitation

Lecture: 72 Lab: 54

Prerequisite: Eligibility for MATH 71

Advisory: Eligibility for ENGL 1A

Measurements, atomic structure, chemical equations, stoichiometry, gases, solutions, acids and bases, bonding, nomenclature, matter, and energy. Completion prepares students to take CHEM 50.

CHEM 50 General Chemistry I**5 Units** (Degree Applicable, CSU, UC, C-ID #: CHEM 110, CHEM120S(50+51))

UC Credit Limitation

Lecture: 54 Lab: 108

Prerequisite: CHEM 40 or satisfactory score on Chemistry Placement Examination; and MATH 71 or MATH 71B or MATH 71X or equivalent.

General Chemistry topics including chemical formulas, equations, nomenclature, reactions, stoichiometry, thermochemistry, periodic trends, atomic structure, chemical bonding and structure, and properties of gases, liquids, solids, and solutions. Emphasis is on critical thinking as well as mathematical and dimensional analysis problem-solving. Laboratory experiments emphasize the scientific method as well as computer-based technologies in data acquisition and analysis. Introduces laboratory report writing skills.

CHEM 50H General Chemistry I - Honors**5 Units** (Degree Applicable, CSU, UC, C-ID #: CHEM 110, CHEM120S(50+51))

Lecture: 54 Lab: 108

Prerequisite: Acceptance into the Honors Program. CHEM 40 or satisfactory score on Chemistry Placement Examination, and MATH 71 or MATH 71B or MATH 71X or equivalent.

General Chemistry topics including chemical formulas, equations, nomenclature, reactions, stoichiometry, thermochemistry, periodic trends, atomic structure, chemical bonding and structure, and properties of gases, liquids, solids, and solutions. Emphasis is on critical thinking as well as mathematical and dimensional analysis problem-solving. Laboratory experiments emphasize the scientific method as well as computer-based technologies in data acquisition and analysis. Introduces laboratory report writing skills. An honors course designed to provide an enriched experience. Students may not receive credit for both CHEM 50 and CHEM 50H.

CHEM 51 General Chemistry II**5 Units** (Degree Applicable, CSU, UC, C-ID #: CHEM120S(50+51))

Lecture: 54 Lab: 108

Prerequisite: CHEM 50 or CHEM 50H

Kinetics, equilibrium, thermodynamics, acid-base and oxidation-reduction reactions, transition metals, electrochemistry, and nuclear chemistry. Emphasis is on critical thinking and mathematical problem-solving. Laboratory experiments support lecture topics and use a variety of instrumentation and technology in data acquisition and analysis.

CHEM 51H General Chemistry II - Honors**5 Units** (Degree Applicable, CSU, UC, C-ID #: CHEM120S(50+51), (50H +51H))

Lecture: 54 Lab: 108

Prerequisite: Acceptance into the Honors Program and CHEM 50 or CHEM 50H

Kinetics, equilibrium, thermodynamics, acid-base and oxidation-reduction reactions, transition metals, electrochemistry, and nuclear chemistry. Emphasis is on critical thinking and mathematical problem-solving. Laboratory experiments support lecture topics and use a variety of instrumentation and technology in data acquisition and analysis. An honors course designed to provide an enriched experience. Students may not receive credit for both CHEM 51 and CHEM 51H.

CHEM 55 Chemistry for Engineers**5 Units** (Degree Applicable, CSU, UC)

Lecture: 72 Lab: 54

Prerequisite: CHEM 40 and MATH 71 or MATH 130 or satisfactory score on Chemistry Placement Examination

Topics including periodic table and atomic structure, bonding in solids, stoichiometry, chemical reactions, gases, thermodynamics, kinetics, equilibrium, electrochemistry, organic, polymers, and nuclear chemistry for engineering majors. Completion does not give eligibility for CHEM 51.

CHEM 80 Organic Chemistry I**5 Units** (Degree Applicable, CSU, UC, C-ID #: CHEM 150, CHEM160S(80+81))

UC Credit Limitation

Lecture: 54 Lab: 108

Prerequisite: CHEM 51

Designed for chemistry, biochemistry, chemical engineering and biology majors; also for those in pre-professional programs such as medicine, veterinary medicine, dentistry, optometry and pharmacy. Nomenclature, structure-reactivity relationships, energetics, reactions, reaction mechanisms, synthesis, separation, characterization and spectroscopic methods for organic compounds.

CHEM 81 Organic Chemistry II**5 Units** (Degree Applicable, CSU, UC, C-ID #: CHEM 160 S, (80 + 81))

Lecture: 54 Lab: 108

Prerequisite: CHEM 80

The second semester of a one-year course. Fundamental principles and concepts of organic chemistry including, structure, bonding, nomenclature, stereochemistry, and functional groups with emphasis on reactions and reaction mechanisms of aromatic compounds, phenols, ethers, carbonyl compounds, carboxylic acids, amines, and their derivatives. Multi-step syntheses, stereochemistry of reactions, and structure elucidation using modern instrumental methods are also included. An introduction to biomolecules (carbohydrates, lipids, and proteins) is presented.

CHEM 99 Special Projects in Chemistry**2 Units** (Degree Applicable, CSU)

Lecture: 36

Prerequisite: CHEM 50

Offers selected students recognition for their academic interest and ability and the opportunity to explore their disciplines to greater depth. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Students must have an instructor's authorization before enrolling in this class.

Child Development (CHLD)

CHLD 1 Child, Family, School and Community**3 Units** (Degree Applicable, CSU, UC, C-ID #: CDEV 110)

Lecture: 54

Advisory: AMLA 1A or ENGL 1A or ENGL 1AM

Home, child, school, and community relationships as they pertain to the historical and contemporary perspectives on the education and socialization of children. Family systems and community resources and the influences of age, gender, culture, diverse abilities, socioeconomic status, and public policies factors that affect children and families.

CHLD 5 Principles and Practices in Child Development Programs**3 Units** (Degree Applicable, CSU, C-ID #: ECE 120)

Lecture: 54

Examine historical context, philosophies, and theoretical framework in early childhood education, including ethical conduct, career pathways, professional standards, and advocacy. Explore culturally relevant practice and developmentally appropriate curriculum when planning learning environments for diverse learners in early childhood programs. Assesses best practices related to child observations, teaching strategies, and state regulations. Evaluate the key role of relationships and adult-child interactions in supporting children's physical, social, emotional, language, and cognitive development. TB clearance and 4 observation hours required.

CHLD 6 Introduction to Child Development Curriculum**3 Units** (Degree Applicable, CSU, C-ID #: ECE 130)

Lecture: 54

Advisory: CHLD 5 or CHLD 11

Curriculum designs, content areas, and environments related to early education programs. Teaching strategies and curriculum development based on theoretical frameworks, observation, and assessment through a cultural lens to explain and plan for children's development across the curriculum, including all content areas. Materials and resources used to plan and implement developmentally appropriate curriculum and learning environments for children from birth to 8 years old. TB test and observations required.

CHLD 10 Child Growth and Lifespan Development**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Human lifespan and developmental influences. Developmental approach to the study of the individual identifying effects on growth processes from conception through the end of life. Meets requirements for Title 22 and Title V Regulations pertaining to Child Development Permit. TB clearance and out-of-class observations and interviews required.

CHLD 10H Child Growth and Lifespan Development - Honors**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Human lifespan and developmental influences. Developmental approach to the study of an individual identifying forces affecting growth processes from conception through the end of life. Meets requirements for Title 22 and Title V Regulations pertaining to Child Development Permit. An honors course designed to provide an enriched experience for accelerated students. TB test required. Students may not receive credit for both CHLD 10 and CHLD 10H.

CHLD 11 Child and Adolescent Development**3 Units** (Degree Applicable, CSU, UC, C-ID #: CDEV 100)

UC Credit Limitation

Lecture: 54

Examines major physical, psychosocial, cognitive, language, and brain developmental processes prenatal through adolescence. Emphasis on developmental theory, research methodologies, maturational processes, and environmental factors. Students observe children and analyze characteristics of development at various stages according to developmental theories. Meets Title 22 and Title V requirements for the Child Development Permit. TB test, out-of-class observations, and interviews required.

CHLD 50 Teaching in a Diverse Society**3 Units** (Degree Applicable, CSU, C-ID #: ECE 230)

Lecture: 54

Advisory: CHLD 1 and ENGL 1A or ENGL 1AH

Examination of the impact of various societal influences on the development of children's social identity within a diverse society including theoretical and practical implications. Various classroom strategies will be explored emphasizing culturally competent practices to effectively work with diverse populations of children and families. Evaluation of teaching approaches and classroom environments will help students develop the skills and dispositions necessary to support all children in becoming competent members of a pluralistic society. This course includes research, self-examination, and reflection on issues related to social identity, inclusion, equity, and diversity.

CHLD 51 Early Literacy in Child Development**3 Units** (Degree Applicable, CSU)

Lecture: 54

Theoretical foundations and effective teaching methods that support language and literacy development during early childhood. Teaching strategies for engaging children in integrated listening, speaking, reading, and writing experiences in culturally responsive classrooms will be explored. Gain an understanding of the foundational skills needed to support reading; the content of reading instruction; and scientifically based reading research, methods, and materials used in balanced reading instruction programs. Identify supportive family contexts that enhance children's language and literacy experiences. Second language acquisition, as well as the needs of English language learners will be examined. Educational policies and practices regarding reading instruction are analyzed.

CHLD 61 Language Arts and Art Media for Young Children**3 Units** (Degree Applicable)

Lecture: 54

Exploration of early childhood curriculum and teaching methods that develop creativity and literacy skills in young children. It includes planning and developing interactive, art and language experiences for children ages birth- to 8-years old. Teaching practices, curriculum and materials, and appropriate sociocultural learning environments that enhance the child's creativity and language development are examined, including standards established by the California State Department of Education.

CHLD 62 Music and Motor Development for Young Children**3 Units** (Degree Applicable, CSU)

Lecture: 54

Exploration of the relationship between music and movement and a young child's physical, cognitive, and psycho-social development. Participation and interactions and strategies that encourage children to participate in music, movement, singing and musical instruments.

CHLD 63 Math and Science for Young Children**3 Units** (Degree Applicable, CSU)

Lecture: 54

This course explores children's thinking processes and problem-solving abilities as they become aware of the physical world. It includes planning and developing interactive, engaging mathematics and science experiences for children ages 3- to 8. Teaching practices that enhance children's natural interest in math and science will be investigated, including standards established by the California State Department of Education.

CHLD 64 Health, Safety, and Nutrition of Children**3 Units** (Degree Applicable, CSU, C-ID #: ECE 220)

Lecture: 54

Introduction to the laws, regulations, standards, policies and procedures, and early childhood curriculum related to child health, safety, and nutrition. The key components that ensure physical health, mental health, and safety for both children and staff will be identified along with the importance of collaboration with families and health professionals. Focus on integrating the concepts into everyday planning and program development for all children.

CHLD 66 Early Childhood Development Observation and Assessment**2 Units** (Degree Applicable, CSU, C-ID #: ECE 200, (66+66L))

Lecture: 36

Prerequisite: CHLD 5 and CHLD 11 and ENGL 1A

Corequisite: CHLD 66L

The appropriate use of observation and assessment strategies to document children's behavior, development, and growth. Recording strategies, documentation panels, rating systems, and multiple assessment tools are explored. Note: Students must provide documentation of influenza, pertussis (TDap), and measles immunization, as well as TB clearance, as required by SB792 prior to being permitted to enroll in this class. Instructions on submitting documentation are available at <http://www.mtsac.edu/cdc/immunization/>

CHLD 66L Early Childhood Development Observation and Assessment Laboratory**1 Unit** (Degree Applicable, CSU, C-ID #: ECE 200, (66+66L))

Lab: 54

Prerequisite: CHLD 5 and CHLD 11 and ENGL 1A

Corequisite: CHLD 66

Document child development through observation and assessment in the Early Childhood Education Laboratory School. A holistic approach to child study is emphasized. Students synthesize information which they have recorded and relate it to various domains of the preschool child's growth and development. CHLD 66 must be taken concurrently. Students must provide documentation of influenza, pertussis (TDap), and measles immunization as well as tuberculosis (TB) clearance as required by SB792 prior to being permitted to enroll in this class. Instructions on submitting documentation are available at <http://www.mtsac.edu/cdc/immunization/> or at the Child Development Department office.

CHLD 67 Early Childhood Education Practicum**2 Units** (Degree Applicable, CSU, C-ID #: ECE 210, (67+67L))

Lecture: 36

Prerequisite: CHLD 5 and CHLD 6 and CHLD 11 and CHLD 66 and CHLD 66L

Corequisite: CHLD 67L

Advisory: CHLD 61 or CHLD 62 or CHLD 63

Child development principles in the preschool classroom setting and recognition of skills necessary for the teacher of young children. Evaluation of participation experiences. Note: Students must provide documentation of influenza, pertussis (TDap), and measles immunization, as well as TB clearance, as required by SB792 prior to being permitted to enroll in this class. <http://www.mtsac.edu/cdc/immunization/>

CHLD 67L Early Childhood Education Practicum Laboratory**1 Unit** (Degree Applicable, CSU, C-ID #: ECE 210, (67+67L))

Lab: 63

Corequisite: CHLD 67

Supervised teaching experience with young children. Child centered, play-oriented approaches to teaching, learning, and assessment. Student teachers design, implement, and evaluate curriculum for groups of children. Note: Students must provide documentation of influenza, pertussis (TDap), and measles immunization, as well as TB clearance, as required by SB792 prior to being permitted to enroll in this class. <http://www.mtsac.edu/cdc/immunization/>

CHLD 68 Introduction to Children With Special Needs**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: CHLD 10 or CHLD 10H or CHLD 11 or PSYC 15 or SOC 15

Typical and atypical characteristics in physical, cognitive, and social-emotional development of children with special needs. Topics relevant to the inclusive classroom are examined from a culturally sensitive, family-centered perspective. Examines current and historical legal issues, current educational trends, the referral process and community resources. TB test and observations required.

CHLD 69 Early Childhood Development Field Work Seminar**2 Units** (Degree Applicable, CSU)

Lecture: 36

Prerequisite: (CHLD 67 and CHLD 67L) or (CHLD 86 and CHLD 87)

Corequisite: CHLD 91

Selected problem-solving topics related to student teaching at community sites. Topics include philosophical orientation, curriculum, parent involvement, staff relations, professionalism, and professional growth.

CHLD 71A Administration of Child Development Programs**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: CHLD 5 and CHLD 6 and CHLD 10 or CHLD 10H

Introduction to the administration of early care and education programs including program structures, philosophies, organization, budget, record keeping, administrator characteristics, personnel supervision, staffing policies and procedures, and California laws and regulations.

CHLD 71B Personnel and Leadership in Child Development Programs**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: CHLD 71A

Leadership and strategic planning for early childhood programs, including legal and ethical responsibilities, supervision techniques, professional development, and reflective practices for a diverse and inclusive program. Personnel management practices designed to facilitate administrator and staff relationships, teamwork, and leadership skill building.

CHLD 72 Teacher, Parent, and Child Relationships**1 Unit** (Degree Applicable)

Lecture: 18

Child-parent-teacher relationships to better understand family dynamics and to recognize influences in the child development program setting. Theories of sequential changes in parent-child-school relations within the larger social context. Strategies addressing issues that emerge when working with children and their families in the school setting.

CHLD 73 Infant and Toddler Development**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: CHLD 11 and Eligibility for ENGL 68

Infants and toddlers from pre-conception to age three including physical, cognitive, language, social, and emotional growth and development. Applies theoretical frameworks to interpret behavior and interactions between heredity and environment. Emphasizes the role of family and relationships in development. Documentation of tuberculosis (TB) clearance is required.

CHLD 74 Program Planning for the School Age Child**3 Units** (Degree Applicable)

Lecture: 54

Advisory: Eligibility for ENGL 1A or ENGL 1AM or AMLA 1A and (CHLD 10 or CHLD 10H or CHLD 11)

Designing, planning and implementing developmentally appropriate child development programs, and working with school-age children in before- and after-school care settings. Techniques for discipline, guidance, conflict resolution, and relationships. Planning and conducting of interactive activities and games. This class meets the Title 22 licensing requirements for personnel in school-age programs. TB test required for observations.

CHLD 75 Supervising Adults in Early Childhood Settings**2 Units** (Degree Applicable, CSU)

Lecture: 36

Advisory: CHLD 1 and CHLD 5

Functions of leadership as an important role in working with and supervising adults in the early childhood education setting. Emphasis is on effective leadership skills for teachers of young children who function as role models and mentors to new teachers as they address the needs of children, parents and staff.

CHLD 79 Infant and Toddler Care and Education**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CHLD 73 May have been taken previously

Advisory: CHLD 11 and (ENGL 1A or ENGL 1AH or AMLA 1A)

Applies current theory and research to the care and education of infants and toddlers in group settings. Examines essential policies, principles, and practices that lead to quality care and developmentally appropriate curriculum for children from birth to 36 months. Documentation of influenza, pertussis, and measles immunization and tuberculosis (TB) clearance as required by Senate Bill (SB) No. 792.

CHLD 80 Curriculum and Strategies for Children with Special Needs**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: CHLD 68

Advisory: Eligibility for ENGL 68

Covers curriculum and intervention strategies for working with children with special needs in partnership with their families. Focuses on the use of observation and assessment in meeting the individualized needs of children in inclusive and natural environments. Includes the role of the teacher as a professional working with families, collaboration with interdisciplinary teams, and cultural competence. TB test required.

CHLD 83 Current Issues in Child Development**1 Unit** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18

Advisory: CHLD 5 and CHLD 11

Current research based actions that are applied to contemporary issues that arise in child development and early education. Contemporary issues covered will change with course offerings.

CHLD 84 Guidance and Discipline in Child Development Settings**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: CHLD 5

Appropriate for classroom teachers in various settings, students will identify developmentally appropriate behaviors, challenging behaviors and the various influences that effect children's behavior. Students will analyze children's behaviors and select strategies to make positive changes. Emphasizes the connection between children's social and emotional development and their success in the classroom, and how the teachers' perceptions, experiences, and behavior influence child behaviors.

CHLD 85 Infants At Risk**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: CHLD 10 or CHLD 10H or CHLD 11

Advisory: CHLD 73

Principles and methods of working with infants who are disabled or at-risk. Emphasis on prenatal prevention, postnatal intervention, and support programs. Course will prepare caregivers of infants at risk for appropriate program planning. TB test and out-of-class observations required.

CHLD 86 Infant Toddler Practicum Seminar**2 Units** (Degree Applicable, CSU, C-ID #: ECE 210, (86+87))

Lecture: 36

Prerequisite: CHLD 5 and CHLD 11 and CHLD 66 and CHLD 66L and CHLD 73

Corequisite: CHLD 79 (may have been taken previously) and CHLD 87

Developmentally appropriate early childhood teaching competencies under guided supervision in an infant/toddler classroom. Students utilize practical classroom experiences to make connections between theory and practice, develop professional behaviors, and build a comprehensive understanding of children and families. Child-centered, play-oriented approaches to teaching, learning, and assessment.

CHLD 87 Infant Toddler Practicum Field Work Experience**1 Unit** (Degree Applicable, CSU, C-ID #: ECE 210, (86+87))

(May be taken for Pass/No Pass only)

Prerequisite: CHLD 5 and CHLD 11 and CHLD 66 and CHLD 66L and CHLD 73

Corequisite: CHLD 86 and (CHLD 79 may have been taken previously)

Supervised teaching experience with infants and toddlers. 75 paid or 60 non-paid hours required per unit of credit. Knowledge of care routines and relationship-based content areas will be emphasized as student teachers design, implement, and evaluate experiences that promote positive development and learning for young children while supporting an inclusive and culturally diverse environment. Documentation of influenza, pertussis, and measles immunization and TB clearance as required by SB792. <http://www.mtsac.edu/cdc/immunization/>

CHLD 91 Early Childhood Development Field Work**1 Unit** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 60-75

Prerequisite: (CHLD 67 and CHLD 67L) or (CHLD 86 and CHLD 87)

Corequisite: CHLD 69

A teacher-supervised work experience course which permits students to apply early childhood development principles in community preschools. A minimum of 60 non-paid or 75 paid hours per semester of supervised work is required for one unit. Hours per week should be equally distributed throughout the semester. Documentation of influenza, pertussis, and measles immunization and TB clearance required by SB792.

Chinese (CHIN)

CHIN 1 Elementary Chinese**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Intended for students without previous exposure to Chinese. Begins to develop the ability to converse, read, and write in Mandarin Chinese. Includes the study of essentials of pronunciation, vocabulary, idioms, and grammatical structures along with an introduction to Chinese culture.

CHIN 2 Continuing Elementary Chinese**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: CHIN 1 or equivalent

Further develops conversational, reading, and writing skills in Mandarin Chinese with special emphasis on verbs, grammar, and extension of vocabulary.

CHIN 3 Intermediate Chinese**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: CHIN 2

Further development of Mandarin Chinese language skills and their use as tools in exploring Chinese civilization. Further study and review of grammar, exercises in word building, derivation, and the extension of the active and recognition vocabularies.

CHIN 4 Continuing Intermediate Chinese**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: CHIN 3

Using Mandarin in traveling, telling stories, describing experiences, and discussing Chinese literary works, festivals, food, and advanced grammar.

Computer and Networking Technology (CNET)

CNET 50 Personal Computer (PC) Servicing**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Personal computer (PC) and peripheral servicing techniques, preventative maintenance, hardware configurations, software configurations, software diagnostics, and the use of test equipment.

CNET 52 PC Operating Systems**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Advisory: CNET 50

Current operating systems required for A+ and Network+ Certification and general computer servicing. Includes: identification of major components, installation, configuration, upgrading, and troubleshooting.

CNET 54 PC Troubleshooting**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Advisory: CNET 50

Personal computer (PC) servicing. Includes isolating, identifying, and repairing specific problems in the computer environment at the hardware level. Prepares students for the A+ Certification Exam.

CNET 56 Computer Networks**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Advisory: CNET 54

Standards, terminology, design, implementation, and troubleshooting techniques as they relate to both local and wide area networks. Emphasis on hardware and software components, network architecture, and data transmission methods. Of special interest to computer and network technicians and those seeking certification in A+, Network+, or other certifications.

CNET 58 Server Systems**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Advisory: CNET 56

Server systems, both physical and virtual. Server installation, configuration, and management. Includes hardware and software components, virtual server configurations, troubleshooting techniques using flow charts and diagnostic tools, and disaster recovery concepts. Emphasis on hardware components. Covers the core material needed for the Server+ Certification. Software content in this course is covered only to the extent that is required for hardware troubleshooting, repair and implementation per CompTIA.

CNET 60 A+ Certification Preparation**2 Units** (Degree Applicable)

Lecture: 36

Advisory: CNET 50 and CNET 52

Prepares the student and qualified computer technician for the A+ certification examination. All aspects of the A+ Essentials and A+ Practical Application test modules will be stressed through both lecture review and test simulation software.

CNET 62 Network+ Certification Preparation**2 Units** (Degree Applicable)

Lecture: 36

Advisory: CNET 56

Prepares the student or A+ certified technician for the Network+ (Net+) certification examination. Includes Open System Interconnection (OSI) model, Transmission Control Protocol/Internet Protocol (TCP/IP), and implementing, installing, maintaining, and supporting networks.

CNET 64 Server+ Certification Preparation**2 Units** (Degree Applicable)

Lecture: 36

Advisory: CNET 58

Prepares the computer/network service technician for the CompTIA Server+ certification examination.

CNET 66 Security+ Certification Preparation**2 Units** (Degree Applicable)

Lecture: 36

Advisory: CNET 54 and CNET 56

Prepares the computer/network service technician for the CompTIA sponsored Security+ Certification examination. Security information is covered only as it pertains to enabling the service technician to troubleshoot a computer system that may have a security problem.

Computer Information Systems: Beginning (CISB)

CISB 10 Office Skills**3 Units** (Degree Applicable)

Lecture: 54

Skills necessary to work in an office setting including: alpha and numeric keyboarding, email etiquette and standards, electronic calendaring, ten-key, composing, formatting and storing business documents, and telephone techniques.

CISB 11 Computer Information Systems**3.5 Units** (Degree Applicable, CSU, UC, C-ID #: BUS 140, ITIS 120)

UC Credit Limitation

Lecture: 54 Lab: 27

Overview of computer information systems including computer hardware, software, networking, programming, databases, Internet, security, systems analysis, ethics, and problem solving using business applications.

CISB 15 Microcomputer Applications**3.5 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 27

Windows operating system (OS) and applications, simple business examples using up-to-date browser, word processing, spreadsheet, database management and presentation software, and integration of software applications.

CISB 16 Macintosh Applications**2 Units** (Degree Applicable, CSU)

Lecture: 27 Lab: 27

Macintosh operating system and related tools; creating files using office applications; storing and sharing files using iCloud.

CISB 21 Microsoft Excel**3 Units** (Degree Applicable, CSU)

Lecture: 54

Spreadsheet concepts using Microsoft Excel including formatting, formulas and functions, charts, linked worksheets, pivot tables, macros, and Visual Basic for Applications (VBA) code.

CISB 31 Microsoft Word**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Word processing with Microsoft Word and its editing, formatting, and language tools to create, edit, and format business and publication documents. Includes creating flyers, newsletters, and other publication documents using advanced formatting techniques and tools.

CISB 51 Microsoft PowerPoint**3 Units** (Degree Applicable, CSU)

Lecture: 54

Using PowerPoint to plan, design, and produce effective presentations. Includes creating charts, diagrams, and storyboards; developing appropriate text content; and adding sound, animation, and movies.

CISB 60 Machine Learning in Business**3.5 Units** (Degree Applicable)

Lecture: 54 Lab: 27

Advisory: CISP 21 or CISP 71 or CISP 31 or CISP 41

A broad introduction to machine learning and its implementation to solve real-world business problems. Includes end-to-end process of investigating data through a machine learning lens and how to extract and identify useful features that best represent data and evaluate the performance of different machine learning algorithms. Topics include: supervised learning (linear regression, logistic regression, support vector machines, k-nearest neighbors, decision trees, random forest, and gradient boosted tree); unsupervised learning (clustering, dimensionality reduction, kernel methods); reinforcement learning and adaptive control.

CISB 62 Deep Learning in Business**3.5 Units** (Degree Applicable)

Lecture: 54 Lab: 27

Prerequisite: CISB 60

To learn the most cutting-edge deep learning algorithms and technique. Covers building deep learning prediction models of different complexities, from simple linear logistic regression to major categories of neural networks including convolutional neural networks (CNNs), recurrent neural networks (RNNs), long short-term memory (LSTMs), gated recurrent units (GRUs), and more. Structured around special coding blueprint approaches not mathematical complexities. Valuable hands-on experience with real-world business challenges.

CISB 63 Natural Language Processing in Business**3.5 Units** (Degree Applicable)

Lecture: 54 Lab: 27

Prerequisite: CISB 60

To learn natural language processing and its application in business. Regular expressions. Tokenization and text normalization. Part of speech tagging and grammar parsing. Extracting named entities from text. Feature engineering for text using count vector and term frequency-inverse document frequency (TF-IDF) representations of text. Mastering the art of text cleaning. Semantics and sentiment analysis. Interpreting patterns from text using latent Dirichlet allocation (LDA) and non-negative matrix factorization (NMF) topic models. Text generation with long short term memory algorithm. Creating chatbots.

CISB 81 Work Experience in Office Technology**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Provides students with actual on-the-job experience in an approved worksite, which is related to classroom-based learning. A minimum of 75 paid clock hours or 60 nonpaid clock hours per semester of supervised work is required for each one unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. Work experience placement is not guaranteed, but assistance is provided.

Computer Information Systems: Database (CISD)

CISD 11 Database Management - Microsoft Access**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISD 11L

Advisory: CISB 11 and CISB 15

Design, creation, and management of relational databases using Microsoft Access. Basic database design, creation of tables, queries, forms, reports, and macros. Creation of custom graphical user interface and introduction to Visual Basic for Applications (VBA) code.

CISD 11L Database Management - Microsoft Access Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISD 11

Laboratory for CISD 11 - Database Management - Microsoft Access. Exercises focusing on design and development of a business database using Microsoft Access software, including creation of tables and relationships between tables, queries, forms, reports, macros, and an introduction to Visual Basics for Applications (VBA) programming language to make a fully-functioning, user-friendly Access database.

CISD 14 VBA for Excel and Access**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: CISD 14L

Advisory: CISD 11 and CISB 21

Excel and Access programming using Visual Basic for Applications (VBA) programming language for business applications. Event-driven programming, Excel and Access Object Models, ActiveX Data Objects model (ADO), VBA structures, arrays, embedded SQL (Structured Query Language) into Access VBA, and error-handling.

CISD 14L Visual Basic for Applications (VBA) Excel and Access Laboratory**0.5 Units** (Degree Applicable)

Lab: 27

Corequisite: CISD 14

Laboratory component for the CISD 14 course. Visual Basic for Applications (VBA) programming language exercises in both Excel and Access applications. Uses the structures learned in the CISD 14 course, including decision statements, looping, array manipulation, and error-handling. Use the Excel and Access Object Models and the ActiveX Data Objects model in programming projects.

CISD 21 Database Management - Microsoft SQL Server**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISD 21L

Advisory: CISB 11 or CISB 15

Structured Query Language (SQL) and Transact-SQL for Microsoft SQL Server. Topics include creating database objects, retrieving and updating data, writing scripts, developing stored procedures and functions, developing triggers, and creating cursors. Student must be enrolled in CISD 21L, a concurrent lab co-requisite.

CISD 21L Database Management - Microsoft SQL Server Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISD 21

Laboratory for CISD 21 - Structured Query Language (SQL) and Transact-SQL for Microsoft SQL Server. Topics include creating database objects, retrieving and updating data, writing scripts, developing stored procedures, functions, triggers, and creating cursors. Student must be enrolled in CISD 21, a concurrent lecture co-requisite.

CISD 31 Database Management - Oracle**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISD 31L

Advisory: CISB 11 or CISB 15

Oracle database management system (DBMS) functions, concepts, and terms. Procedure Language/Structure Query Language (PL/SQL) is used to code, test, and implement stored procedures, functions, triggers, and packages. Relational database projects will be built using PL/SQL. Concurrent enrollment in CISD 31L is required.

CISD 31L Database Management - Oracle Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISD 31

Laboratory for CISD 31 - Oracle database management system (DBMS) functions, concepts, and terms. Procedure Language/Structured Query Language (PL/SQL) is used to code, test, and implement stored procedures, functions, triggers, and packages. Relational database projects will be built using PL/SQL. Concurrent enrollment in CISD 31 is required.

CISD 40 Database Design**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: CISD 11 and CISD 11L

Database design principles. Understanding database needs and functions; creating data models, entity-relationship (E-R), and Unified Modeling Language (UML) diagrams; using normalization rules and principles to create databases; learning basic database administrator objectives and tasks; and understanding the role of data warehousing and data mining.

CISD 41 Introduction to Data Science**3.5 Units** (Degree Applicable)

Lecture: 54 Lab: 27

Advisory: CISP 10

Introduces students to the evolving domain of data science. Addresses the key knowledge domains in data science, including data development and management, statistical analysis, data visualization, and inference. Provides an exposure to some of the technologies involved in application of data science. Goals are to learn how to use tools for acquiring, cleaning, analyzing, exploring, and visualizing data; making data-driven inferences and decisions; and effectively communicating results.

CISD 42 Big Data Integration and Processing**3.5 Units** (Degree Applicable)

Lecture: 54 Lab: 27

Prerequisite: CISD 41

Advisory: CISP 10

Learn Big Data: why and where. Characteristics of Big Data and dimensions of scalability. Use Big Data frameworks and tools. Retrieve data from example database and Big Data management systems. Acquire and ingest Big Data. Get value out of Big Data by using a 5-step process to structure an analysis. Process Big Data using various technologies. Identify when a Big Data problem needs data integration. Integrate Big Data and warehouse data using various technologies. Describe the connections between data management operations and the Big Data processing patterns needed to utilize them in large-scale analytical applications.

CISD 43 Big Data Modeling and Analysis**3.5 Units** (Degree Applicable)

Lecture: 54 Lab: 27

Prerequisite: CISD 41

Advisory: CISP 10

Introduces students to various Big Data management systems and analytical tools. Addresses data mining vs predictive analytics. Provides an exposure to data modeling, data mining, text mining, analytics, real-time analytics, and graph analytics from Big Data perspective.

Computer Information Systems: Management (CISM)

CISM 11 Systems Analysis and Design**3.5 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 27

Advisory: CISB 11

Information systems and the discipline of systems analysis in relation to the system development life cycle. Develops skills in applying the tools, techniques, and concepts of systems analysis to information systems development. Application of structured analysis and design methods and tools, including Computer Aided System Engineering (CASE) tools.

Computer Information Systems: Networking (CISN)

CISN 11 Telecommunications Networking**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISN 11L

Advisory: CISB 11

Prepares students for the first year Cisco Certified Network Associate (CCNA) and Network+ certification. Telecommunications networking focusing on network concepts and designs; network standards; Transmission Control Protocol and Internet Protocol (TCP/IP) version 4 (IPv4) and version 6 (IPv6); Open Systems Interconnection (OSI); network protocols; transmission media; switch; hardware architecture; local area network (LAN); wide area network (WAN); remote connectivity; Microsoft and Linux network operating system; network troubleshooting, maintenance, and upgrade; network and wireless security; system vulnerability; and network sniffing analysis.

CISN 11L Telecommunications/Networking Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISN 11

Telecommunications Networking lab preparing students for first year Cisco Certified Network Associate (CCNA) and Network+ certification. Telecommunications Networking focusing on network concepts and designs, network standards, Transmission Control Protocol and Internet Protocol (TCP/IP) version 4 (IPv4) and version 6 (IPv6), Open Systems Interconnection (OSI), network protocols, transmission media, switch, hardware architecture, local area network (LAN), wide area network (WAN), remote connectivity, Microsoft and Linux network operating system, network troubleshooting, maintenance, and upgrade, network and wireless security, system vulnerability, and network sniffing analysis.

CISN 21 Windows Operating System**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: CISB 11 or CISB 15

Windows operating system installation and performance tweaking, including hardware and software issues, Windows system files, and Windows security.

CISN 24 Window Server Network and Security Administration**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISN 24L

Advisory: CISN 11

Computer Network Administration and Security Management (CNASM) core. Microsoft Certified Solutions Expert (MCSE) topics, Active Directory security and Group Policy management, Hyper-V virtual server installation, Dynamic Host Configuration Protocol (DHCP), Domain Name Service (DNS), file system security, logon script, software deployment, network printing, Remote Desktop (RD) Gateway and RD Web Access, Network Address Translation (NAT), Internet Protocol Security (IPsec) and secure Virtual Private Network (VPN), Internet Protocol (IP) version 6 (v6) DHCPv6, DNSv6, and IPv6 Routing.

CISN 24L Window Server Network and Security Administration Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISN 24

Laboratory applications for Microsoft Server Certification Expert (MCSE) topics, Active Directory security and Group Policy management, Hyper-V virtual server installation, Dynamic Host Configuration Protocol (DHCP), Domain Name Service (DNS), file system security, logon script, software deployment, network printing, Remote Desktop (RD) Gateway and RD Web Access, Network Address Translation (NAT), IPsec and secure Virtual Private Network (VPN), Internet Protocol (IP) version 6 (v6) DHCPv6, DNSv6, and IPv6 Routing. Student must be enrolled in CISN 24 - Window Server Network and Security Administration, a concurrent lecture co-requisite.

CISN 31 Linux Operating System**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISN 31L

Advisory: CISB 11

Concepts and skills in planning and installing Linux Operating System (OS) and its graphical user interface (GUI); using Linux Shells and system administration commands; managing user accounts; installing hardware and software; and maintaining file systems and system resources.

CISN 31L Linux Operating System Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISN 31

Laboratory for planning, installing, and managing Linux Operating System (OS) and its graphical user interface (GUI); using Linux Shells and system administration commands; managing user accounts; installing hardware and software; and maintaining file systems and system resources. Concurrent enrollment in CISN 31 lecture course is required.

CISN 34 Linux Networking and Security**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISN 34L

Advisory: CISN 31

Installation and management of Linux operating system networks and security modules. Concept study and installation of Transmission Control Protocol/Internet Protocol (TCP/IP) protocols, Internet Protocol (IP) addressing, network protocols and servers, routers, and network applications. Creating Linux intranets and connecting to Internet. Student must take CISN 34L, a concurrent lab co-requisite.

CISN 34L Linux Networking and Security Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISN 34

Laboratory for installation and management of Linux operating system networks and security modules. Concept study and installation of Transmission Control Protocol/Internet Protocol (TCP/IP) protocols, Internet Protocol (IP) addressing, network protocols and servers, routers, and network applications. Creating Linux intranets and connecting to Internet. Student must be enrolled in CISN 34, a concurrent lecture course co-requisite.

CISN 51 Cisco CCNA Networking and Routing**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISN 51L

Advisory: CISN 11

Computer Network Administration and Security Management (CNASM) core. Preparation for Cisco Certified Network Associate (CCNA) certification. Design and configuration of local area networks (LAN), wide area networks (WAN), open systems interconnection (OSI) model, advanced Subnetting, route summarization, command line Interface (CLI), transmission control protocol and Internet protocol (TCP/IP), Cisco internetwork operating system (IOS), router, advanced switching, virtual LAN (VLAN), access control lists (ACL), wireless and network security, Internet protocol version 6 (IPv6), point-to-point protocol (PPP), voice over Internet protocol (VoIP), and routing protocols including static route, routing information protocol (RIP), enhanced interior gateway routing protocol (EIGRP), and open shortest path first (OSPF). Student must be enrolled in CISN 51L, a concurrent lab co-requisite.

CISN 51L Cisco CCNA Networking and Routing Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISN 51

Lab to prepare for Cisco Certified Network Associate (CCNA) certification. Design and configuration of local area networks (LAN), wide area networks (WAN), open systems interconnection (OSI) model, advanced subnetting, route summarization, command line interface (CLI), transmission control protocol and Internet protocol (TCP/IP), Cisco internetwork operating system (IOS), router, advanced switching, virtual LAN (VLAN), access control lists (ACL), wireless and network security, Internet protocol version 6 (IPv6), point-to-point protocol (PPP), voice over Internet protocol (VoIP), and routing protocols including static route, routing information protocol (RIP), enhanced interior gateway routing protocol (EIGRP), and open shortest path first (OSPF). Student must be enrolled in CISN 51 - Cisco CCNA Networking and Routing, a concurrent lecture co-requisite.

CISN 61 Cloud and Virtualization Network Security**3 Units** (Degree Applicable)

Lecture: 54

Plan, configure, secure, install, and maintain Virtual Machines, Containers, and latest virtual and cloud systems from prominent vendors: Amazon AWS, Microsoft Azure, VMWare, Oracle, Docker, and others.

CISN 71 Introduction to Cloud Computing**3 Units** (Degree Applicable)

Lecture: 54

Advisory: CISB 11

Concepts and principles of cloud computing that shift information systems from on-premises computing infrastructure to highly scalable internet architectures. Topics includes cloud computing technologies, cloud services (storage, servers and software applications), cloud providers, industry cloud practices, cloud careers, and industry demand for cloud skills. Students analyze a variety of case studies to effectively evaluate and assess the business and technical benefits of cloud computing and cloud applications.

CISN 72A Cloud Computing Database Essentials for Amazon Web Services**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: CISN 71

Concepts and skills in planning, designing, and using different cloud database data storage solutions; define, operate and scale both Structured Query Language (SQL) and Not only SQL (NoSQL) data storage solutions; using Amazon Relational Database Service (RDS) and SQL to create and fill tables, retrieve and manipulate data; using object-based Application Programming Interface (APIs) to serialize objects to Amazon DynamoDB for NoSQL solutions and other topics like automated backups, transaction logs, restoration, and retention.

CISN 73A Compute Engines in Amazon Web Services**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: CISN 71

Concepts and skills on building cloud computing systems using a common set of core technologies, algorithms, and design principles centered around distributed systems; using Amazon Web Services (AWS) Management Console to provision, load-balance, and scale applications with compute engines like Elastic Compute Cloud (EC2) and the AWS Elastic Beanstalk (EB); and rationale for using AWS and design principles of scalable cloud applications.

CISN 74A Security in Amazon Web Services**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: CISN 71

Concepts and skills on protecting confidentiality, integrity, and availability of computing systems and data; how Amazon Web Service (AWS) uses redundant and layered controls, continuous validation and testing, and a substantial amount of automation to ensure the underlying infrastructure is continuously monitored and protected; AWS Shared Responsibility Model; and identifying through the AWS Management Console the security tools and features provided by the AWS platform.

CISN 81 Work Experience in Computer Networking**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog.

Provides students with actual on-the-job computer networking work experience in an approved worksite, which is related to classroom based learning. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester of supervised work is required for each one unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. Work experience placement is not guaranteed, but assistance is provided.

Computer Information Systems: Programming (CISP)

CISP 10 Principles of Object-Oriented Design**2.5 Units** (Degree Applicable, CSU)

Lecture: 27 Lab: 54

Advisory: CISP 11 or CISP 21 or CISP 31 or CISP 41

Object-oriented design, patterns, and use of Unified Modeling Language (UML) in different programming languages that will enable students to build large packages and business applications. The course also covers Agile and Scrum methodologies.

CISP 11 Programming in Visual Basic**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Corequisite: CISP 11L

Advisory: CISB 11 or CISB 15 or CISP 10

Visual Basic (VB) programming in the business environment includes: planning and writing object-oriented applications using Windows Forms and Web Forms; user interface design classes, objects, properties, methods and events; control structures; lists and arrays; printing and print previews; accessing a database.

CISP 11L Programming in Visual Basic Laboratory**0.5 Units** (Degree Applicable, CSU, UC)

Lab: 27

Corequisite: CISP 11

Laboratory for CISP 11 Programming in Visual Basic (VB). Planning and writing object-oriented applications in the business environment; using Windows Forms and Web Forms; user interface design classes, objects, properties, methods, and events; control structures; lists and arrays; printing and print previews; accessing a database.

CISP 21 Programming in Java**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Corequisite: CISP 21L

Advisory: CISP 10 and (CISB 11 or CISB 15)

Design and development of object-oriented Java programming applications. Includes object-oriented business programs and applications, documentation and debugging techniques, user-interface, objects, various data types, methods, events, elementary control structures, arrays, and inheritance. Student must take CISP 21L concurrently.

CISP 21L Programming in Java Laboratory**0.5 Units** (Degree Applicable, CSU, UC)

Lab: 27

Corequisite: CISP 21

Laboratory for CISP 21 - Java Programming exercises focusing on design and development of object-oriented business programs and applications, documentation and debugging techniques, user-interface, objects, variables, methods, events, elementary control structures, lists, arrays, and inheritance. Concurrent enrollment in the lecture course CISP 21 - Programming in Java is required.

CISP 24 Advanced Java Programming**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Corequisite: CISP 24L

Advisory: CISP 21 and CISP 21L

Advanced object-oriented programming using Java: designing, coding, testing, and implementing multi-tier applications in serialization, multithreading, Advanced Swing Components (ASC), networking, server-side technology which include servlets, remote method invocation (RMI), Java server pages, Java Database Connectivity (JDBC), public key infrastructure (PKI), mobile applications, and security. Student must be enrolled in CISP 24L, a concurrent lab co-requisite.

CISP 24L Advanced Java Laboratory**0.5 Units** (Degree Applicable, CSU, UC)

Lab: 27

Corequisite: CISP 24

Advisory: CISP 21 and CISP 21L

Laboratory for advanced programming concepts using Java: designing, coding, testing, and implementing multi-tier applications in serialization, multithreading, Advanced Swing Components (ASC), networking, server-side technology which include servlets, remote method invocation (RMI), Java server pages, Java Database Connectivity (JDBC), public key infrastructure (PKI), mobile applications, and security. Student must be enrolled in CISP 24, a concurrent lecture co-requisite.

CISP 31 Programming in C++**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Corequisite: CISP 31L

Advisory: CISP 10 or (CISP 11 and CISP 11L) or (CISP 21 and CISP 21L)

Object-oriented programming in C++ including object-oriented design, documentation, and debugging techniques. Elementary control structures, classes, overload operators and functions, and single and multiple inheritance. Student must be enrolled in CISP 31L, a concurrent laboratory co-requisite.

CISP 31L Programming in C++ Laboratory**0.5 Units** (Degree Applicable, CSU, UC)

Lab: 27

Corequisite: CISP 31

Laboratory for object-oriented programming in C++ including object-oriented design, documentation, and debugging techniques. Elementary control structures, classes, overload operators and functions, and single and multiple inheritance. Student must be enrolled in CISP 31, a concurrent lecture co-requisite.

CISP 34 Advanced C++ Programming**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Corequisite: CISP 34L

Advisory: CISP 31 and CISP 31L

Object-oriented programming in C++ concepts and principles. Covers data structures: vectors, linked lists, queues, stacks and hash tables, graphical-user interface (GUI), database access, and web services. Students must be enrolled in CISP 34L, a concurrent lab co-requisite.

CISP 34L Advanced C++ Programming Laboratory**0.5 Units** (Degree Applicable, CSU, UC)

Lab: 27

Corequisite: CISP 34

Laboratory for object-oriented programming in C++ concepts. Covers principles covers data structures: vectors, linked lists, queues, stacks and hash tables, graphical-user interface (GUI), database access, and web services. Students must be enrolled in CISP 34, a concurrent lecture co-requisite.

CISP 41 Programming in C#**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISP 41L

Advisory: CISB 11 and CISB 15 and CISP 10

Programming in C# using Windows Forms and Web Forms. Course covers control structures (loops, if statements, and switch blocks), database access, multiple forms, and object-oriented programming concepts. Student must be enrolled in CISP 41L, a concurrent lab co-requisite.

CISP 41L Programming in C# Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISP 41

Laboratory for programming in C# using Windows Forms and Web Forms. Course covers control structures (loops, if statements, and switch blocks), database access, multiple forms, and object-oriented programming concepts. Student must be enrolled in CISP 41, a concurrent lecture co-requisite.

CISP 52 Mobile Device Programming**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: CISP 52L

Advisory: CISP 10 and CISW 21

User interface patterns and design, connectivity, and application (app) architecture and design. Student must be enrolled in CISP 52L, a concurrent lab co-requisite.

CISP 52L Mobile Device Programming Laboratory**0.5 Units** (Degree Applicable)

Lab: 27

Corequisite: CISP 52

User interface, connectivity, and application (app) architecture and design. Student must be enrolled in CISP 52, a concurrent lecture co-requisite.

CISP 53 iOS Programming**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: CISP 53L

Advisory: CISP 10 and CISP 52 and CISP 52L

Programming for iOS devices covers user interface patterns and design, connectivity, and application (app) architecture. Students must be enrolled in CISP 53L, a concurrent lab co-requisite.

CISP 53L iOS Programming Laboratory**0.5 Units** (Degree Applicable)

Lab: 27

Corequisite: CISP 53

iOS programming laboratory: user interface, connectivity, and application (app) architecture and design. Student must be enrolled in CISP 53, a concurrent lecture co-requisite.

CISP 54 Programming for Android Devices**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: CISP 54L

Advisory: CISP 10 and CISP 52 and CISP 52L

Android device programming, user interface patterns and design, connectivity, and application (app) architecture with an emphasis on creating effective mobile apps. Student must be enrolled in CISP 54L, a concurrent lab co-requisite.

CISP 54L Android Programming Laboratory**0.5 Units** (Degree Applicable)

Lab: 27

Corequisite: CISP 54

Laboratory for Android programming user interface, connectivity, and application (app) architecture and design. Student must be enrolled in CISP 54, a concurrent lecture co-requisite.

CISP 71 Programming in Python**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: CISP 71L

Advisory: CISP 10

Design and development of object-oriented Python programming applications. Includes object-oriented business programs and applications, documentation and debugging techniques, user-interface, objects, various data types, methods, events, elementary control structures, arrays, inheritance, polymorphism, file operations, database interaction, and networking. Student must take CISP 71L concurrently.

CISP 71L Programming in Python Laboratory**0.5 Units** (Degree Applicable)

Lab: 27

Corequisite: CISP 71

Advisory: CISP 10

Python Programming exercises focusing on design and development of object-oriented business programs and applications, documentation and debugging techniques, user-interface, objects, variables, methods, events, elementary control structures, lists, arrays, inheritance, polymorphism, file operations, database interaction, and networking. Concurrent enrollment in CISP 71 is required.

CISP 74 Advanced Programming in Python**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: CISP 74L

Advisory: CISP 10 and CISP 71 and CISP 71L

Advanced object-oriented programming using Python. Topics include: (data structures and algorithms; extensible markup language (XML) processing; threads and concurrency; web scraping; web applications; scalable applications on the Amazon web services (AWS) cloud ; web services interaction; operating systems interaction; and real world tasks automation. Student must enroll in CISP 74L concurrently.

CISP 74L Advanced Programming in Python Laboratory**0.5 Units** (Degree Applicable)

Lab: 27

Corequisite: CISP 74

Advisory: CISP 10 and CISP 71 and CISP 71L

Laboratory for advanced object-oriented programming using Python.

Topics include data structures and algorithms; extensible markup language (XML) processing; threads and concurrency; web scraping; web applications; scalable applications on the Amazon web services (AWS) cloud ; web services interaction; operating systems interaction; and real world tasks automation. Student must be enrolled in CISP 74, a concurrent lecture co-requisite.

CISP 81 Work Experience in Computer Programming**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog.

Provides students with actual on-the-job experience in computer programming at an approved worksite, which is related to classroom based learning. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester of supervised work is required for each one unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. Work experience placement is not guaranteed, but assistance is provided.

Computer Information Systems: Security (CISS)

CISS 11 Practical Computer Security**2 Units** (Degree Applicable)

Lecture: 27 Lab: 27

Advisory: CISB 11

Computer security for all computer users. Provides awareness for computer users to protect user accounts and computer systems from attacks. Projects illustrate security software and hardware configuration.

CISS 13 Principles of Information Systems Security**4 Units** (Degree Applicable)

Lecture: 72

Advisory: CISB 11 and CISS 11

Systems Security Certified Practitioner (SSCP) exam course preparation including practical technical skills for operational information technology (IT) roles.

CISS 15 Operating Systems Security**3 Units** (Degree Applicable)

Lecture: 54

Advisory: CISB 11 or CISN 21

Operating systems security concepts and techniques: covers how attackers operate, how viruses strike, strengthening operating systems, repelling attacks, and applying security techniques to different operating systems like Windows, Unix, Linux, etc.

CISS 21 Network Vulnerabilities and Countermeasures**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISS 21L

Advisory: CISN 11

Network vulnerabilities from a hacker's perspective. Cyber security legal and ethical issues. Written security, use policy, and instance response policy. Scanning and penetration tests, vulnerability assessments, and countermeasures for Windows and Linux operating systems. Secure programming, virtual private network (VPN), cryptography, wireless, Web, and remote access securities. Student must be enrolled in CISS 21L, a concurrent lab co-requisite.

CISS 21L Network Vulnerabilities and Countermeasures Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISS 21

Laboratory for network vulnerabilities from a hacker's perspective. Cyber security legal and ethical issues. Written security, use policy, and instance response policy. Scanning and penetration tests, vulnerability assessments and countermeasures for Windows and Linux operating systems. Secure programming, virtual private network (VPN), cryptography, wireless, Web, and remote access securities. Student must be enrolled in CISS 21, a concurrent lecture co-requisite.

CISS 23 Network Analysis, Intrusion Detection/Prevention Systems**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISS 23L

Advisory: CISN 11

WireShark, Netflow network analyzer, and computer forensic tools to troubleshoot network problems and monitor network traffics. Detect and block network attacks with standalone Cisco Intrusion Detection Systems and Intrusion Prevention Systems (IDS/IPS), integrated Cisco Adaptive Security Appliance (ASA) IPS, Linux Snort and Windows IDS/IPS. Student must be enrolled in CISS 23L, a concurrent lab co-requisite.

CISS 23L Network Analysis, Intrusion Detection/Prevention Systems Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISS 23

Laboratory course using WireShark, and computer forensic tools to troubleshoot network problems and monitor network traffics. Detect and block network attacks with standalone Cisco Intrusion Detection Systems and Intrusion Prevention Systems (IDS/IPS), integrated Cisco Adaptive Security Appliance (ASA) IPS, Linux Snort and Windows IDS/IPS. Student must be enrolled in CISS 23, a concurrent lecture co-requisite.

CISS 25 Network Security and Firewalls**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISS 25L

Advisory: CISN 11

Design, configure, and implement firewalls to secure enterprise, medium, and small businesses networks. Cisco Adaptive Security Appliance (ASA) with intrusion prevention system (IPS) and Linux firewall with IPS integration. Site to site and remote client Virtual Private Network (VPN), Access Control Lists (ACL), content filtering, Confidentiality Integrity Availability (CIA), Radius, and Certificate Authentication (CA). Cisco ASA and Linux firewall troubleshooting technique. Student must enroll in CISS 25L concurrently.

CISS 25L Network Security and Firewalls Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISS 25

Laboratory course to design, configure, and implement firewall to secure enterprise, medium, and small businesses networks. Cisco Adaptive Security Appliance (ASA) with intrusion prevention system (IPS) and Linux firewall with IPS integration. Site to site and remote client Virtual Private Network (VPN), Access Control Lists (ACL), content filtering, Confidentiality Integrity Availability (CIA), Radius, and Certificate Authentication (CA). Cisco ASA and Linux firewall troubleshooting technique. Student must enroll in CISS 25, a concurrent lecture co-requisite.

CISS 27 Cyber Defense**1 Unit** (Degree Applicable)

Lab: 54

Advisory: CISN 11 and CISN 11L

Cyber security hands-on activities in defending, responding, mitigating, and analyzing attacks through IT infrastructure and application service vulnerabilities. Prepare students to secure, configure, monitor, and analyze computer, switch, router, firewall, Intrusion Prevention Systems (IPS), Voice over IP (VoIP), smart phone, and application services such as Web, email, Structured Query Language (SQL) database, Domain Name Systems (DNS), and Virtual Private Network (VPN).

CISS 29 CNASM Service Learning**1 Unit** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 54

Explore career objectives and advanced skills from Computer Network Administration and Security Management (CNASM) courses through lab activities and community services.

CISS 31 Computer System Forensics**3 Units** (Degree Applicable)

Lecture: 54

Advisory: CISN 11 and CISN 11L

Computer system forensics including an overview of computer crimes and the role of computer forensics specialists in using current and emerging technologies, tools, techniques, and methods to perform evidence gathering and analysis in the field and laboratories.

CISS 81 Work Experience in Computer Security**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog.

Provides students with actual on-the-job experience in computer security at an approved work site, which is related to classroom based learning.

A minimum of 75 paid clock hours or 60 non-paid clock hours per semester of supervised work is required for each one unit of credit.

It is recommended that the hours per week be equally distributed throughout the semester. Work experience placement is not guaranteed, but assistance is provided.

Computer Information Systems: Web Applications (CISW)

CISW 15 Web Site Development**3.5 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 27

Advisory: CISB 15 or CISB 16

Plan, develop, implement, publish, and maintain Web sites with a professional visual Web-authoring application, includes working with text and images, internal and external hyperlinks, image maps, tables, Cascading Style Sheets (CSS), Web page content, Web forms, multimedia objects (Flash text, Flash buttons, sounds, and video), interactions and behaviors, and Web page templates. Principles of Web site structures, documentation, management, and maintenance will be discussed.

CISW 17 HTML, CSS, and JavaScript Programming**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: CISB 11

Plan, program, implement, publish, and maintain web sites using Hypertext Markup Language version 5 (HTML5), Cascading Style Sheets version 3 (CSS3), and JavaScript. Includes working with text, semantic, and multimedia objects, tables, forms, Application Programming Interfaces (APIs), Document Object Model (DOM), cross-browser compatibility, markup validation, client-side interactivity, and principles of web page design, web site construction, documentation, and publishing.

CISW 21 Secure Web Programming with ASP.NET**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: CISW 21L

Advisory: CISB 15

Secure Web programming using programming, scripting and markup languages such as eXtensible Markup Language(XML), XML HyperText Markup Language (XHTML), Dynamic HTML, Javascript, Asynchronous Javascript and XML (AJAX), and Active Server Pages .NET (ASP.NET) with Visual Basic .NET (VB.NET) or C Sharp (C#) for designing user interfaces, processing user input, and accessing Web servers and databases. Students must be enrolled in CISW 21L, a concurrent lab co-requisite.

CISW 21L Secure Web Programming with ASP.NET Laboratory**0.5 Units** (Degree Applicable, CSU)

Lab: 27

Corequisite: CISW 21

Laboratory for secure Web server programming using programming, scripting and markup languages such as XML (eXtensible Markup Language), XHTML (XML HyperText Markup Language), Dynamic HTML, Javascript, AJAX (Asynchronous Javascript and XML), and ASP.NET (Active Server Pages .NET) with VB.NET (Visual Basic .NET) or C# (C Sharp) for designing user interfaces, processing user input, and accessing Web servers and databases. Student must be enrolled in CISW 21, a concurrent lecture co-requisite.

CISW 24 Secure Web Server Programming in Python**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: CISW 24L

Secure web programming to create user interfaces, extract information and manage databases, manage files, format reports, and access web servers using Python programming language. Student must be enrolled in CISW 24L, a concurrent lab co-requisite.

CISW 24L Secure Web Server Programming in Python Laboratory**0.5 Units** (Degree Applicable)

Lab: 27

Corequisite: CISW 24

Laboratory for secure web programming to create user interfaces, extract information and manage databases, manage files, format reports, and access web servers using Python programming language. Student must be enrolled in CISW 24, a concurrent lecture co-requisite.

CISW 31 Secure Web Server Programming in PHP**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: CISW 31L

Advisory: (CISN 34 and CISN 34L) or (CISW 24 and CISW 24L)

Plan, install, and manage secure Apache Web servers using server side programming language like PHP (PHP: Hypertext Preprocessor) to access, manage, and secure MySQL databases. Student must be enrolled in CISW 31L, a concurrent lab co-requisite.

CISW 31L Secure Web Server Programming in PHP Laboratory**0.5 Units** (Degree Applicable)

Lab: 27

Corequisite: CISW 31

Laboratory to plan, install, and manage secure Apache Web servers using server side programming language like PHP (PHP: Hypertext Preprocessor) to access, manage, and secure MySQL databases. Student must be enrolled in CISW 31, a concurrent lecture co-requisite.

CISW 81 Work Experience in Web Programming**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog.

Provides students with actual on-the-job experience in web programming at an approved work site, which is related to classroom based learning.

A minimum of 75 paid clock hours or 60 non-paid clock hours per semester of supervised work is required for each one unit of credit.

It is recommended that the hours per week be equally distributed throughout the semester. Work experience placement is not guaranteed, but assistance is provided.

Computer Science (CSCI)

CSCI 110 Fundamentals of Computer Science**3.5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 27

Prerequisite: MATH 71 or MATH 71B or MATH71X

Advisory: Eligibility for ENGL 1A

Computer hardware and software. General computer organization and information representation. Binary and hexadecimal number systems. Algorithm design and problem-solving techniques. Introduction to programming using a high level language such as C++, Java, or Python.

CSCI 140 C++ Language and Object Development**4 Units** (Degree Applicable, CSU, UC, C-ID #: COMP 122)

Lecture: 54 Lab: 54

Prerequisite: CSCI 110

For computer science, mathematics, engineering and other science students. C++ programming and object-oriented paradigm. Control structures, functions, arrays, pointers and strings, classes and data abstraction, C++ object programming, operator overloading, inheritance, virtual functions and polymorphism, stream input and output, templates, exception handling, file processing. Data structures in C++, string processing and recursion.

CSCI 145 Java Language and Object Oriented Programming**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Prerequisite: CSCI 110

Java language and object-oriented programming (OOP) with Java as well as general concepts and techniques of computer programming. Topics include: Java expressions, flow control, methods and program structure, Java classes, overloading, object references, inheritance, Java library packages, exceptions, file input/output (I/O), applets, graphical user interface (GUI), and event handling. A course for computer science, engineering, mathematics, and other science students.

CSCI 150 Assembly Language/Machine Architecture**3.5 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 27

Prerequisite: CSCI 110

Advisory: CSCI 140 or CSCI 145

Organization and operation of real computer systems at the assembly language level using the Intel 80x86 family of processors; mapping statements and constructs in a high-level language onto sequences of machine instructions; internal representations of simple data types and structures; numerical computation, noting various data representation errors and potential procedural errors; investigation of basic principles of operating systems; and programming language translation process.

CSCI 190 Discrete Mathematics Applied to Computer Science**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: MATH 71 or equivalent

A study of set theory, propositional and predicate calculus, modular arithmetic, counting techniques, combinatorics, mathematical induction, recursion, binary search trees, graphs, and finite probability. For students in computers science, engineering, mathematics and other sciences.

CSCI 220 Data Structures I**3.5 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 27

Prerequisite: CSCI 140 or CSCI 145

Abstract data types and running time analysis tools. Linear data structures including sets, stacks, queues, and linked lists. Trees, binary search trees, heaps, and priority queues. Many procedures are discussed using an algorithmic language and selected problems are programmed in a higher level language.

CSCI 230 Data Structures II**3.5 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 27

Prerequisite: CSCI 220

Basic searching/sorting algorithms, hashing, graphs, memory/disk management, indexing, B-trees, advanced tree structures and analysis.

CSCI 240 Data Structures and Algorithms**5 Units** (Degree Applicable, CSU, UC)

Lecture: 72 Lab: 54

Prerequisite: CSCI 140 or CSCI 145

Abstract data types and algorithm analysis and design. Linear data structures including stacks, queues, vectors, and lists. Non-linear data structures including trees, binary search trees, heaps, priority queues, and graphs. Searching, sorting, and hash tables. Design patterns including divide-and-conquer, greedy method, and dynamic programming. Memory and disk management techniques.

Counseling (COUN)

COUN 1 Introduction to College

1 Unit (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18

Higher education and the college experience including orientation to college and higher education resources. Explores degree and transfer requirements, factors in educational decision-making, educational planning.

COUN 1H Introduction to College - Honors

1 Unit (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 18

Prerequisite: Acceptance into Honors Program.

Higher education and the college experience including orientation to college and resources. Explores degree and transfer requirements, factors in educational decision-making, and educational planning. May not receive credit for both COUN 1 and COUN 1H.

COUN 2 College Success Strategies

3 Units (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Strategies and techniques to be a successful college student including self-management, study habits, campus resources, career exploration and educational planning. Develop skills necessary to reach educational and career goals.

COUN 5 Career and Life Planning

3 Units (Degree Applicable, CSU)

Lecture: 54

A systematic approach to self-exploration related to the career and life planning process, including identification of values, interests, skills, personality and self-management style. Develop decision making and goal setting skills and identify barriers to success. Explores and evaluates careers and job search techniques.

COUN 7 Introduction to the Transfer Process

2 Units (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Advisory: Eligibility for ENGL 1A

Exploration of transfer requirements, admission procedures and requirements for majors. Explore academic and support services, financial aid and other transitional issues to enable students to make informed choices on majors, four-year institutions and academic planning. Off campus assignments are required.

COUN 12 Career Exploration and Planning for Students with Disabilities

3 Units (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Systematic approach to self-exploration, occupational research, and career decision making. Students will identify interests, personality style, and skills. Functional limitations, self advocacy including reasonable accommodations, aspects of disability law, and factors contributing to job success are covered. Designed for students with disabilities.

COUN 13 Orientation to College for Students with Disabilities

1 Unit (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 18

Examine the college experience in relationship to disabilities. Develop an understanding of how disability related factors may influence the educational decision-making process.

COUN 20 Introduction to Peer Mentoring

2 Units (Degree Applicable, CSU)

Lecture: 36

Prerequisite: Eligibility for ENGL 68

Group experience with interpersonal communication and approaches to student to student peer mentoring. Provide opportunities to develop skills with a variety of communication styles that include open expression, active listening, and feedback.

COUN 51 Career Exploration and Planning

1 Unit (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18

Introductory career planning course designed for students who want assistance in making informed career decisions. A variety of assessments, inventories, and computer generated information will be used to help students explore careers and majors.

COUN 54 Student Success for Single Parents

3 Units (Degree Applicable)

Lecture: 54

Identify behavior patterns that influence student success. Develop skills and strategies to be a successful single parent college student. Topics include communication, assertiveness, conflict resolution, goal setting, decision making, time management, educational planning, career assessment, college resources, self-advocacy, and building a strong support system.

Culinary (CUL)

CUL 91 Culinary Work Experience

5 Units (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 300

Corequisite: (CUL 114 or HRM 53 (may have been taken previously)) and CUL 115

Capstone culinary work experience course that will challenge students to use knowledge learned in prior coursework and apply it to the day-to-day operations of a student-run restaurant. Students will understand and utilize food and beverage principles, practices, philosophies, and systems in managing a full-service restaurant, through planning, managing and evaluating the daily operations. This course will provide knowledge and skills necessary to manage and make intelligent business decisions within a food and beverage operation or department. A minimum of 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. Work experience placement is guaranteed at the student-run restaurant.

CUL 101 Professional Cooking Foundations

3 Units (Degree Applicable)

Lecture: 54

Foundational skills required for future culinary course work. Topics include professionalism, food safety, menus and recipes, equipment identification, knife care and use, weights and measures, culinary nutrition, and principles of cooking.

CUL 102 Professional Cooking I

3 Units (Degree Applicable, CSU, C-ID #: HOSP 160, HOSP 160 X)

Lecture: 36 Lab: 54

Prerequisite: HRM 52

Formerly HRM 54.

Fundamental culinary principles, techniques, and operations. Professional cooking, tasting, and evaluating techniques for commercial operations. Students apply skills in product identification, ingredient handling, recipe costing, commercial recipe development, cooking fundamentals, and professional standards of commercial kitchen operations. Uniform and student knife set required. Students must be certified by a nationally recognized food safety organization.

CUL 103 Professional Cooking II

3 Units (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: HRM 52 and (CUL 102 or HRM 54)

Advanced professional cooking techniques with a hands-on approach to cooking, tasting, and evaluating. Students will demonstrate how ingredient quality, flavor profiles, and cooking techniques affect product outcomes. No recipes will be used in this class.

CUL 104 Garde Manger

3 Units (Degree Applicable)

Lecture: 36 Lab: 54

Formerly HRM 81.

Preparation and presentation of cold kitchen foods, including sauces, soups, salads, sandwiches, appetizers, hors d'oeuvres, and buffets.

CUL 105 Baking and Pastry I

3 Units (Degree Applicable, C-ID #: HOSP 180 X)

Lecture: 36 Lab: 54

Formerly HRM 82.

Preparation of baked goods and pastries, including breads, cakes, icing, laminated pastries, cookies, pies, tarts, and frozen and plated desserts.

CUL 106 Baking and Pastry II

3 Units (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: HRM 52 and (CUL 105 or HRM 82)

Theory and principles of fine baking, pastry, and desserts with emphasis on the European tradition. Students will create and decorate cakes, fine pastry, chocolate work, and classic and modern desserts with emphasis on organization, speed, and presentation. This course is intended for students interested in commercial application in restaurants, bakeries, and other food service facilities.

CUL 107 World Cuisines

3 Units (Degree Applicable)

Lecture: 36 Lab: 54

Formerly HRM 83.

Preparation of world cuisines from Europe, the Middle East, Asia, and the Americas. Emphasis will be placed on regional dishes from each country or region covered.

CUL 108 Cooking for Special Diets

3 Units (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: HRM 52

Skills and techniques needed to address special diets while providing culinary inspiration for healthy wholesome meals for consumers and guests. Nutrition information, healthy ingredients, and substitutions are covered. Exploring the wide range of dietary challenges of which chefs should be conscious, including celiac disease, diabetes, high blood pressure, high cholesterol, food allergies, and more.

CUL 109 Butchery & Charcuterie

3 Units (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: HRM 52

Creation and preparation of artisanal meat products and charcuterie items. Examination, identification, and fabrication of poultry, beef, lamb, and pork. Emphasis on safety and sanitation practices. Students will gain experience with common charcuterie items, preparing sausages, utilizing curing methods, and hot and cold smoking methods.

CUL 110 Street Foods

3 Units (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: HRM 52

Preparation of popular street foods from around the globe. Includes origin, serving style, and associated condiments of various street foods. The food truck trend will be discussed as well as how to turn street food into small plates for a restaurant.

CUL 111 Exploring Beverages**3 Units** (Degree Applicable)

Lecture: 54

Production methods and service of non-alcoholic beverages, beer, wine, and spirits. Students identify beverages using sensory evaluation techniques. Selection, storage, service of wines, wine lists, and evaluation of wine will be emphasized. Students will also be introduced to food and wine pairing strategies. Beverage costing and profitability are discussed. Note: Students must be 21 years or older with a valid photo identification (ID) in order to taste alcoholic beverages. Students under 21 years of age will not be allowed to taste alcoholic beverages.

CUL 112 Sustainability in Culinary Arts**3 Units** (Degree Applicable)

Lecture: 54

Explore sustainability in culinary arts. Examine current thinking, trends, and production methods of food, before moving into the often hidden methods and difficulties in processing, storing, distributing, preparing, and consuming these foods. Various business models and management systems will be explored, with an emphasis on sustainable values that focus on profitability, environmental concerns, and consumer satisfaction. Farm-to-table ideals will be explored through the cultivation of organic vegetables.

CUL 114 Dining Room Service Management**3 Units** (Degree Applicable, CSU)

Lecture: 54

Skills and knowledge needed for all aspects of dining room service. Exploration of the various styles of service. Table setting styles, buffet set-ups, wine and beverage service, and service as a sales tool are covered. Safety of both customer and staff are discussed. Field trip required.

CUL 115 Restaurant Operations**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: HRM 52 and (CUL 102 or HRM 54) and HRM 57 and HRM 61

Corequisite: CUL 91 and (CUL 114 or HRM 53) may be taken previously
Advisory: HRM 56

Restaurant operation and management strategies utilized in managing a full-service restaurant. Planning, managing, and evaluating the daily operation. This course will provide knowledge and skills necessary to make intelligent business decisions within a food and beverage operation. Emphasis is on financial management, customer service, and human resources. Restaurant Operations is designed to support students with the capstone course CUL 91, Culinary Work Experience.

CUL 116 World Baking**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: HRM 52

This class will explore the flavor profiles and techniques of baked goods from around the world. Students will take a global tour of the baking world, learning techniques and flavors that are specific to different regions of the world. Emphasis on Europe, Asia, the Americas, Africa, India, the Caribbean, and the South Pacific.

CUL 117 Artisan Bread**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Systematic approach to bread, including details of mixing, fermenting, shaping, and baking bread. The course covers baker's math, ingredient selection and function, how mixing affects fermentation, and other bread baking fundamentals. Includes prefermenters such as sourdoughs, levain, wild yeasts, mothers, and poolish. Introduction to breads of the world and breads for special diets.

CUL 118 Specialty Cakes**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: HRM 52 and CUL 105

Focus on a variety of cake mixing methods, creams, and fillings. Students will study cake composition, assembly, and design and practice various decorative skills. The student will move from making rustic cakes towards creating visually spectacular, intricate cakes featuring complex textures and exquisite flavors.

Dance: Activity (DNCE)

DNCE 1 Ballet Fundamentals**0.5-2 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-108

Fundamental vocabulary, technique, and movement combinations for ballet. Includes ballet floor work, ballet barre, center practice, floor progressions, and musicality and phrasing.

DNCE 2A Ballet I**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Beginning vocabulary, technique, and movement combinations for ballet. Includes barre work, center floor work, floor progressions, preparation for turning, and musicality and phrasing.

DNCE 2B Ballet II**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Intermediate technique, vocabulary, and movement combinations for ballet. Includes intermediate barre work, demi-pointe work, use of epaulement and increasingly difficult center floor combinations. Students who repeat this course will improve proficiency through continued instruction and practice.

DNCE 3 Ballet Performance**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Advanced barre work, center work, floor progressions, and performance of classical ballet variations for ballet dance.

DNCE 4 Choreography**0.5-2 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-108

Advisory: DNCE 12A or DNCE 12B or DNCE 13

Techniques of choreography and dance composition. Designed for the experienced dancer.

DNCE 8 Latin Dance I**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Latin styles of dance. Includes Cha Cha, Samba, Rumba, Pasodoble and Jive.

DNCE 10 Modern Fundamentals**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Fundamental vocabulary, technique, and movement combinations for Modern Dance. Includes floor work, center work, floor progressions, musicality and phrasing.

DNCE 11A Social Dance Forms I**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Fundamentals of music, dance positions, dance formations, and choreography to be used in the study of, but not limited to Swing, Salsa, Waltz, Foxtrot, and Tango.

DNCE 11B Social Dance Forms II**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Advanced study of dance positions, dance formations, music, and choreography to be used in the study of, but not limited to, Swing, Salsa, Waltz, Foxtrot, and Tango.

DNCE 12A Modern I**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Beginning terminology, technique, and movement combinations for Modern dance.

DNCE 12B Modern II**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Intermediate terminology, technique, and movement combinations for Modern dance. Students who repeat this course will improve skills through further instruction and practice.

DNCE 13 Modern Performance**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Performance aspects of Modern dance, including advanced terminology, technique, choreographic elements, and performance for the experienced dance student.

DNCE 14A Jazz I**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Beginning vocabulary, technique, and movement combinations for jazz dance. Includes warm-up, progressions, and center floor routines.

DNCE 14B Jazz II**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Intermediate vocabulary, technique, and movement combinations for jazz dance. Includes warm-up, progressions, and center floor routines.

DNCE 15 Jazz Performance**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Introduces the experienced dancer to the performance styles and techniques of jazz dance. Includes advanced warm-up, floor progressions, and performance of complex jazz dance routines.

DNCE 17 Jazz Fundamentals**0.5-2 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-108

Introduces fundamental vocabulary, technique, and movement combinations for jazz dance. Includes floor work, center work, floor progressions, routines, and musicality and phrasing.

DNCE 18A Tap I**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Beginning level technique, rhythms and routines for tap dance.

DNCE 18B Tap II**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Intermediate technique, rhythms, and routines for tap dance.

DNCE 19 Tap Performance**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Introduces the experienced dancer to the performance aspects of tap by providing advanced techniques leading to the performance of compositions.

DNCE 22 Dance Rehearsal**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Beginning rehearsal elements for the experienced dancer participating in concert production, competitions and community performances. Students who repeat this course will improve skills through further instruction and practice.

DNCE 24 Dance Production**1-2 Units** (Degree Applicable, CSU, UC)

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 54-108

Intermediate choreography to perform on stage and at competitions. Students will apply choreographic skill, conduct stage rehearsals, and learn costuming techniques. Students who repeat this course will improve skills through further instruction and practice.

DNCE 25 Dance Ensemble**1.5 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 81

Prerequisite: Admission by audition

Small ensemble dance experience with a focus on production elements. Includes experience in story development, choreography, and performance culminating in the practical application of a series of public presentations. Attendance is required at all public performances including off-campus locations.

DNCE 28 Theater Dance I**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Beginning theatre dance variations drawn from a variety of theater musicals and movies. Includes concepts of acting and staging incorporated with musical theatre choreography.

DNCE 29 Theater Dance II**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Advanced theatre dance variations for the technically skilled dancer drawn from a variety of theater musicals and movies. Includes concepts of acting and staging incorporated with musical theatre choreography.

DNCE 30 Contemporary Dance**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Advisory: DNCE 12B and DNCE 13

Intermediate to advanced terminology, technique, and movement combinations for Contemporary dance.

DNCE 31 Classical Dance**0.5-2 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-108

Advanced ballet repertoire focusing on the different schools of technique including Balanchine, Bournonville, and Vaganova.

DNCE 32 Commercial Dance**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Beginning terminology, styles, techniques, and movement combinations for Hip Hop dance. Includes Hip Hop choreographic skills.

DNCE 33 Improvisation**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Beginning to advanced improvisation in dance and choreography.

DNCE 34 Dance Directives**0.5-1 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Prerequisite: Admission by audition

Provides the intermediate or advanced student the practical experience to assist an instructor in the creation and instruction of a dance class.

DNCE 35 Repertory**2 Units** (Degree Applicable, CSU, UC)

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Admission by audition

Advanced choreography and repertory to perform at workshops, competitions, and special events. Students who repeat this course will improve skills through further instruction and practice.

DNCE 36 Commercial Dance II**0.5-1 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Intermediate to advanced terminology, styles, and movement combinations for Hip Hop dance. Includes Hip Hop choreographic skills.

DNCE 39 Pilates Fundamentals**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Pilates foundation mat-work. Conditioning exercises and body awareness resulting in improved alignment, strength, flexibility, control, and coordination. Includes an introduction to the Pilates Reformer.

DNCE 40 Conditioning Through Dance**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Improves fitness through the coordination of dance exercises. Focuses on strength, flexibility, and range of motion. Designed for the dancer and non-dancer.

DNCE 41 Pilates I**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Advisory: DNCE 39 or DNCE 39A

Pilates beginning and intermediate mat-work and beginning Reformer. Includes Pilatesstick and the Magic Circle.

DNCE 42 Pilates II**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Advisory: DNCE 41

Pilates intermediate mat, reformer, and Pilatesstick and beginning Wunda Chair, step barrel, and Ped-a-Pul. Includes use of physioball in mat work.

DNCE 43 Pilates III**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lab: 36-54

Prerequisite: DNCE 42

Pilates intermediate and advanced mat, reformer (with use of Jumpboard), Wunda Chair (with use of split pedal), and Pilatesstick. Includes beginning Cadillac and High Barrel.

Dance: Theory (DN-T)

Correction: Added: Formerly DNCE 9 to DN-T 9. 8/23/2022**DN-T 9 Dance Audition Techniques****1 Unit** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 9 Lab: 36

Advisory: DNCE 2A and DANCE 12 and DNCE 14A

Formerly DNCE 9

Dance audition preparation, practice, and skill development for the commercial industry. Designed for the intermediate or advanced dancer.

DN-T 18 Introduction to Dance**1.5 Units** (Degree Applicable, CSU, UC)

Lecture: 18 Lab: 27

A survey of the profession of dance through lecture, discussion, demonstration, and participation. Includes philosophies, historical overviews of each genre, and the study of vocational roles in dance. This course will include participation and a general overview in dance forms such as ballet, modern, jazz, and cultural dance.

DN-T 20 History and Appreciation of Dance**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Advisory: Eligibility for ENGL 68

Theatrical dance in western civilization. History of dance in chronological sequence emphasizing the cultural background and historical development of various forms and styles of dance to include discussion of the influence of theatrical dance on other art forms.

DN-T 27 Theory and Principles of Pilates**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: DNCE 39 (may have been taken previously)

Teaching skills for the Pilates method of physical and mental conditioning. Concepts and principles as applied to the mat and apparatus repertoire.

DN-T 28 Functional Anatomy for Pilates**2 Units** (Degree Applicable)

Lecture: 36

Advisory: DNCE 39

Functional human anatomy as applied to the Pilates method of conditioning.

DN-T 29 Teaching Pilates Mat Repertoire**1.5 Units** (Degree Applicable)

Lecture: 18 Lab: 36

Corequisite: DN-T 27 (may have been taken previously)

Learning to teach the Pilates mat exercises and principles. Includes basic, intermediate, and advanced levels focusing on pedagogy and the development of correct neuromuscular patterning.

DN-T 30 Teaching Pilates Reformer Repertoire**1.5 Units** (Degree Applicable)

Lecture: 18 Lab: 36

Prerequisite: DN-T 29

Learning to teach the Pilates Reformer exercises and principles. All levels are covered with a focus on the development of correct neuromuscular patterning.

DN-T 31 Pilates Teaching-Mat and Reformer**3 Units** (Degree Applicable)

Lecture: 18 Lab: 108

Prerequisite: DN-T 28 and DN-T 30

Prepares students to teach Pilates in a variety of settings and situations. Teaching reinforces knowledge and understanding of the Pilates exercises. Includes lecture, observation, self-integration, assistant teaching, one-on-one teaching, and content. Off-campus observations may be required.

DN-T 32 Teaching Pilates Cadillac and Wunda Chair Repertoire**1.5 Units** (Degree Applicable)

Lecture: 18 Lab: 36

Prerequisite: DN-T 27 and DN-T 29 and DN-T 30

Learning to teach the Pilates repertoire of exercises on the Cadillac and Wunda Chair. All levels are covered with a focus on the development of correct neuromuscular patterning.

DN-T 33 Teaching Pilates Ped-a-Pul, Barrels and Auxiliary Equipment Repertoire**1.5 Units** (Degree Applicable)

Lecture: 18 Lab: 36

Prerequisite: DN-T 30 and DN-T 32

Learning to teach Pilates exercises on the following apparatus: Ped-a-Pul, Ladder Barrel, Step Barrel, Arc Barrel, Magic Circle, C-cushion, and props. All levels are covered with a focus on the development of correct neuromuscular patterning.

DN-T 34 Pilates Teaching-Cadillac, Wunda Chair, & Auxiliary Equipment**3 Units** (Degree Applicable)

Lecture: 18 Lab: 108

Prerequisite: DN-T 33

Prepares students to teach Pilates in a variety of settings and situations. Teaching reinforces knowledge and understanding of the Pilates exercises and concepts. Includes lecture, observation, self-integration, assistant teaching, and one-on-one teaching. Off-campus observations may be required.

DN-T 38 Dance Teaching Methods**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Corequisite: DNCE 2B (May have been taken previously) or DNCE 12B (May have been taken previously) or DNCE 14B (May have been taken previously)

The application of pedagogical methods in dance. Explores teaching strategies, imagery, motivational techniques, music for class instruction, and injury prevention. Focus is on the genres of ballet, jazz, and modern dance. Course will involve on- and off-campus dance teaching observations.

Education (EDUC)

EDUC 10 Introduction to Education**3 Units** (Degree Applicable, CSU, UC, C-ID #: EDUC 200)

Lecture: 54

Concepts and issues related to teaching diverse learners in contemporary public schools (K-12). Topics include historical and philosophical foundations of the American education system, teaching as a profession and career, contemporary education issues, California Content Standards and framework, and teacher performance standards. In addition to class time, 45-hours of structured fieldwork are required at an approved public school elementary classrooms with a certified classroom teacher and students that represent California's diverse population. Proof of a negative TB test and fingerprint clearance are required for classroom observations.

EDUC 16 Aspects and Issues in Teaching**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Advisory: Eligibility for ENGL 68

Survey of the K-12 teaching profession, including teaching and learning styles, common core standards and testing, current California and national legislation, social issues, school funding, and teacher and student rights and responsibilities. Off-campus assignments required.

Electronics (ELEC)

ELEC 10 Introduction to Mechatronics**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

A combination of conventional electronic technology with mechanical and computer technology. Special emphasis is on robotics. Hands-on activities include the building of a robot.

ELEC 11 Technical Applications in Microcomputers**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Personal computer (PC) applications used in electronics technology. Includes word processing, spreadsheets, database, computer presentation methods, and internet research specifically designed for electronics technology.

ELEC 12 Computer Simulation and Troubleshooting**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

Advisory: ELEC 51 and ELEC 56

Troubleshooting of electronic hardware, including use of computer-based tools for simulation and troubleshooting of analog and digital circuits. National Instruments Multisim software will be used for circuit analysis, value substitution, and fault diagnostics.

ELEC 50A Electronic Circuits - Direct Current (DC)**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Advisory: Eligibility for MATH 51

Direct Current (DC) electrical circuits and their applications. Covers DC sources, analysis, test equipment, measurements, and troubleshooting of resistive devices and other basic components. Includes Ohm's Law, Kirchhoff's law, and network theorems. (Students seeking a survey course in electronics should take ELEC 10, Introduction to Mechatronics, rather than ELEC 50A or 50B.)

ELEC 50B Electronic Circuits (AC)**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Advisory: ELEC 50A

Alternating Current (AC) electrical circuits and their applications. Covers AC sources, analysis (using complex numbers), test equipment, measurements, and troubleshooting of basic circuits with capacitors, inductors, and resistors. Includes impedance, resonance, filters, and decibels.

ELEC 51 Semiconductor Devices and Circuits**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Advisory: ELEC 50B

Solid-state devices and circuits, including bipolar-junction and field-effect transistors, rectifier diodes, operational amplifiers, and thyristors. Analog circuits studied include discrete and integrated circuit amplifiers, voltage regulators, oscillators and timers. Emphasizes configurations, classes, load lines, characteristic curves, gain, troubleshooting, measurements, and frequency response.

ELEC 53 Communications Systems**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Advisory: ELEC 51 taken prior or concurrently

Analog and digital communications systems. Emphasizes analog and digital modulation principles, multiplexing, protocols, and telecommunications circuits and systems.

ELEC 54A Industrial Electronics**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Advisory: ELEC 50A and ELEC 50B

Industrial electronic components and basic control circuits. Includes time delay controls, thyristor controls, relays, optoelectronic (opto) devices, direct current (DC) and alternating current (AC) motor control, transducers, silicon controlled rectifier (SCR) and unijunction transistor (UJT) devices.

ELEC 54B Industrial Electronic Systems**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Systems application of industrial electronics including industrial production and processes, automation, and programmable and motor controllers. Emphasis is on programmable logic controllers (PLCs).

ELEC 55 Microwave Communications**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Advisory: ELEC 50B taken prior

Microwave components and circuits. Stresses transmission lines, Smith Charts, impedance matching, antenna characteristics, wave propagation, frequency analysis, and measurement techniques.

ELEC 56 Digital Electronics**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Combinational and sequential logic circuits emphasizing number systems, binary math, basic gates, Boolean algebra, Karnaugh maps, flip-flops, counters, and registers. Stresses design and troubleshooting techniques.

ELEC 61 Electronic Assembly and Fabrication**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Advisory: ELEC 50A and ELEC 50B

Manufacturing and fabrication processes associated with the electronics industry. Printed circuit board (PCB) design from conception to completion. Emphasizes electrical schematics, bill of material (BOM), component selection, layout design, manufacturability, assembly, soldering, de-soldering, and surface-mount technology.

ELEC 62 Advanced Surface Mount Assembly and Rework**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

Advisory: ELEC 61

Advanced course in assembly and repair (soldering) on surface mount assemblies (SMT). Material is similar in content to the Institute for Printed Circuits (IPC) surface mount assembly and rework certification.

ELEC 74 Microcontroller Systems**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Advisory: ELEC 56

Microcontroller systems and programming methods; programmable logic devices (PLDs); serial communications; conversion of signals from analog to digital formats and the converse. Industry applications, interfacing, and troubleshooting.

ELEC 76 FCC General Radiotelephone Operator License Preparation**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

Advisory: ELEC 50B

Prepares qualified electronics and aviation technicians for the Federal Communications Commission (FCC) commercial General Radiotelephone Operator License (GROL).

ELEC 81 Laboratory Studies in Electronics Technology**1-2 Units** (Degree Applicable)

Lab: 54-108

Extended laboratory experience supplementary to that available in the regular program. Allows the student to pursue more advanced and complex laboratory projects and experiments.

ELEC 91 Work Experience in Electronics**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Provides on-the-job experience in electronics at an approved work site which is related to classroom instruction. A minimum of five hours per week of supervised work (60 non-paid clock hours or 75 paid clock hours per semester) is required for each one unit of credit.

Emergency Medical Service (EMS)

EMS 1 Paramedic Preparatory Course**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: Completed Paramedic Program application and current California EMT certificate and 1000 hours employment as an EMT and Eligibility for ENGL 68 and Eligibility for READ 90 and Eligibility for MATH 51

Assessment and review of required Emergency Medical Technician (EMT) competencies as part of the preparation for the Paramedic Academy. Includes current practices, medical terminology, mathematical skills for drug calculations, and applied physiology and anatomy of human body systems.

EMS 10 Paramedic Core Content**11 Units** (Degree Applicable)

Lecture: 180 Lab: 54

Prerequisite: Admission to Paramedic Program and EMS 1
Corequisite: EMS 40 and EMS 50

Didactic and psychomotor paramedic core content including anatomy, pathophysiology, and pharmacology for paramedics.

EMS 40 Emergency Care for Paramedics**4.5 Units** (Degree Applicable)

Lecture: 72 Lab: 27

Prerequisite: Admission to Paramedic Program and EMS 1

Corequisite: EMS 10 and EMS 50

Familiarizes the paramedic with the normal, abnormal, and diseased heart, patient assessments, assessment tools, interpretation of dysrhythmias, and paramedic interventions. Certifies students in Pediatric Advanced Life Support (PALS), and Advanced Cardiac Life Support (ACLS) in accordance with the American Heart Association (AHA).

EMS 50 Paramedic Skills Competency**5 Units** (Degree Applicable)

Lecture: 54 Lab: 108

Prerequisite: Admission to the Paramedic Program and EMS 1

Corequisite: EMS 10 and EMS 40

Paramedic skills required for field operation as a paramedic and for licensing in competency-based exams.

EMS 70 Paramedic Clinical Internship**3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 162

Prerequisite: EMS 10 and EMS 40 and EMS 50

Clinical experience and application of paramedic theory and practice with an emphasis on patient assessment and utilization of paramedic skills in a hospital setting.

EMS 80 Paramedic Field Externship**9 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 486

Prerequisite: EMS 70 and successful completion of Los Angeles County accreditation exam

Application of concepts of paramedic theory and practices, with emphasis on patient assessment and utilization of paramedic skills in a field setting on an operational paramedic unit.

Emergency Medical Technician (EMT)

EMT 91 Emergency Medical Technician I Refresher**1.5 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 16 Lab: 16

Prerequisite: Completion of an approved California State EMT course and possession of a currently valid EMT certificate or one which has expired for no more than 20 months

Renews EMT certification. Approved by the L.A. County and State Departments of Health. Fulfills updates for Emergency Medical Technician personnel every two years in order to maintain eligibility for employment in an emergency response agency and to keep certification valid. Course covers all required material and current changes/updates in pre-hospital emergency care at the EMT level. Special approval required to enroll.

Engineering (ENGR)

ENGR 1 Introduction to Engineering**2 Units** (Degree Applicable, CSU, UC, C-ID #: ENGR 110)

Lecture: 18 Lab: 54

Engineering professions including academic requirements, licensure, articulation agreements with four-year institutions, transfer, engineering study as a preparation for other careers, and academic and employment strategies. Engineering design, creativity, and problem solving processes including working as a team member on an engineering design project. Field trips are required.

ENGR 1C Engineering Critical Thinking**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 54

Prerequisite: ENGL 1A or ENGL 1AH

Advisory: MATH 71 or equivalent

A critical thinking course for science and engineering students. Analyze, criticize, and reason inductively and deductively and reach well-supported factual or judgmental conclusions. Main topics include: identifying topics for investigation, developing planning strategies, locating pertinent information, critically analyzing sources of information, testing hypotheses, synthesizing and organizing results for effective written and verbal communication. Students will complete a hands-on experience with a client-centered engineering design project to develop critical thinking skills.

ENGR 6 Introduction to Engineering Programming Concepts and Methodologies**4 Units** (Degree Applicable, CSU, UC, C-ID #: ENGR 120)

Lecture: 54 Lab: 54

Prerequisite: MATH 160

Fundamental concepts of procedure-oriented programming, associated abstraction mechanisms and design processes, interface of software with the physical world, use of sensors, and application of numerical techniques.

ENGR 7 Programming Applications for Engineers**4 Units** (Degree Applicable, CSU, UC, C-ID #: ENGR 220)

Lecture: 54 Lab: 54

Prerequisite: MATH 180

Engineering computation using MATLAB and Simulink. Topics include matrix computation, statistical analysis, graphics, and numerical methods. Common examples and applications of physics and engineering are used throughout the course.

ENGR 8 Properties of Materials**4 Units** (Degree Applicable, CSU, UC, C-ID #: ENGR 140)

Lecture: 54 Lab: 54

Prerequisite: CHEM 50 or CHEM 55 and (PHYS 4A or PHYS 2AG)

Mechanical, electrical, magnetic, optical, and thermal properties of engineering materials and their relation to the materials' internal structure. Atomic structure and bonding, crystalline structures, phase and phase diagrams, metals, polymers, ceramics, composites, mechanical deformation and fracture, structural control and influence of properties, materials naming and designating systems, corrosion process, lasers, semiconductors, and electronic packaging materials.

ENGR 16 Introduction to Digital Electronics with FPGA Programming**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Prerequisite: MATH 160

Advisory: ENGR 6 or CSCI 140

A core course in electrical and computer engineering which introduces Digital Electronics and Field Programmable Gate Array programming. Digital circuit implementation using Field Programmable Gate Arrays (FPGAs). Analysis, design, building, and testing of combinational and sequential digital logic circuits. Analysis and design of finite state machines with state diagrams and ASM charts. Design of finite state machines with HDL and implementation of finite state machines with FPGAs.

ENGR 18 Introduction to Engineering Graphics**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Fundamental engineering graphics and problem solving techniques. Skills in freehand and instrument drawing are developed and applied to the solution of problems. Orthographic, isometric and oblique drawings.

ENGR 24 Engineering Graphics**4 Units** (Degree Applicable, CSU, UC, C-ID #: ENGR 150)

Lecture: 36 Lab: 108

Prerequisite: MATH 150 or (Eligibility for MATH 160 or Eligibility for MATH 180) and (ENGR 18 or instructor approval)

Project-based learning activities and hands-on design related to 2D and 3D Computer-Aided Design (CAD) for engineering students. The principles of engineering drawing and sketching for civil and mechanical design, the use of computer graphics and solid modeling in design representation of 3D objects, assembly, and simulation as well as American Society of Mechanical Engineers (ASME) standards on geometric dimensioning and tolerances.

ENGR 40 Statics**3 Units** (Degree Applicable, CSU, UC, C-ID #: ENGR 130)

Lecture: 54

Prerequisite: MATH 181 and PHYS 4A

Vector approach to static equilibrium of rigid bodies, forces, and couples in two- and three-dimensional space. Application of equilibrium principles to trusses, frames, and machines. Calculation of center of mass and centroid. Friction, moment of inertia, and distributed and concentrated loads. Forces in cables and beams. Fluid statics. Introduction to virtual work.

ENGR 40T Applied Statics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: MATH 160 and PHYS 2AG

Vector approach to static equilibrium of rigid bodies, forces, and couples in two- and three-dimensional space. Application of equilibrium principles to trusses, frames, and machines. Calculation of center of mass and centroid. Friction, moment of inertia, and distributed and concentrated loads. Forces in cables and beams. Fluid statics. Introduction to virtual work. This course is for applied Engineering students. This course may not be accepted in general engineering transfer programs.

ENGR 41 Dynamics**3 Units** (Degree Applicable, CSU, UC, C-ID #: ENGR 230)

Lecture: 54

Prerequisite: ENGR 40

Vector approach to classical mechanics including absolute and relative motion of particles and rigid bodies in translational and rotational motion. Instantaneous center of rotation. Application of Newton's Second Law, work-energy and impulse-momentum methods, and introduction to mechanical vibrations.

ENGR 42 Mechanics of Materials**4 Units** (Degree Applicable, CSU, UC, C-ID #: ENGR 240)

Lecture: 54 Lab: 54

Prerequisite: ENGR 40

Mechanics of deformable bodies subjected to axial, torsional, shearing, and bending loads. Includes combined stresses, statically indeterminate structures, deflection and stress analysis of beams, stability of columns, strain energy methods, and design of pressure vessels and structures. Applied concepts through a laboratory experience linking mechanics of materials to properties of materials.

ENGR 44 Electrical Engineering**4 Units** (Degree Applicable, CSU, UC, C-ID #: ENGR 260)

Lecture: 54 Lab: 54

Prerequisite: PHYS 4B

Corequisite: ENGR 285 or MATH 290 (may have been taken previously)

Electrical circuit analysis including applications of Kirchoff's Laws and Thevenin's Theorems to direct current (DC) and alternating current (AC) circuits. Fundamental principles, including steady state and transient circuit response, complex impedance and admittance, Fourier and Laplace transforms, and three-phase circuits. Application of fundamental circuit principles to operational amplifier and transistor circuits.

ENGR 50A Robotics Team Project Development**2 Units** (Degree Applicable, CSU)

(May be taken four times for credit)

Lab: 108

Prerequisite: Instructor approval required for robotics competition team members

This course is for members of the Robotics Team. Introduces the knowledge, skills and activities needed to organize, promote and manage the design phase of a robotics competition team. Includes a survey of problem analysis, programming, mechanical design, and project management. Intended for students with an interest in robotics who need to gain experience as members of an engineering design team. Instructor approval required. Off-campus competition required.

ENGR 50B Intermediate Robotics Team Project Development**1 Unit** (Degree Applicable)

(May be taken four times for credit)

Lab: 74

Prerequisite: Instructor approval required for robotics competition team members

For members of the robotics team who compete in one or more intercollegiate competitions. Designing a solution to a complex problem by applying strategic design, mechanical design, computer-aided design, numerical modeling, computer programming, prototyping, fabrication, and project management. Instructor approval required. Off-campus activities required.

ENGR 99 Special Projects in Engineering**1-2 Units** (Not Degree Applicable)

Lab: 54-108

Corequisite: PHYS 1 or PHYS 2AG or PHYS 4A (May have been taken previously)

In order to offer selected students recognition for their academic interests and ability and the opportunity to explore their disciplines to greater depth, the various departments from time to time offer special projects courses. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Student must have instructor's authorization before enrolling in this class. Students who repeat this course will meet with the instructor and make individual contracts of a more advanced nature to ensure that proficiencies are enhanced.

ENGR 285 Differential Equations and Linear Algebra for Engineers**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Prerequisite: MATH 181

Linear algebra, ordinary and partial differential equations, systems of differential equations, Fourier series, and Laplace and Fourier transforms and their applications in engineering. Applications include mechanics, vibration, circuits, and computer vision.

Engineering Construction Technology (ECT)

ECT 16 CADD and Digital Design Media Level I**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Computer Aided Design and Drafting (CADD) Level 1 and computer applications in building construction, engineering, and related fields, including spreadsheet and presentation applications. Field trips required.

ECT 17 Legal Aspects of Construction**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Advisory: ECT 70

Legal aspects of the construction industry involving the owner, contractor, builder or developer, and design professional. Includes codes, licensing, contracts, bonds, and lien laws. May include off-campus assignments.

ECT 26 Civil Engineering Technology and CADD**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Theory of civil engineering projects with hands-on instruction in civil drawings and Computer Aided Drafting and Design (CADD) applications. Layout, topography maps, grading plans, sections, street improvements, and interpretation of surveyor's data are covered. Set of CADD drawings produced for a final portfolio.

ECT 67 Reading Construction Drawings**3 Units** (Degree Applicable, CSU)

Lecture: 54

Reading construction drawings as they apply to architecture, construction, interior design, and related fields. Off-campus assignments may be required.

ECT 70 Elements of Construction Management**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Construction processes, terminology, and procedures. Topics include construction careers, building systems, sustainability, quality control, management, and scheduling of resources (materials, equipment, time, personnel, and finance).

ECT 71 Construction Estimating**3 Units** (Degree Applicable, CSU)

Lecture: 54

Construction estimating and bidding procedures using contract documents, construction drawings, and cost data. Estimating methods and use of estimating forms or software, including detailed quantity take-offs of building materials and labor required in building construction.

ECT 87 Fundamentals of Construction Inspection**3 Units** (Degree Applicable, CSU)

Lecture: 54

Construction inspection of light frame wood construction and steel structures. Topics include vertical and horizontal loads, stress analysis, framing and structural standards of lumber and steel, metallurgy, and welding.

Engineering Design Technology (EDT)

EDT 89 Engineering Design Technology Work Experience**1-3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-225

Prerequisite: Application approved by department faculty and compliance with Work Experience regulations as designated in the College Catalog.

Provides on-the-job experience at an approved worksite which is related to classroom instruction in Engineering Design Technology. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. If this is a volunteer program on or off campus, a minimum number of hours per month will be required as part of the 60 hour total.

Engineering Technology (ENGT)

ENGT 10A Foundations of Technical Sales**2 Units** (Not Degree Applicable)

Lecture: 18 Lab: 54

Prerequisite: MATH 150 or eligibility for MATH 160

Technical sales course for science and engineering students. Fundamentals of technical sales including communication, business knowledge basics, leadership, sales and ethics. Main topics include understanding technical sales as a member of the sales process, technical marketing and prequalification, successful customer engagements, decision makers and technical buyers, the trusted advisor, the perfect pitch and demo, RFPs and financial justification.

ENGT 10B Technical Sales Strategies**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

Prerequisite: ENGT 10A

Case studies and experiential lessons on the development and application of technical sales strategies. Specific topics will include developing pricing and distribution strategies, managing a sales staff and channel, developing sales teams and global sales plans, bid and negotiation strategies, time management skills, and implementing sales automation technologies.

English: Composition (ENGL)

ENGL 1A Freshman Composition**4 Units** (Degree Applicable, CSU, UC, C-ID #: ENGL 100, ENGL 110)

UC Credit Limitation

Lecture: 72

Prerequisite: ENGL 68 or AMLA 90 or appropriate placement

Develops effective expository writing skills and investigates the principles and methods of composition as applied to the research process and the writing of essays. Emphasizes critical reading of academic material. Students may only earn credit for one: AMLA 1A, ENGL 1A, or ENGL 1AM.

ENGL 1AH Freshman Composition - Honors**4 Units** (Degree Applicable, CSU, UC, C-ID #: ENGL 100, ENGL 110)

UC Credit Limitation

Lecture: 72

Prerequisite: Acceptance into the Honors Program

Develops effective expository writing skills and investigates the principles and methods of composition as applied to the research process and the writing of essays. Emphasizes critical reading of academic material. An honors course designed to provide an enriched experience. Students may not receive credit for both ENGL 1A and ENGL 1AH.

ENGL 1AM College Composition for Non-Native English Speakers**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 72

Prerequisite: ENGL 68 or AMLA 90 or appropriate placement

Engages non-native English students in the reading and writing process with emphasis on college-level reading, critical analysis, research skills, and expository and argumentative composition mindful of purpose and audience while developing an awareness of fundamental principles of cultural competence and linguistic awareness that are inherent in language learning. Students may only earn credit for one: AMLA 1A, ENGL 1A, or ENGL 1AM.

ENGL 1B English - Introduction to Literary Types**3 Units** (Degree Applicable, CSU, UC, C-ID #: ENGL 120, ENGL-LIT 100)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH

Critical, oral, and written evaluation, analysis, and interpretation of short and long fiction, poetry, and drama. Develops a foundation for personal, cultural, and intellectual growth.

ENGL 1BH English - Introduction to Literary Types - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: ENGL 120, ENGL-LIT 100)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH and acceptance into the Honors Program

Critical, oral, and written evaluation, analysis and interpretation of short and long fiction, poetry, and drama. Develops a foundation for personal, cultural, and intellectual growth. An honors course designed to provide an enriched experience. May not receive credit for both ENGL 1B and ENGL 1BH.

ENGL 1C Critical Thinking and Writing**4 Units** (Degree Applicable, CSU, UC, C-ID #: ENGL 105, (ENGL 115))

Lecture: 72

Prerequisite: ENGL 1A or ENGL 1AH

Develops critical thinking, reading, and writing skills beyond the level achieved in ENGL 1A. Increases the student's capacity for logical analysis and argumentative writing.

ENGL 1CH Critical Thinking and Writing - Honors**4 Units** (Degree Applicable, CSU, UC, C-ID #: ENGL 105, (ENGL 115))

Lecture: 72

Prerequisite: ENGL 1A or ENGL 1AH and acceptance into the Honors Program

The nature of arguments, the basic principles of logic, and the rhetorical strategies necessary to write effective argumentative essays. Emphasizes the appraisal of information, close analysis of a variety of texts, and the essential principles involved in the practice of reasoned decision-making. An honors course designed to provide an enriched experience. May not receive credit for both ENGL 1C and ENGL 1CH.

ENGL 8A Creative Writing - Fiction**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH

Elements, processes, and techniques of fiction writing. Includes genre, setting, point of view, character development, plot development, description, and dialogue with an emphasis on student development as a writer of fiction through practice and discussion.

ENGL 8B Creative Writing - Poetry**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH

Emphasizes the student's development as a poet.

ENGL 8E Creative Writing - Memoir**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Analysis and writing of memoirs including stylistic and syntactic forms and composition strategies used when writing memoir.

ENGL 8F Creative Writing - Nonfiction**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Analysis and writing of creative nonfiction including stylistic and syntactic forms and composition strategies used when writing creative nonfiction.

ENGL 56 Grammar Review**1 Unit** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18

Formerly ENGL 65

Fundamentals of English for the student who needs a practical course focusing on usage and grammar: subjects, verbs, agreement, case, fragments, modifiers, parallelism, shifts in construction, and punctuation.

ENGL 57 Writing Effective Sentences**1 Unit** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18

Formerly ENGL 64

Improve sentence writing skills through the analysis and application of sentence elements. Includes the identification and correction of common sentence problems, such as comma splice, fragment, and run-on.

ENGL 58 Paragraph Writing**1 Unit** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18

Formerly ENGL 66

Analysis and writing of paragraphs. Through the process of writing, the student learns to state and support an idea about a focused topic.

ENGL 67 Writing Fundamentals**4 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Prerequisite: Satisfactory score on the English Placement Test or completion of LERN 81

Emphasizes sentence, outlining, summary, paragraph and essay skills, and critical thinking through combining reading and writing.

ENGL 68 Preparation for College Writing**4 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Prerequisite: ENGL 67 or appropriate placement

Development of the academic essay based on critical reading of texts. Reviews essay structure and introduces research and principles of documentation. Continues to develop critical thinking through reading of and writing about increasingly complex texts.

ENGL 75 Vocabulary Building**3 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Expands students' reading, writing, and speaking vocabularies through study of the principles of word formation, emphasizing prefixes, roots, suffixes, and the effective use of content clues as well as dictionaries and other reference works.

ENGL 81 Language Acquisition**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: ENGL 1A

Language structure, linguistics, and language development. Explores first and second-language acquisition as it pertains to K-12 learners. Meets the Commission on Teaching Credentialing standards for Language Acquisition requirement for elementary school teaching credential.

ENGL 90 Accelerated Developmental Writing**5 Units** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 90

Prerequisite: Eligibility for ENGL 67

Advisory: Eligibility for READ 90 or eligibility for AMLA 33

Critical thinking skills, contextual analysis, and conventions of essay writing in a thematic context to prepare students for college-level composition. Addresses metacognitive skills and affective factors with a process-based, integrative approach to writing.

ENGL 99 Special Projects in English**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Prerequisite: ENGL 1A

Offers selected students recognition for their academic interest and ability, and the opportunity to explore the discipline in greater depth. The content of this course and the methods of study vary and depend on the particular project under consideration. Instructor authorization needed prior to enrollment.

Ethnic Studies (ETHS)

ETHS 1 Introduction to Ethnic Studies**3 Units** (Degree Applicable, CSU)

Lecture: 54

An introduction to the interdisciplinary study of race and ethnicity in the United States relating to the diverse institutional, cultural, and historical issues of the four historically defined racialized core groups (Native Americans, African Americans, Latinx Americans, and Asian Americans). The course will examine key topics such as racialization, racism, settler colonialism, imperialism, racial capitalism, white supremacy, cultural hegemony, power, discrimination, immigration, economics, labor, political conditions, cultural expression, resistance, cross-group collaboration, liberation movements, and the intersection of racial, ethnic, gender, and sexual identities.

ETHS 2 Race and Racism in Education**3 Units** (Degree Applicable, CSU)

Lecture: 54

This interdisciplinary survey course, broadly and deeply, examines the role of race and racism in the educational experiences of the four historically defined racialized core groups in the United States (Native Americans, African/Black Americans, Latinx Americans, and Asian Americans). This course is largely constructed around the words and voices of the aforementioned groups, in order to understand historical dehumanization, (in)access, and segregation in education, as well as contemporary practical manifestations of how race and racism play out in everyday K-16 schooling.

ETHS 20 Introduction to Script Analysis for the Theater**3 Units** (Degree Applicable, CSU)

Lecture: 54

Socially conscious and equitable analysis of dramatic literature for practical application in contemporary theater arts. This class focuses on the reading and analysis of dramatic literature written by black, indigenous, people of color (BIPOC) playwrights. Students may not earn credit for both THTR 20 and ETHS 20.

Family & Consumer Studies (FCS)

FCS 41 Life Management**3 Units** (Degree Applicable, CSU)

Lecture: 54

Life skills for effective self-management now and in the future. Examines theories of life management including Maslow's Hierarchy of Needs and how it can be applied to daily use of one's resources including energy, abilities, priorities, and money. Major topics include steps in value clarification, goal setting, resource allocation, decision-making, priority management, money management, workplace management, communication skills, and healthy habits. In addition, the course explores the effect of cultural forces and future trends.

FCS 51 Consumerism: The Movement, its Impact, and Issues**3 Units** (Degree Applicable, CSU)

Lecture: 54

Analysis of the role of consumption in economic systems. The consumer movement past, present, and future viewed as a response to economic and social conditions. Contemporary consumer issues, information sources, legislation, and protection.

FCS 80 Personal Financial Planning**3 Units** (Degree Applicable, CSU)

Lecture: 54

Integrative approach to personal finance focusing on practical financial decision making as well as the social, psychological, and physiological contexts in which those decisions are made. Students will examine their relationships with money, set personal goals, and develop a plan to meet those goals. Topics include consumerism, debt, healthcare, investing, retirement, long-term care, disability, death, and taxes. Students may not earn credit for both BUSA 71 and FCS 80.

FCS 91 Work Experience in Family and Consumer Sciences**1-3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-225

Prerequisite: Compliance with work experience regulations as designated in the College Catalog

Provides Family and Consumer Science majors with actual on-the-job experience in an approved work site related to classroom-based learning. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. Work experience placement is not guaranteed but assistance is provided by the Family and Consumer Sciences faculty. Instructor approval required.

Fashion Merchandising & Design (FASH)

FASH 8 Introduction to Fashion**3 Units** (Degree Applicable, CSU)

Lecture: 54

Fashion industry as a whole, including raw materials, manufacturing, retailing, technology, world economics, globalization, and careers. Includes apparel design, manufacturing, retail merchandising, sales, promotion, textile production, and career opportunities.

FASH 9 History of Fashion**3 Units** (Degree Applicable, CSU)

Lecture: 54

Survey of Western costume and fashion from antiquity to contemporary times. Emphasis is placed on style development as it relates to social, economic, and political forces, and the relationship of historic styles to current fashion.

FASH 10 Clothing Construction I**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Essentials of industry standard apparel construction techniques using a variety of machines and equipment. Students will be given instruction in single needle machine operation, industrial overlock operation, and garment assembly.

FASH 12 Clothing Construction II**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: FASH 10

Advanced industry construction techniques using overlock and single needle machines.

FASH 14 Dress, Culture, and Identity**3 Units** (Degree Applicable, CSU)

Lecture: 54

The interrelatedness of socio-psychological, economic, cultural, and political/religious influences on dress, adornment, and fashion in historical perspective. Includes cross-cultural analysis of Western and non-Western dress.

FASH 15 Aesthetic Design in Fashion**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: FASH 25

Design principles and influences in apparel selection and fashion design. Projects applying design elements and principles using computer-aided design (CAD) software.

FASH 16 Corset Construction**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: FASH 10

History of the corset, types of corset fabrics, trims and methods of embellishment. Essentials of standard apparel corset construction techniques using a variety of tools and equipment. Skills learned can be applied to historical or contemporary corsets.

FASH 17 Textiles**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Introductory study of the physical and chemical properties of textiles. Textile fiber production, classification, properties, and identification. Textiles coloration and finishing processes. Relationship of fiber characteristics, coloration, and finishing processes to fabric properties, performance, legislation, and care.

FASH 21 Patternmaking I**3 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 108

Prerequisite: FASH 10

Flat patternmaking techniques to create garment designs using industry standards, dart transfer, and seam manipulation. First and production patterns will be created, constructed, and fitted.

FASH 22 Fashion Design By Draping**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: FASH 10

Advisory: FASH 21

Three dimensional dress design through draping fabrics directly to a dress form to create original designs and patterns to interpret fashion illustrations and technical flats.

FASH 23 Patternmaking II**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: FASH 21 and FASH 25

Intermediate pattern drafting and flat patternmaking with an introduction to technical packages. Students apply patternmaking theories to create ready-to-wear sportswear designs for misses and women's wear.

FASH 24 Fashion Patternmaking by Computer**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: FASH 21

Industrial fashion patternmaking and grading using Gerber computer-aided design (CAD) technology. Exploration of drawing techniques, pattern development, flat pattern manipulation, and the sizing and grading of patterns.

FASH 25 Fashion Digital Illustration and Design**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Advisory: FASH 10

Technical fashion drawing techniques using Adobe Illustrator and Photoshop. Includes drawing production flats, colorization, and digital fashion figures using a computer as a drafting tool. Exploration of popular computer techniques and apparel industry design methods.

FASH 57 Fashion Retailing and Production Technologies**3 Units** (Degree Applicable)

Lecture: 54

Apparel wholesale to retail concepts and technologies used in fashion merchandising environment systems. The emphasis is on practical knowledge and use of software in the fashion industry.

FASH 59 Fashion Retailing**3 Units** (Degree Applicable, CSU)

Lecture: 54

Overview of fashion retailing, on site environments, online fashion stores, management, and multi-channel retailers. Principles focus on the fashion segment of the retailing industry and the merchandising of fashion products.

FASH 62 Retail Buying and Merchandising**4 Units** (Degree Applicable, CSU)

Lecture: 72

Advisory: MATH 51

Principles and practices used in retail buying and merchandising environment. This course emphasizes the buyer's role in merchandising management, quantitative retail formulas, costing calculations, pricing strategies, and managing profit. Students will apply concepts learned using Microsoft Excel.

FASH 63 Fashion Promotion**3 Units** (Degree Applicable, CSU)

Lecture: 54

Principles and techniques of integrated marketing communications for apparel wholesale and retail products. Emphasis focuses on principles of integrated marketing and communication strategy, market and consumer research, branding, and the comprehensive nature of promotion in the fashion merchandising environment and emphasizes the changing nature of promotion in a global marketplace.

FASH 66 Visual Merchandising Display**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: FASH 25 or ARTC 140

Design principles, color theory, space and lighting in relation to visual merchandising display areas and interior design of stores using various applications of computer graphics programs.

FASH 81 Work Experience in Fashion Merchandising and Retail**1-3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-225

Prerequisite: FASH 8 and FASH 62

Provides fashion merchandising students with on-the-job experience in an approved work site which, is related to classroom-based learning. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester in apparel merchandising, buying, and retail business required for each unit of credit. Students are responsible for securing their own internships and must be ready for the first week of class.

FASH 84 Work Experience in Fashion Design**1-2 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-150

Prerequisite: FASH 23 and FASH 24

Provides fashion design students with on-the-job experience in an approved work site which is related to classroom-based learning. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester in apparel technical design, patternmaking, and apparel production required for each unit of credit. Students are responsible for securing their own internships and must be ready for the first week of class.

FASH 90T Topics in Fashion Design**2 Units**

(May be taken four times for credit)

(May be taken for Pass/No Pass only)

Lecture: 18 Lab: 54

Provides design experience to supplement regular program opportunities for students to pursue more advanced projects. Students who repeat this course will improve skills through further instruction and practice.

Fire Technology (FIRE)

FIRE 1 Fire Protection Organization**3 Units** (Degree Applicable, CSU)

Lecture: 54

This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields ; culture and history of emergency services; fire loss analysis: organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics; life safe initiatives

FIRE 2 Fire Prevention Technology**3 Units** (Degree Applicable, CSU, C-ID #: FIRE 110 X)

Lecture: 54

This course provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; and fire investigation.

FIRE 3 Fire Protection Equipment and Systems**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: FIRE 1

Provides information relating to the features of design and operation of the fire alarm systems; water based fire suppression systems; specialized hazard fire suppression systems; water supply for fire protection and portable fire extinguishers.

FIRE 4 Building Construction for Fire Protection**3 Units** (Degree Applicable, CSU, C-ID #: FIRE 130 X)

Lecture: 54

Advisory: FIRE 1

Provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations , and operating at emergencies.

FIRE 5 Fire Behavior and Combustion**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: FIRE 1

Explores the theories and fundamentals of how and why fires start, spread, and are controlled. In depth study of fire chemistry and physics, characteristics of materials, extinguishing of materials, extinguishing agents, and fire control techniques.

FIRE 6 Hazardous Materials/ICS**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: FIRE 1

Provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity, and health encountered by emergency services. Provides information regarding emergency procedures, legal requirements, compliance to regulations, health effects and treatment, and protocols that meet Occupational Safety and Health Administration (OSHA) requirements.

FIRE 7 Fire Fighting Tactics and Strategy**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: FIRE 1

This course provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agents. Additionally, it provides principles of fire command and control procedures, understanding types of building construction as they relate to fire control, review of fire chemistry, pre-fire planning, organized approach to decision making on the fire scene, and basic firefighting strategies and tactics.

FIRE 8 Fire Company Organization and Management**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: FIRE 1

Introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service ethics and leadership from the perspective of the company officer.

FIRE 9 Fire Hydraulics**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: FIRE 1 and eligibility for MATH 51

Provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and solve water supply problems.

FIRE 10 Arson and Fire Investigation**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: FIRE 1

Provides students with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes.

FIRE 11 Fire Apparatus and Equipment**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: FIRE 1

Mechanized equipment operated by fire service personnel and regulations pertaining to their use. Includes driving laws, driving techniques, construction and operation of pumping engines, ladder trucks, aerial platforms, specialized equipment, and apparatus maintenance.

FIRE 12 Wildland Fire Control**4.5 Units** (Degree Applicable, CSU)

Lecture: 81

Advisory: Eligibility for ENGL 68

Addresses wildland fire behavior, safety considerations, strategy, tactics, and operational differences within the wildland urban interface. Field trip required.

FIRE 13 Principles of Fire and Emergency Services Safety and Survival**3 Units** (Degree Applicable, CSU, C-ID #: FIRE 150 X)

Lecture: 54

Advisory: FIRE 1

This course introduces the basic principles and history related to the National Firefighter Life Safety Initiatives; focusing on the need for cultural and behavior change throughout the emergency services. This course meets criteria of the National Fire and Emergency Services Higher Education objectives as it pertains to firefighter safety and survival techniques used in today's fire service.

FIRE 86 Basic Fire Academy**14.5 Units** (Degree Applicable)

Lecture: 144 Lab: 377

Prerequisite: FIRE 1 and FIRE 2 and FIRE 3 and FIRE 4 and FIRE 5 and (FIRE 13 or equivalent) and KIN 50 and (KINF 51A or KINF 51B or KINF 52A or KINF 52B or equivalent) and proof of EMT completion record
Corequisite: KINF 53

This course prepares students for an entry level position as a firefighter. Includes Firefighter I training in the areas of structural firefighting, hazardous materials, and wildland firefighting. Upon successful completion of the course, students will earn a State Firefighter I certification and be eligible for the State Firefighter II certification.

FIRE 91 Fire Academy Ladder Orientation**1 Unit** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 8 Lab: 32

Intensive training in ladder manipulation to prepare students for Fire Academy and physical fitness tests given by the fire departments.

FIRE 93 Firefighter 1 Skills Review and Testing**1 Unit** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 4 Lab: 36

Prerequisite: FIRE 86 Basic Fire Academy course completion

Review of skills learned in the basic fire academy in accordance with the State Fire Marshal Firefighter 1 curriculum. This course also provides the student the opportunity to take the National Capstone tests for International Fire Service Accreditation Congress (IFSAC) and National Board on Fire Services Professional Qualifications (Pro Board) certification. Successful completion of this course would provide the student with the opportunity to apply for employment outside the state of California with those states that offer reciprocity.

FIRE 96 Work Experience Fire Science**1-4 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog. Completion of a minimum of 12 units in Fire Science.

Work experience in fire service at an approved work site which is related to classroom instruction. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. This course is available to students achieving a minimum of 12 units in fire service.

FIRE 100 Company Officer 2C: Fire Inspections and Investigations**2 Units** (Degree Applicable)

Lecture: 40

Company Officer's role in fire prevention and investigation, the relationship between life safety and building construction, the elements of a quality company inspection program, determination of origin and cause of fire scene and how to address complex hazards encountered during an inspection.

FIRE 101 Company Officer 2D: All Risk Command Operations**2 Units** (Degree Applicable)

Lecture: 40

Prerequisite: Fire Academy Course Completion Certificate and 200 online certificate and Hazardous Material Incident Commander (CSTI) Certification

Principles of command for the Company Officer including the development of incident priorities, strategy, tactics, safety, and the risk management process. An overview of Company Officer pre- and post-incident planning considerations, and crew roles and responsibilities. Each student will have the opportunity to gain experience through structure fire incident simulations and role play.

FIRE 102 Company Officer 2B: General Administrative Functions**1 Unit** (Degree Applicable)

Lecture: 20

Company Officer 2B general administrative functions and the implementation of department policies and procedures. Addresses the fire department's role, image, and mission to the public.

FIRE 103 Company Officer 2E: Wildland Incident Operations**2 Units** (Degree Applicable)

Lecture: 40

Prerequisite: Fire Academy Course Completion Certificate and FIRE 101 and S-290 (classroom delivery only)

Principles of command in the wildland urban interface environment. Overview of the concepts of command safety and the risk management process, personnel qualifications, pre-incident planning considerations, command considerations at wildland incidents, fire behavior forecasting, firefighting limitations, key points from historic fires, the challenges of local conditions, and public expectations.

FIRE 104 Instructional Methodology**2 Units** (Degree Applicable)

Lecture: 40

This course is part of the Company Officer Certification track for the California State Fire Marshal. Methods and techniques for training in accordance with the latest concepts in career education; selecting, adapting, organizing, and using instructional materials appropriate for teaching cognitive lessons; criteria and methods to evaluate teaching and learning efficiency; and an opportunity to apply major principles of learning through teaching demonstrations.

FIRE 107 Company Officer 2A: Human Resource Management for Company Officers**2 Units** (Degree Applicable)

Lecture: 40

Company Officer 2A Human Resource Management for Company Officers course prepares or enhances the ability of the first line supervisor to supervise subordinates through the use of human resource management skills to accomplish assignment, evaluate member performance, and integrate health and safety plans, policies, and procedures into daily activities as well as the emergency scene.

FIRE 108 ICS 300: Advance Incident Command**1 Unit** (Degree Applicable)

Lecture: 20

Prerequisite: ICS 100 and ICS 200 online FEMA certificates

ICS 300 is part of the State Fire Marshal Officer Certification track and intended for persons serving as command staff, section chiefs, strike team leaders, task force leaders, unit leaders, division/group supervisors, branch directors, and multi-agency coordination system/emergency operations center staff. Topics include Incident Command System (ICS) staffing and organization, transfer of command, unified command functions in a multi-jurisdictional or multi-agency incident, ICS forms, resource management, interagency mission planning and procurement.

French (FRCH)

FRCH 1 Elementary French**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Beginning course for students without prior exposure to French. Begins to develop the ability to converse, read, and write in French. Emphasis is on oral proficiency. Includes the study of principles of language learning, pronunciation, basic vocabulary, and grammatical structures. Extensive exposure to the cultures of French-speaking countries.

FRCH 2 Continuing Elementary French**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: FRCH 1

Further development of conversational, reading, and writing skills in French, with emphasis on communicative skills, expansion of vocabulary, and understanding of structure. Extensive exploration and analysis of the cultures of French-speaking countries.

FRCH 3 Intermediate French**4 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Prerequisite: FRCH 2 or equivalent

Expansion of vocabulary and structural components. Further development of communicative proficiency with increasing emphasis on reading and writing. Extensive exposure to culture from France and other French-speaking countries.

FRCH 4 Continuing Intermediate French**4 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Prerequisite: FRCH 3

Continued development of intermediate-level proficiency in French. Increasing emphasis on reading and writing. Extensive exposure to cultural elements such as art, music, film, and history from France and other French-speaking countries.

FRCH 53 Intermediate Conversational French**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: FRCH 2

Intermediate level fluency through expansion of vocabulary and practical use of language.

FRCH 54 Continuing Intermediate Conversational French**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: FRCH 3 or FRCH 53 or equivalent

Continuing to intermediate fluency through further expansion of vocabulary and practical use of language.

FRCH 60 French Culture Through Cinema**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

French culture and history as presented in classic and contemporary French films. Analysis of characters and political, social, and artistic movements in France and other Francophone countries as reflected in the works of French-speaking film directors and writers. Lectures and class discussions conducted in English. All films with English subtitles.

Geography (GEOG)

GEOG 1 Physical Geography**3 Units** (Degree Applicable, CSU, UC, C-ID #: GEOG 110)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Study of the natural processes creating the Earth's physical environments with emphasis on the inter-relationships of natural processes and systems; general atmospheric circulation, Earth-sun relationships, oceanic circulation, water and energy budgets, plate tectonics, and the shaping of the physical landscape.

GEOG 1H Physical Geography - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: GEOG 110)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Study of the natural processes creating the Earth's physical environments with emphasis on the inter-relationships of natural processes and systems; general atmospheric circulation, Earth-sun relationships, oceanic circulation, water and energy budgets, plate tectonics, and the shaping of the physical landscape. An honors course designed to provide an enriched experience. Students may not receive credit for both GEOG 1 and GEOG 1H.

GEOG 1L Physical Geography Laboratory**1 Unit** (Degree Applicable, CSU, UC, C-ID #: GEOG 111)

Lab: 54

Corequisite: GEOG 1 or GEOG 1H (May have been taken previously)

Advisory: MATH 50

Geographical observations, experiments, and demonstrations in a laboratory setting to explore natural earth processes and systems.

GEOG 1LH Physical Geography Laboratory - Honors**1 Unit** (Degree Applicable, CSU, UC, C-ID #: GEOG 111)

Lab: 54

Prerequisite: Acceptance into the Honors Program

Corequisite: GEOG 1 or GEOG 1H (May have been taken previously)

Advisory: MATH 50

Geographical observations, experiments, and demonstrations in a laboratory setting to explore natural earth processes and systems. An honors course designed to provide an enriched experience. Students may not receive credit for both GEOG 1L and GEOG 1LH.

GEOG 2 Human Geography**3 Units** (Degree Applicable, CSU, UC, C-ID #: GEOG 120)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Human geography with emphasis on critical areas of inquiry and research. Focus on the interconnections of place and process in several sites around the globe; comprehension of important terms and concepts; and literacy in the geography of place names and in world regional understanding.

GEOG 2H Human Geography - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: GEOG 120)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Human geography with emphasis on critical areas of inquiry and research. Focus on the interconnections of place and process in several sites around the globe; comprehension of important terms and concepts; and literacy in the geography of place names and in world regional understanding. An honors course designed to provide an enriched experience. Students may not receive credit for both GEOG 2 and GEOG 2H.

GEOG 5 World Regional Geography**3 Units** (Degree Applicable, CSU, UC, C-ID #: GEOG 125)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Study of the world's regions addressing the major regions of the world in the context of population, resources, environmental challenges, cultural landscapes, economic development, urbanization and geographic problems.

GEOG 8 Urban Geography**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Study of urban society and space. Cities are examined as complex social-economic groupings of people, material landscapes of buildings, and public and private spaces. Attention is paid to the evolution of urban experience of the past and present as well as to ever-changing ideas about urban planning and design for the future. While the overall perspective of the course is global, its primary focus is on the cities of North America and, in particular, the Los Angeles metropolitan area. The global-local emphasis is applied both in the classroom and in possible field trips.

GEOG 9 Geospatial Concepts**3 Units** (Degree Applicable, CSU)

Lecture: 54

Introduction to skills needed to use and appreciate maps as a form of communication and as a research tool. Develops spatial reasoning skills through a survey of maps, spatial science concepts, and geospatial technologies. Topics include geospatial information, navigation, map projections, symbolization, misuse of maps, and analysis of spatial data.

GEOG 10 Introduction to Geographic Information Systems**3 Units** (Degree Applicable, CSU, UC, C-ID #: GEOG 155)

Lecture: 36 Lab: 54

Principles, theory, and operations of geographic information systems (GIS), including geospatial data models, analytical functions, data quality, map design and visual communication, and social and environmental applications of GIS.

GEOG 12 Cartography**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

Prerequisite: GEOG 10

Fundamental digital cartographic concepts and design principles to create and edit effective visual representations of data (maps, graphs, dashboards, and diagrams) in different formats (hardcopy, digital, web, and mobile). Topics include the ethical and appropriate application of map scale, map projections, generalization, and symbolization.

GEOG 13 Geospatial Data Acquisition and Management**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: GEOG 10

Addresses the interpretation and understanding of a variety of data formats used by geospatial professionals. Introduces the fundamental concepts such as primary GIS data creation, database creation, and data management and discusses quantitative techniques for the collection, classification, integration, and management of geographical data.

GEOG 14 Spatial Analysis**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: GEOG 10

Examination of the spatial relationships of features in geospatial data, such as patterns, trends, connections, etc. GIS-based spatial analysis techniques for both vector and raster data models with an emphasis on using spatial analysis operations to aid in geospatial problem-solving scenarios.

GEOG 15 Raster Methods**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: GEOG 10

An introduction to working with Raster Data. Topics include the physical principles on which raster data is based, history and future trends, sensors and their characteristics, image data sources, and image classification, interpretation, and analysis techniques.

GEOG 16 GIS Capstone Portfolio**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: GEOG 14 and GEOG 15

Geographic Information System instruction on research methodologies and analysis techniques. Emphasis placed on construction of a GIS research project: location of paper and digital sources, using analysis tool, model building, and project presentation.

GEOG 30 Geography of California**3 Units** (Degree Applicable, CSU, UC, C-ID #: GEOG 140)

Lecture: 54

Thematic approach to issues, processes, and topics relevant to the study of California. Includes an examination of the physical processes that shape the landscapes of California, the interaction of humans with these physical processes (particularly the importance of water), and the cultural and social landscapes that have evolved as a result of this human-environment interface. A field trip may be required.

Geology (GEOL)

GEOL 1 Physical Geology**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Advisory: MATH 50

Minerals, rocks, earthquakes, volcanoes, and landscapes are presented within a framework of plate tectonics operating in concert with atmospheric and oceanic processes. A required course for students entering geoscience majors. May be taken by non-majors as a transferable physical science plus lab. Required field trips may involve overnight camping.

GEOL 2 Historical Geology**4 Units** (Degree Applicable, CSU, UC, C-ID #: GEOL 111)

Lecture: 54 Lab: 54

Prerequisite: GEOL 1 or GEOL 8L

An Earth systems approach applied to tracing the tectonic, biologic, and climatic development of Earth, with focus on North America, through geologic time. Study of Earth history using geologic maps, cross-sections, minerals, rocks, and fossils and integrating basic geological field methods. Required field trips may involve overnight camping.

GEOL 7 Geology of California**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Natural provinces of California, namely their mineral, rock, and petroleum resources, volcanoes and earthquakes, landscapes, and geologic history as influenced by plate tectonic and surface processes. Field trips are required and may involve overnight camping.

GEOL 8 Earth Science**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Fundamentals of geology, oceanography, meteorology, and astronomy. A field trip is required. Take with GEOL 8L for lecture/lab credit.

GEOL 8H Earth Science - Honors**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Prerequisite: Acceptance into the Honors Program

An honors course designed to provide an enriched experience. Fundamentals of geology, oceanography, meteorology, and astronomy. A field trip is required. Students may not receive credit for both GEOL 8 and GEOL 8H.

GEOL 8L Earth Science Laboratory**1 Unit** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lab: 54

Corequisite: GEOL 8 or GEOL 8H (May have been taken previously)

Laboratory applications and problem-solving in geology, oceanography, meteorology, and astronomy. Recommended for students needing a lab to transfer to a 4-year college or university.

GEOL 9 Environmental Geology**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Human interactions with the geological environment. Relevant aspects of the geological environment and the problems currently caused by humans as they use the earth and its resources. Geologic hazards, including earthquakes, volcanoes, landslides, floods, and subsidence. Emphasis on geological viewpoints concerning waste disposal, pollution, geothermal energy, fossil fuels, and mining. Geologic practices related to sound land management, conservation of resources, and protection of the environment. Field trips required.

GEOL 9L Environmental Geology Laboratory**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Corequisite: GEOL 9 (May have been taken previously)

Common laboratory practices and exercises in environmental geology. Laboratory exercises include analyzing topographic and geological maps and aerial and satellite imagery. Also included are identifying common mineral and rock samples, water and soil analysis, and integrating data from lab activities in problem solving exercises. Field trip required.

GEOL 10 Natural Disasters**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Surveys the hazards faced by humans from the natural environment. Analyzes a variety of hazards from a geological perspective. Studies the impact humans have on influencing or exacerbating natural disasters. Includes the role of government in responding to natural disasters. Field trips required.

GEOL 24 Geologic Field Studies: Central California**4 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54 Lab: 54

Field studies of selected Central California geological provinces and surrounding areas. Overnight field trips with substantial hiking required.

GEOL 25 Geologic Field Studies: Southern California**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Field studies of selected Southern California geological provinces and surrounding areas. Overnight field trips required. Trips require significant hiking.

GEOL 29 Special Topics in Field Geology**3 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 108

Advisory: GEOL 1 or GEOL 8 or GEOL 24 or GEOL 25

Field studies of designated geologic provinces and regions. Emphasis on rock identification and interpretation of geologic histories of field areas. Extended overnight field trips, camping, and strenuous hiking required.

GEOL 30 Global Climate Change**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

History of Earth's changing climate through geologic time and the application of the scientific method to the global climate change debate. Topics include the feedback systems that regulate the climate over long and short-term time scales, the interrelationships among short and long-term carbon cycling, plate tectonics, ocean and atmosphere circulation, the influence and origin of greenhouse gases and the major reservoirs of the exchangeable carbon on Earth. Required field trips may involve overnight camping.

GEOL 31 Geotechnical Methods for Geotech**1 Unit** (Degree Applicable)

Lab: 54

Prerequisite: GEOL 9L

Introduction to methods and skills utilized by professionals in the geotechnical sector. Emphasis on technical and soft skills required for entry-level positions. For Geotechnician Certificate Program students. Mandatory day and overnight field trips to various field sites may require camping and hiking.

GEOL 32 Work Experience in Geotechnician/Environmental Technician Skills**1-4 Units** (Degree Applicable)

Prerequisite: GEOL 31

Provides geotechnician program students with actual on-the-job experience in an approved work site that is related to classroom-based learning. A minimum of 75 paid clock hours or 60 non-paid clock hours per semester in the geotechnical, environmental technical, or petroleum technical fields required for each one unit of credit. Students are responsible for securing their own internships and internships must be arranged to begin the first week of class.

GEOL 33 Geotechnical Methods for Geotech 2**1 Unit** (Degree Applicable)

Lab: 54

Prerequisite: GEOL 31

Introduction to advanced methods and skills utilized by professionals in the geotechnical sector. Emphasis on technical and soft skills required for entry-level positions as soil technicians, environmental techs working with soils and sediments, petroleum techs and other positions focused on non-aqueous settings. For Geotechnician Certificate Program students who have completed Geotechnical Methods I. Mandatory day and overnight field trips to various field sites may require camping and hiking.

GEOL 99 Special Projects in Geology**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

In order to offer students recognition for their academic interests and abilities and the opportunity to explore their disciplines in greater depth, the various departments from time to time offer Special Projects courses. The content of each course and the methods of study vary from semester to semester, and depend on the particular project under consideration. Students must have an instructor's authorization before enrolling in this course. Field trips may be required.

German (GERM)

GERM 1 Elementary German**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

For students with no previous German. Develops the ability to converse, read, and write in German. Emphasis on oral proficiency. Includes essentials of pronunciation, vocabulary, idioms, and grammatical structures along with an introduction to Germanic culture.

GERM 2 Continuing Elementary German**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: GERM 1

Further development of conversational reading and writing skills in German with emphasis on communication skills, expansion of vocabulary, and understanding of structure. Further study of Germanic culture.

GERM 3 Intermediate German**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: GERM 2

Communicative proficiency in German and exploration of Germanic culture. Further study and review of grammar and expansion of vocabulary. Increasing emphasis on reading and writing in German

GERM 60 German Culture through Cinema**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

A survey of German culture from 1870 to the present as reflected in the works of German film-makers. Special emphasis is placed on aesthetic, historical, and social movements in Germany. Films are shown in German with English subtitles. Class discussion and lectures are conducted in English.

History (HIST)

HIST 1 History of the United States**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Prerequisite: Eligibility for ENGL 68

History of the United States from the colonial period to the present.

HIST 3 World History: Prehistoric to Early Modern**3 Units** (Degree Applicable, CSU, UC, C-ID #: HIST 150)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Human societies from their origins to the Early Modern period from a global and comparative perspective including social, political, religious, economic, and cultural institutions and changes.

HIST 3H World History: Prehistoric to Early Modern - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: HIST 150)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Human societies from their origins to the Early Modern period from a global and comparative perspective including social, political, religious, economic, and cultural institutions and changes. An honors course designed to provide an enriched experience. Students may not receive credit for both HIST 3 and HIST 3H.

HIST 4 World History: Early Modern to the Present**3 Units** (Degree Applicable, CSU, UC, C-ID #: HIST 160)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Social, political, economic, and cultural changes during the modern period from a global and comparative perspective.

HIST 4H World History: Early Modern to the Present - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: HIST 160)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Social, political, economic, and cultural changes during the modern period from a global and comparative perspective. An honors course designed to provide an enriched experience. Includes extensive reading and writing assignments. Students may not receive credit for both HIST 4 and HIST 4H.

HIST 7 History of the United States to 1877**3 Units** (Degree Applicable, CSU, UC, C-ID #: HIST 130)

UC Credit Limitation

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Survey of American history from Native American origins through post-Civil War Reconstruction. Studies the United States and its major ethnic and social groups. Explores the influence of the geography and environment of North America and the ethnic, social, and religious complexity of the population. Examines political, cultural, philosophical, and intellectual influences on the people and political institutions of the United States. Requires substantial reading and writing assignments. Satisfies the requirement for a course in American history, including the study of American institutions and ideas and the Constitution of the United States as required by Title 5 of the California Administrative Code.

HIST 7H History of the United States to 1877 - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: HIST 130)

UC Credit Limitation

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Survey of American history from Native American origins through post-Civil War Reconstruction. Studies the United States and its major ethnic and social groups. Explores the influence of the geography and environment of North America and the ethnic, social, and religious complexity of the population. Examines political, cultural, philosophical, and intellectual influences on the people and political institutions of the United States. Requires substantial reading and writing assignments. Satisfies the requirement for a course in American history, including the study of American institutions and ideas and the Constitution of the United States as required by Title 5 of the California Administrative Code. An honors course designed to provide an enriched experience. Students may not receive credit for both HIST 7 and HIST 7H.

HIST 8 History of the United States from 1865**3 Units** (Degree Applicable, CSU, UC, C-ID #: HIST 140)

UC Credit Limitation

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

United States history from 1865 to the present. Examines social, economic, political, intellectual, and military themes and patterns of United States development. Designed for history, social science, or humanities majors, or for transfer students who need a year course in United States history to meet general education requirements. Satisfies the requirement for a course in American history, including the study of American institutions and ideals and the principles of State and local government as required by Title 5 of the California Administrative Code.

HIST 8H History of the United States from 1865 - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: HIST 140)

UC Credit Limitation

Lecture: 54

Prerequisite: Acceptance into the Honors Program

United States history from 1865 to the present. Examines social, economic, political, intellectual, and military themes and patterns of United States development. Designed for history, social science, or humanities majors, or for transfer students who need a year course in United States history to meet general education requirements. Satisfies the requirement for a course in American history, including the study of American institutions and ideals and the principles of State and local government as required by Title 5 of the California Administrative Code. An honors course designed to provide an enriched experience. Students may not receive credit for both HIST 8 and HIST 8H.

HIST 9 Asian American and Pacific Islander History**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Surveys American history through the lens of Asians and Pacific Islanders, beginning with European colonialism in the 17th century to the present. This course highlights transnational and intergroup relations, paying close attention to Asian American and Pacific Islander American cultural development and influences on the social, political, cultural, and economic meanings of freedom in the United States.

HIST 10 History of Premodern Asia**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

History of East, South, and Southeast Asia from the prehistoric age to the early modern period. Emphasizes social, political, economic, and cultural changes in Asia from a regional and comparative perspective.

HIST 10H History of Premodern Asia - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance to the Honors Program

History of East, South, and Southeast Asia from the prehistoric age to the early modern period. Emphasizes social, political, economic, and cultural changes in Asia from a regional and comparative perspective. An honors course is designed to provide an enriched experience. Students may not receive credit for both HIST 10 and HIST 10H.

HIST 11 History of Modern Asia**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

History of East, South, and Southeast Asia from the early modern period to the present. Emphasizes social, political, economic, and cultural changes in Asia during the modern period from a regional and comparative perspective.

HIST 11H History of Modern Asia - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance to the Honors Program

History of East, South, and Southeast Asia from the early modern period to the present. Emphasizes social, political, economic, and cultural changes in Asia during the modern period from a regional and comparative perspective. An honors course is designed to provide an enriched experience. Students may not receive credit for both HIST 11 and HIST 11H.

HIST 16 The Wild West - A History, 1800-1890**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

History of the 19th Century Trans-Mississippi West (also known as the Wild West or the 19th Century American West) including significant historical, economic, and political events and personalities which make up this time period.

HIST 18 History of Latin America**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

History of Latin America from early human societies to the present. Topics include ancient societies, European colonialism, revolution and the emergence of independent Latin American states, the range and influence of Latin American culture, and the social and economic changes of recent decades.

HIST 19 History of Mexico**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Cultural and social history of the Mexican people from pre-Colombian civilization to modern Mexico.

HIST 30 History of the African American 1619-1877**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

The history of African Americans from 1619 to 1877, including historical processes and their impact on modern U.S. society. A critical analysis will be made of the contributions of African Americans to the historical development of the United States, and the transformations that have occurred as a result. Satisfies the requirement for a course in American institutions and ideals and the Constitution of the United States as required by Title 5 of the California Administrative Code.

HIST 31 History of the African American**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

History of African Americans from the Reconstruction period to the present, including historical processes and their impact on modern U.S. society. A critical analysis will be made of the contributions of African Americans to the historical development of the United States, and the transformations that have occurred as a result. Satisfies the requirement for a course in American institutions and ideals and the Constitution of the United States as required by Title 5 of the California Administrative Code.

HIST 35 History of Africa**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

History of Africa from prehistoric times to the present, addressing the diversity of the continent. Students learn about cultures, religions, art and architecture, literature, and social and political history. Topics include ancient African societies, colonialism and decolonization, and independent African states in the last 50 years.

HIST 36 Women in American History**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Women's experience placed within the context of major themes of United States history, addressing issues and debates related to gender construction and identity from Colonial times to the present. Political, economic, and social currents within the context of race, ethnicity, sexual orientation, and class are examined and analyzed. This course satisfies the requirement for a course in American history including the study of American institutions and ideals, as required by Title 5 of the California Administrative Code.

HIST 39 California History**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

The social, intellectual, economic, and political development of California and the Pacific Coast from earliest times to the present.

HIST 40 History of the Mexican American**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

U.S. history from colonial times to the present with a special emphasis on the role of Mexican Americans in the development of the nation. Satisfies the requirement for a course in American History, including the study of American institutions and ideals as required by Title 5 of the California Administrative Code.

HIST 44 History of Native Americans**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for English 68

History of the United States from Colonial times to the present with a special emphasis on the role of Native Americans. Examines the role Euro-American social, political, and economic movements play in the Native American experience and the mutual relationships generated through these factors. Critically analyzes how the Native American narrative is woven into the fabric of U.S. history and is an essential component of the complete American story.

HIST 99 Special Projects in History**2 Units** (Degree Applicable, CSU)

Lecture: 36

Prerequisite: Eligibility for ENGL 1A and instructor approval.

Offers selected students recognition for their academic interests and ability and the opportunity to explore their disciplines to a greater depth, the various departments from time to time offer Special Projects courses. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Instructor authorization needed prior to enrollment.

Histotechnology (HT)

HT 1 Introduction to Histotechnology**1 Unit** (Degree Applicable)

Lecture: 18

Advisory: Eligibility for ENGL 1A

The role of histotechnicians in preparation and analysis of tissues samples for diagnostic and research purposes. Internet resources, support organizations and periodical references for histotechnicians, as well as regulatory agencies. Set up of an educational plan and portfolio to be used throughout the program.

HT 2 Scientific Basics for Histotechnicians**3 Units** (Degree Applicable)

Lecture: 54

Advisory: CHEM 10 and Eligibility for ENGL 1A

General laboratory issues including general laboratory protocols (GLP's), safety, ethics, and terminology relative to the preparation of tissue samples.

HT 10 Histology**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: ANAT 35

Microscopy, cell structure, cell reproduction, and staining. Identification of tissues, organs, and special microstructures, and their detailed morphology. Involves distinguishing normal features from pathological conditions.

HT 12 Beginning Histotechniques**5 Units** (Degree Applicable)

Lecture: 54 Lab: 108

Prerequisite: HT 1 and HT 2

Advisory: MICR 22

Theory and practical applications and skill-building in tissue fixation, processing, embedding, sectioning, microtomy, hematoxylin-eosin staining (H&E), and microorganism staining. Quality control as it relates to routine histological techniques and equipment.

HT 14 Advanced Histotechniques**5 Units** (Degree Applicable)

Lecture: 54 Lab: 108

Prerequisite: HT 12

Practical applications of special stains for carbohydrates, amyloid, connective tissues, muscle and nervous tissues, including silver stains. Introduction to frozen sections, cytology preparation, and microwave technology. Field trip required.

HT 16 Histochemistry and Immunohistochemistry**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Prerequisite: HT 10 and HT 12

Practical applications of enzyme and immunological reactions as they relate to tissue staining. Field trip required.

HT 17 Work Experience in Histotechnology**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Prerequisite: HT 12 and compliance with Work Experience regulations as designated in the College Catalog

Provides histotechnology students with actual on-the-job experience in an approved work setting which is related to classroom instruction. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. Students who repeat this course will improve skills through further instruction and practice. Placement by Program Director.

Hospitality & Restaurant Management (HRM)

HRM 51 Introduction to Hospitality**3 Units** (Degree Applicable, CSU, C-ID #: HOSP 100)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Overview of structure and financial performance of hospitality industry; food and lodging, resorts, tourism enterprises, attractions and related operations. Focus on orientation to customer service, cultural and economic trends, and career opportunities.

HRM 52 Food Safety and Sanitation**2 Units** (Degree Applicable, CSU, C-ID #: HOSP 110)

Lecture: 36

Prerequisite: Eligibility for ENGL 68

Sanitation practices affecting individual and commercial food service operations. Prevention and control of foodborne illnesses through flow of food and Hazard Analysis Critical Control Point (HACCP) management. Also includes study of worker safety. Students will take a nationally recognized Food Safety Manager Certification exam as part of this course.

HRM 56 Hospitality Supervision**3 Units** (Degree Applicable, CSU, C-ID #: HOSP 170 X)

Lecture: 54

Human resource management procedures and skills needed to hire, train, and manage employees in the hospitality industry. Role, responsibilities, and legal issues related to supervision. Application of management techniques including: effective communication, recruitment, selection, training, coaching, team building, performance evaluation, discipline, and conflict management.

HRM 57 Hospitality Cost Control**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: HRM 51 (May have been taken previously)

Analyzing and managing food, beverage, labor, and other costs within a hospitality operation. Emphasis on problem solving, applying cost control techniques to maximize profits while managing expenses. Topics include establishing standards, cost-volume-profit analysis, forecasting, purchasing and storage controls, menu costing and pricing, theft prevention, and labor control.

HRM 59 Introduction to Food and Beverage Management**3 Units** (Degree Applicable, CSU, C-ID #: HOSP 130)

Lecture: 54

Techniques and procedures of management are explored and developed as they relate to commercial and institutional food and beverage facilities. Topics include functions of management, marketing, menu development, effective cost controls in purchasing, labor and service techniques.

HRM 61 Menu Planning**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: HRM 51

Menu development, design, and analysis. Emphasis on demographics and market research, facility assessment, costing, pricing, menu analysis, menu design, and layout. Includes a practical concept-to-creation capstone project.

HRM 62 Event Planning and Catering**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: HRM 52

Event planning and catering with an emphasis on the business and culinary aspects of catering. Includes event types, revenue-cost analysis, menu pricing, staff coordination, organizing logistical components, client negotiation and contracts, contracting vendors, conflict resolutions, and marketing. On-campus catering events are required for the lab. Duties may include setting tables, preparing food, serving food, building buffet stations, cleaning, and setting up and breaking down of events.

HRM 64 Hospitality Financial Accounting**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: BUSA 11 or Eligibility for MATH 50

Financial accounting specific to hospitality businesses. Emphasis on: bookkeeping, financial statements development and analysis, and tailoring the Uniform System of Accounting to hotels, restaurants, clubs, and other food service operations.

HRM 66 Hospitality Law**3 Units** (Degree Applicable, CSU, C-ID #: HOSP 150)

Lecture: 54

Prerequisite: HRM 51

Legal relationship and considerations of hotel, restaurant, travel, and tourism operations. Field trip required.

HRM 70 Introduction to Lodging**3 Units** (Degree Applicable, CSU, C-ID #: HOSP 140)

Lecture: 54

Introduction to the operating system and components of a hotel-resort facility, which includes front office, housekeeping, food and beverage, sales and marketing, accounting, property maintenance, human resource management, and information systems. Independent field trips required for this course.

HRM 72 Hospitality Purchasing and Procurement**3 Units** (Degree Applicable, CSU)

Lecture: 54

Policies, procedures, controls, and their implementation in purchasing merchandise and supplies for the hospitality industry including equipment, service ware, furniture, fixtures, contract services, and food and beverage supplies. The focus of this course is on optimal procurement, purchasing, and selection policies and procedures for the hospitality industry.

HRM 74 Introduction to Tourism**3 Units** (Degree Applicable, CSU)

Lecture: 54

Introductory study of travel and tourism management, its principles, practices, philosophies, and systems. Examination of tourism as a developing industry including its travel modes, organizations, laws, and environmental, and socio-economic impact.

HRM 91 Hospitality Work Experience**1-4 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Provides students with actual on-the-job experience in an approved worksite which is related to classroom-based learning. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. Work experience placement is not guaranteed, but assistance is provided by faculty.

Humanities (HUMA)

HUMA 1 Humanities and the Human Experience**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Comparative, thematic study of the human experience, as documented and expressed through the arts and culture from antiquity to the present day.

HUMA 1H Humanities and the Human Experience - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Comparative, thematic study of the human experience, as documented and expressed through the arts and culture from antiquity to the present day. This is an Honors course; students may not earn credit for both HUMA 1 and HUMA 1H.

Industrial Design Engineering (IDE)

IDE 110 Design Foundation-Visual Literacy**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Corequisite: IDE 120 and IDE 130

A portfolio-based course that explores sketching, rendering and physical sketch-modeling techniques based on formal design concepts and principles. Promotes efficient communication between designers, engineers, clients and users through rapid, focused concept and form development.

IDE 120 Introduction to CAD**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Corequisite: IDE 110 and IDE 130

Computer Aided Design (CAD) applications and design processes used in industrial design and manufacturing. A portfolio-based course that requires students to generate industry standard CAD drawings used for manufacturing.

IDE 130 Introduction to Shop Processes**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Corequisite: IDE 110 and IDE 120

Methods and tools used for creating production prototypes, breadboards, and mock-ups used for fabrication and manufacturing industries. Focus is on tool and process selection, safety, and mastery of machine operation skills and techniques.

IDE 150 Design Foundation II**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: IDE 110 and IDE 120 and IDE 130

Corequisite: IDE 160 and IDE 170

Intermediate form development and visual communication skills used to create and convey complex design and manufacturing concepts. Focuses on design solutions for conceptual and structural problems with an emphasis on sketch modeling, intermediate design principles, rapid visualization, and Computer Assisted Design (CAD) techniques required for effective visual communication in industry.

IDE 160 Intermediate CAD**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: IDE 110 and IDE 120 and IDE 130

Corequisite: IDE 150 and IDE 170

Applications, methods, theories, and industrial design processes used in engineering and industrial design fields. A portfolio-based course that develops skills in sketching, communicating, constructing mock ups and displays, prototyping, and 2D and 3D Computer Assisted Design (CAD) parametric solid modeling.

IDE 170 Introduction to Prototyping**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: IDE 110 and IDE 120 and IDE 130

Corequisite: IDE 150 and IDE 160

Processes and materials typically employed when creating high fidelity proof of concept models, form studies and production-intent prototypes. Provides hands-on experience with fabrication techniques including laser cutting, manual and cnc machining, 3D printing, related tools and machinery. Emphasis is placed how the design process is influenced by material and manufacturing limitations.

IDE 210 Advanced Media**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: IDE 150 and IDE 160 and IDE 170

Corequisite: IDE 220 and IDE 230

Design methods used for creating and presenting 2D and 3D industrial product concepts and manufacturing details. Develops illustration and conceptualization skills using media and technology such as computer aided design (CAD) software, digital photography, 2D scanners, sketch tablets, and presentation and illustration software. Emphasis is placed on form development and completion of a comprehensive portfolio.

IDE 220 Advanced CAD**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: IDE 150 and IDE 160 and IDE 170

Corequisite: IDE 210 and IDE 230

Complex surface modeling in hybrid surface and solid environments using rapid modeling methods. Integrates manufacturing technologies, materials, and machine design with an emphasis on translating concepts from visualization manufacturing projects generated using computer aided manufacturing (CAM) and rapid prototyping technologies.

IDE 230 Introduction to Mechanical Principles**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: IDE 150 and IDE 160 and IDE 170

Corequisite: IDE 210 and IDE 220

Mechanical devices, concepts and principles common to manufactured products and manufacturing processes. Analysis, discussion, and problem solving related to mechanical design scenarios and supported by computer aided design (CAD). Exploration of inherent strengths and weaknesses of specific devices and various design approaches. Emphasis on the way mechanical principles affect design strategies.

IDE 250 Product Design and Viability**6 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 162

Prerequisite: IDE 210 and IDE 220 and IDE 230

Corequisite: IDE 270

Product life cycle from design through manufacturing and distribution. Portfolio-based course that includes fabrication of a viable product and incorporates every stage of project management including research, graphic presentation, parts sourcing, material choices and fabrication of prototype.

IDE 270 Manufacturing Processes and Materials**3 Units** (Degree Applicable, CSU)

Lecture: 9 Lab: 135

Prerequisite: IDE 210 and IDE 220 and IDE 230

Corequisite: IDE 250

Overview of common manufacturing processes and associated materials and their impact on the design process. Covers sourcing, costing, bills of materials, project documentation and presentation. Reverse engineering and computer aided design (CAD) model construction assists with understanding common design approaches and real-world manufacturing problems and solutions.

Interior Design (ID)

ID 10 Introduction to Interior Design

2 Units (Degree Applicable, CSU)

Lecture: 36

Interior design and the planning of total interior environments that meet individual, functional, and environmental needs. Field trips may be required.

ID 10L Introduction to Interior Design Laboratory

1 Unit (Degree Applicable, CSU)

Lab: 54

Corequisite: ID 10 (May have been taken previously)

Application of the interior design practice and the planning of total interior environments that meet individual, functional, and environmental needs. Field trips may be required.

ID 12 Materials and Products for Interior Design

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Advisory: ID 10

Analysis, application, and evaluation of products and materials used in interior design. Field trips required.

ID 14 History of Furniture and Decorative Arts

3 Units (Degree Applicable, CSU)

Lecture: 54

Historic development of structure, interior spaces, furniture, and decorative arts throughout the world. Interior architecture is illustrated in this overview of design heritage from antiquity to present. Emphasis is placed on style development as it relates to social, economical, and political influences as well as the use of materials and technology. Field trips may be required.

ID 20 Color and Design Theory I

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Elements and principles of design and the creative process of identifying and solving interior design problems. Formal visual properties of line, shape, form, pattern, texture, and color are studied in their relationship to the organizational systems and unifying principles that create balanced designs. Portfolio pieces will be produced. Field trips may be required.

ID 21 Color and Design Theory II

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Advisory: ID 20

Systematic process of designing three-dimensional (3D) objects including color theory, surface, and volume investigation for interior design. Elements include visualization, perception, presentation, expression, and site analysis of physical, contextual, and cultural aspects of design and the urban environment. Portfolio pieces will be produced. Field trips may be required.

ID 22 Design Drawing for Interior Design

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Communication elements required to convey design ideas to building trades via the written language of design and construction documents. Graphic and drawing techniques, including interior design graphics standards, building construction fundamentals, methods of drawings, computer aided drawing (CAD), and the basics of compiling construction documentation sets. Portfolio pieces will be produced. Field trips may be required.

ID 23 Computer Aided Drawing for Interior Design I

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: ID 22

Advisory: ARCH 141

Computer Aided Drawing (CAD) as a communication element required to convey interior design ideas to building trades. Interior design graphic and drawing techniques, building construction fundamentals, methods of drawings, three-dimensional computer modeling, rendering, lighting, and construction documentation sets. Portfolio pieces will be produced. Field trips may be required.

ID 25 Space Planning for Interior Design I

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: ID 22 or ID 23 or ARCH 141

Federal and state codes and specifications concerning life-safety issues, barrier-free access, and universal design requirements relative to residential and contract interior design. Attention is given to performance, health safety, and universal design for specifying interior materials and products. Portfolio pieces will be produced. Field trips may be required.

ID 26 Space Planning for Interior Design II

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: ID 22 or ID 23 or ARCH 141

Advisory: ID 25

Space planning with an emphasis on programming, behavioral aspects of space, and use of furniture standards and applicable codes. Planning skills are gained through the application of basic principles to actual spaces. Portfolio pieces will be produced. Field trips may be required.

ID 27 Rapid Visualization

3 Units (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: ID 22 or ID 23 or ARCH 141

Methods, techniques, and tools used in illustrating interior spaces with an emphasis on rapid production. Includes techniques of drawing and rendering volume, tone, texture, perspective, and composition using sketching, rapid visualization, and formal composition of one- and two-point perspectives. Portfolio pieces will be produced. Field trips may be required.

ID 29 Interior Design Studio I**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: ID 26

Advisory: ID 12 or ID 21 or ID 27

Analysis and application of design concepts to interior environments. Focuses on the creative process of identifying, evaluating, and solving design problems while incorporating universal and sustainable design in a studio environment. Includes research and analysis of end-user needs, space requirements, existing architectural elements, and site conditions. Portfolio pieces will be produced. Field trips may be required.

ID 31 Building Systems for Interior Design**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: ID 22 or ID 23 or ARCH 141

Residential and commercial construction systems and materials. Includes typical building systems used in construction that affect interior design and elements that make up the foundation, floors, walls, and roof. Field trips may be required.

ID 32 Lighting Design and Theory for Interior Design**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: ID 22 or ID 23 or ARCH 141

Advisory: ID 26

Principles and theory of interior lighting design, lighting technology, terminology, development of lighting design concepts, and selection and placement of luminaries to achieve the desired result. Portfolio pieces will be produced. Field trips may be required.

ID 34 Computer Aided Drawing for Interior Design II**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: ID 23

Three-dimensional computer modeling, rendering, lighting, and fly-throughs as used in interior design. Portfolio pieces will be produced. Field trips may be required.

ID 36 Portfolio Development for Interior Design**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Advisory: ID 29

Development of individual professional identities through self-branding as a marketing strategy. Emphasis is on personal, educational, and professional qualifications required for entry into interior design and related professions. Surveys the interior design profession, industry, and related occupations. Portfolio pieces will be produced. Field trips may be required.

ID 37 Business Practices for Interior Design**3 Units** (Degree Applicable)

Lecture: 54

Principles, procedures, and systems necessary for interior design professionals to start a business. Emphasis will be placed on contracts, legal issues, budgets, revenue generation, purchasing, billing, compensation and collection, interactions with clients, designers, installers, and suppliers. Field trips may be required.

ID 39 Interior Design Studio II**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: ID 26

Advisory: ID 29

Analysis and application of design concepts to interior environments. Focuses on the creative process of identifying and solving design problems incorporating universal and sustainable design. Includes research and analysis of client requirements for complex programs and their solutions in order to satisfy end-user needs, functional space requirements, public image, existing architectural elements, and site conditions. Portfolio pieces will be produced. Field trips may be required.

ID 40 Kitchen and Bath Studio I**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: ID 22 or ARCH 141

Advisory: ID 32 and ID 31 and ID 25

Kitchen and bath design that focuses on ergonomic principles and specific materials including floor and wall surfaces, window treatments, cabinet selection, appliance and fixture selection, counter top selection, and lighting. Projects will consist of dimensioned floor plans, elevations, isometric drawings, perspective drawings, and section drawings completed in accordance with National Kitchen and Bath Association (NKBA) standards and nomenclature. Portfolio pieces will be produced. Field trips may be required.

ID 41 Kitchen and Bath Studio II**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: ID 40

Advisory: ID 32

Kitchen and bath design that focuses on universal design, design concepts, and historical design for kitchen and bath projects. Emphasis is placed on ergonomics and Americans with Disabilities Act (ADA) considerations. Projects will utilize graphic standards as recommended by the National Kitchen and Bath Association (NKBA). Field trips may be required.

ID 48 Internship in Kitchen and Bath**1-3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-225

Prerequisite: Compliance with Work Experience/Internship regulations as designated in the College Catalog

Corequisite: ID 40 (May have been taken previously)

On-the-job experience in the interior design profession at a National Kitchen and Bath Association (NKBA) member work site, which relates to students' classroom based learning. Placement is not guaranteed but assistance is provided by the interior design faculty. A minimum 75 paid clock hours or 60 non-paid clock hours per semester is required.

ID 50 Interior Design Specialized Topics**1 Unit** (Degree Applicable)

Lecture: 18

Exploratory design topics to enhance interior design. The content of each course and the methods of study vary each semester and depend on the particular topic under consideration. Students will explore interior design concepts and presentation techniques. Field trips may be required.

ID 54 Internship in Interior Design**1-3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-225

Prerequisite: Compliance with Work Experience/Internship regulations as designated in the College Catalog

Formerly ID 38.

Designed to provide the student with actual on-the-job experience in the interior design profession, which relates to classroom based learning. Placement is not guaranteed but assistance is provided by the interior design faculty. A minimum 75 paid clock hours or 60 non-paid clock hours per unit is required.

ID 56 Integrated Drawing Techniques for Interior Design**1 Unit** (Degree Applicable)

Lab: 54

Prerequisite: ID 26 and ID 27

Integrating methods, techniques, tools, and software used to draw and render interior spaces with an emphasis on integrating multiple techniques used to rendering volume, tone, and texture to create a desired atmosphere. Portfolio pieces will be produced. Field trips may be required.

ID 58 Field Studies in Interior Design**1 Unit** (Degree Applicable)

Lab: 54

Exploring different areas and trades in the interior design profession by collecting data outside of the class room setting via face-to-face interviews, surveys, and direct observation. Emphasis on soft skills and professional qualifications required for entry into interior design and related professions. Field trips will be required.

ID 59 Computer Basics for Interior Design**1 Unit** (Degree Applicable)

Lab: 54

Software and applications used in the field of interior design. Fundamental concepts of computer hardware and software will be covered in addition to a general knowledge on a variety of computer applications, drawing, and multimedia presentations.

ID 99 Special Projects in Interior Design**1-3 Units** (Degree Applicable)

Lab: 54-162

Prerequisite: ID 10

Extended laboratory experiences supplementary to those available in the regular program and allows the student to pursue more advanced and complex laboratory projects and experiments. Portfolio pieces will be produced. Offers students recognition for their academic interests in interior design and the opportunity to explore the discipline of interior design to greater depth. Students will be able to pursue more advanced and complex laboratory projects and experiments. Portfolio pieces will be produced. The content of the course and the methods of study vary from semester to semester and depend on the particular project under consideration. Instructor authorization is needed prior to enrollment

Italian (ITAL)

ITAL 1 Elementary Italian**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Intended for students without previous exposure to Italian. Begins to develop the ability to converse, read, and write in Italian. Includes the study of essentials of pronunciation, vocabulary, idioms, and grammatical structures along with an introduction to Italian culture.

ITAL 2 Continuing Elementary Italian**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: ITAL 1

Further development of conversational, reading, and writing skills in Italian with special emphasis on verbs, grammar, and extension of vocabulary. Includes study of Italian culture.

ITAL 3 Intermediate Italian**4 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Prerequisite: ITAL 2

Development of intermediate Italian language skills and their application in exploring Italian culture. Review and expansion of grammatical structures, practice in word building, and extension of both active and recognition vocabulary. Extensive exposure to Italian culture in the target language, using film, music, and authentic cultural materials.

ITAL 4 Continuing Intermediate Italian**4 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Prerequisite: ITAL 3

Further practice in speaking and writing of intermediate Italian. Collateral reading in Italian. Extensive exposure to cultural elements from Italy such as art, music, film, and history.

ITAL 53 Continuing Conversational Italian**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: ITAL 2 or ITAL 52

Development of intermediate Italian conversational skills. Emphasis on collaborative activities and practical use of the language. Extensive exposure to Italian culture. Grammar is presented in context.

ITAL 54 Advanced Conversational Italian**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: ITAL 3 or ITAL 53

Development of advanced Italian conversational skills. Emphasis on collaborative activities and practical use of the language. Extensive exposure to Italian culture. Grammar is presented in context.

ITAL 60 Italian Culture Through Cinema**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Italian culture through cinema from 1900 - present through analysis of the aesthetic, literary, artistic and philosophical movements in Italy as reflected in the works of the Italian film makers and writers. Lecture and class discussion to be conducted in English; film presentation with English subtitles.

ITAL 61 Italian Culture through Food**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Defining the essence of Italy through its extensive food culture and civilization of the table. Emphasis is placed on the country's marked regionalism and on the pre-eminence of its urban centers. The course addresses historical influences on Italian cuisine and national identity and relates the significance of food to family dynamics and social status. Other topics include the importance of local and sustainable food production, the relation of food to personal health, and the peculiar role of food in forging national identity.

Japanese (JAPN)

JAPN 1 Elementary Japanese**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Elementary course for students without prior exposure to Japanese. Includes the study of essentials of pronunciation, vocabulary, idioms, and grammatical structures and an introduction to Japanese culture.

JAPN 2 Continuing Elementary Japanese**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: JAPN 1

Further development of elementary skills in Japanese including conversational, reading, and writing skills with special emphasis on verbs, grammar, and extension of vocabulary. Includes a discussion of Japanese culture.

JAPN 3 Intermediate Japanese**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: JAPN 2

Continued development of writing ability emphasizing development of thought through Kanji, Hiragana, and Katakana. Additional development of cultural application of Japanese.

JAPN 4 Continuing Intermediate Japanese**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: JAPN 3

Continuing intermediate study and review of grammar and vocabulary. Readings and discussions of Japanese cultural topics and introduction to Japanese literature.

JAPN 5 Advanced Japanese**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: JAPN 4 or equivalent

Japanese communication skills with emphasis on conversational skills for daily and social settings in Japanese culture. Advanced study of grammar, vocabulary, Kanji characters, listening, speaking, reading, and writing. Extensive exposure to cultural elements from Japan such as art, music, film, and history.

JAPN 53 Conversational Japanese**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: JAPN 2 or equivalent

Development of intermediate Japanese conversational skills. Emphasis on collaborative activities and practical use of the language. Extensive exposure to Japanese culture. Grammar is presented in context.

JAPN 62 Japanese Culture Through Anime and Manga**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

The focus of this course is to examine, analyze, and discuss selected themes of Japanese culture and society through the investigation of Japanese animation (anime) as well as printed cartoons and graphic novels (manga). Students will be exposed to works of various key anime and manga artists. They will explore how these works reflect and influence Japanese culture from historical, spiritual, and global angles. Classes are conducted in English.

Journalism (JOUR)

JOUR 100 Introduction to Mass Communications**3 Units** (Degree Applicable, CSU, UC, C-ID #: JOUR 100)

Lecture: 54

Prerequisite: ENGL 1A

Mass media and interrelationships with society, including history, structure, and trends. Additionally, the following topics will be covered as they pertain to the mass media: economics, law, ethics, technology, and such social issues as gender and cultural diversity.

JOUR 101 Beginning Writing and Reporting for the Mass Media**3 Units** (Degree Applicable, CSU, UC, C-ID #: JOUR 110)

UC Credit Limitation

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Gathering, organizing, and writing news in journalistic style across multiple platforms. Writing and reporting based on original interviews and research. Covering meetings, speeches and events, writing under deadline, and the use of Associated Press (AP) Style. Role of the journalist and related legal and ethical issues.

JOUR 102 Intermediate Writing and Reporting for Mass Media**3 Units** (Degree Applicable, CSU, UC, C-ID #: JOUR 210)

UC Credit Limitation

Lecture: 54

Prerequisite: JOUR 101

Newsgathering, organizing, and writing news and features in journalistic style across multiple platforms. Public affairs, local and regional government, police, courts, arts and entertainment, and sports beats writing and reporting on and off campus.

JOUR 103 Magazine Staff Production Laboratory**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Advisory: JOUR 110

Practical experience in a lab setting writing and producing the print and online editions of the college student magazine. Writing and editing articles; creating multimedia to accompany stories and images for print, web, and broadcast.

JOUR 104 Student Media Photography Laboratory**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Practical lab experience in the creation, preparation, and publishing of photos for the student digital media. Provides learning through the use of digital cameras, Photoshop image editing, emerging technology, and scanners. Students may choose to use their own digital cameras, but digital cameras are available in the newsroom for checkout.

JOUR 105 Editor Training**1 Unit** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 54

Advisory: JOUR 101

Leadership skills in a journalistic setting using the student media as a practical laboratory. Designed for students selected to serve as editors or managers of the student media.

JOUR 106 Online Media Laboratory**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Practical experience in a newsroom lab setting in a variety of online publishing activities to produce and enhance the online student media. Use of computers, software and emerging technologies including audio, video, live broadcast, and wireless computer technology, as well as social media applications.

JOUR 107 Race, Culture, Gender, and Mass Media Images**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Role of mass media and advertising in the integration of minorities, cultures, women, and the queer community into American society. Examines how the mass media impacts public attitudes.

JOUR 108 Introduction to Public Relations**3 Units** (Degree Applicable, CSU, C-ID #: JOUR 150)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Theory, principles, and professional practice of public relations. Concepts of planning and executing effective communication strategies including writing news releases and press pieces and writing for and distribution through traditional, online, and social media outlets, for any organization.

JOUR 109 Public Relations Internship**4 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 225

Advisory: JOUR 108 or JOUR 8

Field work in public relations. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester.

JOUR 110 Magazine Writing and Production**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Advisory: JOUR 101

Writing and production of a student-run magazine. Artistic design, harmony, creativity, and layout are stressed. Writing and editing magazine features, designing pages, selecting photographs and illustrations and preparing them for production, working under deadlines, and other aspects of the magazine business are included.

JOUR 111 Writing Broadcast and Web News**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

News gathering and writing for radio, television and the Web. Newscast planning, story organization, and functions of a broadcast and multimedia newsroom are explored. Lecture and discussion of issues facing broadcast journalists in a new media environment will include ethics, law, and emerging technologies along with shooting video, recording audio, and editing video and audio. Opportunities to contribute to the campus student media.

JOUR 112 Work Experience in Journalism**3 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 180-225

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog.

Corequisite: Students must have secured a journalism internship that meets the requirements of the Mt. SAC work Experience Program.

Provides majors with actual on-the-job experience in an approved workstation, which is related to classroom instruction. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester.

JOUR 114 Student News Media Staff**3 Units** (Degree Applicable, CSU, C-ID #: JOUR 130)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18 Lab: 108

Newsroom lab setting writing and producing the college student news publications. Researching, writing and editing articles for both publications; photography, videography, and multimedia to create stories and images for print, web and broadcast; layout, design and graphic illustrations. Basic fundamentals of journalism law and ethics.

JOUR 115 Student News Media Editing Staff**3 Units** (Degree Applicable, CSU, C-ID #: JOUR 131)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18 Lab: 108

Prerequisite: JOUR 114

Management and leadership involvement in writing and producing the college student publications. Researching, writing and editing articles for both publications; photography, videography, multimedia, and emerging new technologies to create stories and images for print, web and broadcast; art direction, layout, design and graphic illustrations. Journalism law, copyright and ethics.

JOUR 116 Multimedia Storytelling**3 Units** (Degree Applicable, CSU, C-ID #: JOUR 120)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Multimedia storytelling with a journalism emphasis. Techniques explored include the use of video, photos, audio, and text to convey interactive news and feature stories for online publishing. Cultivates skills in interviewing, sourcing and information, gathering content using photographic, audio, and video recording equipment.

Kinesiology: Adaptive (KINL)

KINL 2 Physical Fitness for the Physically Limited**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

A modified physical fitness conditioning program incorporating cardiovascular training exercises, specifically designed for students with a disability or limitation. Students who repeat this course will improve their fitness level through further instruction and practice.

KINL 18 Weight Training for the Physically Limited**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Designed to assist students with a disability or limitation develop strength, endurance, flexibility, and physical fitness through weight training.

Kinesiology: Aquatics (KINA)

KINA 8A Swimming - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Designed to teach basic swimming strokes and aquatic skills to individuals with little or no swimming ability.

KINA 8B Swimming - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Designed to improve competence in swimming ability for individuals who have had instruction in all of the basic strokes and can swim 25 yards in deep water. Students should be able to demonstrate proper mechanics for front crawl and backstroke.

KINA 8C Swimming - Advanced**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Students must show competency in all competitive strokes and be able to swim 500 yards using any of the following: freestyle, backstroke, or breaststroke

Designed to offer aquatic techniques of an advanced level and to refine the skill of the competent swimmer. Students must show competency in all competitive strokes and be able to swim 500 yards using any of the following: freestyle, backstroke, or breaststroke at the beginning of the term.

KINA 14 Water Polo**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Fundamental water polo skills including conditioning, drills, and game situations. Students who repeat this course will improve skills through further instruction and practice.

KINA 20 Aquatic Fitness**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Designed to improve and maintain aquatic fitness. Emphasis on building strength, endurance, and cardiovascular fitness.

Kinesiology: Athletics (KINX)

KINX 2 Beach Volleyball - Women**0.5-3.5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Intended for Women's Intercollegiate Beach Volleyball Team candidates in the components of training and conditioning related to the sport of Beach Volleyball. Students who repeat this course will improve skills through further instruction and practice.

KINX 6 Baseball - Men**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Provides instruction for Men's Intercollegiate Baseball Team candidates in the components of training and conditioning related to the sport of baseball. Students who repeat this course will improve skills through further instruction and practice.

KINX 8 Basketball - Men**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval

Intended for Men's Intercollegiate Basketball Team candidates to provide instruction in the components of training and conditioning related to the sport of basketball. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 9 Conditioning for Sports**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Conditioning course for athletes to develop muscular strength and endurance, flexibility, core training skills, and cardiorespiratory fitness.

KINX 10 Basketball - Women**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Women's Intercollegiate Basketball Team candidates to provide instruction in the components of training and conditioning related to the sport of basketball. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 11 Cross Country - Men**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Provides instruction for Men's Intercollegiate Cross Country Team candidates in the components of training and conditioning related to the sport of cross country. Students who repeat this course will improve skills through further instruction and practice.

KINX 12 Cross Country - Women**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Women's Intercollegiate Cross Country Team candidates to provide instruction in the components of training and conditioning related to the sport of cross country. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 16 Football - Men**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Men's Intercollegiate Football Team candidates to provide instruction in the components of training and conditioning related to the sport of football. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 18 Golf - Men**0.5-3.5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Intended for Men's Intercollegiate Golf Team candidates to provide instruction in the components and training related to the sport of golf. Classes will be held on and off campus and require some traveling. Students who repeat this course will improve skills through further instruction and practice. Students must have their own golf clubs. Enrollment requires instructor and head coach approval.

KINX 19 Golf - Women**0.5-3.5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Intended for Women's Intercollegiate Golf Team candidates to provide instruction in the components and training related to the sport of golf. Classes will be held on and off campus and require some traveling. Students who repeat this course will improve skills through further instruction and practice. Students must have their own golf clubs. Enrollment requires instructor and head coach approval.

KINX 24 Soccer - Men**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Intended for Men's Intercollegiate Soccer Team candidates to provide instruction in the components of training and conditioning related to the sport of soccer. Students who repeat this course will improve skills through further instruction and practice.

KINX 25 Soccer - Women**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Women's Intercollegiate Soccer Team candidates to provide instruction in the components of training and conditioning related to the sport of soccer. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 26 Softball - Women**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Women's Softball Team candidates to provide instruction in the components of training and conditioning related to the sport of softball. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 28 Swimming - Men**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for the Men's Intercollegiate Swim Team candidates to provide instruction in the components of training and conditioning related to the sport of swimming. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 30 Swimming - Women**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Women's Intercollegiate Swim Team candidates and to provide instruction in the components of training and conditioning related to the sport of swimming. Students who repeat this course will improve skills through further instruction and practice.

KINX 32 Tennis - Men**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Men's Intercollegiate Tennis Team candidates to provide instruction in the sport of tennis. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 34 Tennis - Women**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Women's Intercollegiate Tennis Team candidates to provide instruction in the sport of tennis. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 38 Track and Field - Men**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Men's Intercollegiate Track and Field team candidates to provide instruction in the components of training and conditioning related to the sport of track and field. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 42 Track and Field - Women**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Women's Intercollegiate Track and Field Team candidates to provide instruction in the components of training and conditioning related to the sport of track and field. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 46 Volleyball - Women**0.5-3.5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Women's Intercollegiate Volleyball Team candidates in the components of training and conditioning related to the sport of volleyball. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 48 Water Polo - Men**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval.

Intended for Men's Intercollegiate Water Polo Team candidates to provide instruction in the components of training and conditioning related to the sport of water polo. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 49 Water Polo - Women**0.5-3.5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Intended for Women's Intercollegiate Water Polo Team candidates to provide instruction in the components of training and conditioning related to the sport of water polo. Students who repeat course will improve skills through further instruction and practice.

KINX 50 Wrestling - Men**0.5-3.5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Intended for Men's Intercollegiate Wrestling Team candidates to provide instruction in the components and conditioning related to the sport of wrestling. Students who repeat this course will improve through further instruction and practice.

KINX 51 Wrestling - Women**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Intended for Women's Intercollegiate Wrestling Team candidates to provide instruction in the components and conditioning related to the sports of wrestling. Students who repeat this course will improve through instruction and practice.

KINX 70 Pep Squad**0.5-3.5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Provides training and experience for members of the pep squad who are directly supportive of Mt. SAC activities. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 88 Pre-Season Athletics**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-180

Pre-season intercollegiate athletics. Enrollment is limited to athletic team candidates and includes sport specific aerobic and anaerobic conditioning, drill technique, strength conditioning, speed development, and game play. Students who repeat this course will improve skills and fitness through further instruction and practice. Enrollment requires instructor and head coach approval.

KINX 99 Off-Season Athletics**0.5-3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Enrollment requires instructor and head coach approval

Designed for athletic team candidates in an off-season program. Includes sport-specific training with the purpose of developing areas of individual weaknesses. Students who repeat this course will improve skills through further instruction and practice. Enrollment requires instructor and head coach approval.

Kinesiology: Fitness (KINF)

KINF 4 Cardiovascular Conditioning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Designed to improve fitness levels through cardiovascular activities.

KINF 10A Weight Training - Beginning**0.5-2 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Muscular conditioning program using machines and free weights for students with little or no prior experience. Students will develop a personal fitness program to align with personal fitness goals.

KINF 10B Weight Training - Intermediate**0.5-2 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Advisory: KINF 10A or weight training experience

Muscular conditioning using machine and free weights for students with prior experience. Students will develop a personal program identifying baseline and improvements across the course.

KINF 19 Strength Training**0.5-2 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Designed for students concentrating on strength development through various types of exercise.

KINF 25 Core Performance and Foundation Movement**1-2 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Body core training and foundation movement for students interested in improving their fitness level. Training and strengthening of the muscles that stabilize, align, and move the trunk.

KINF 34A Cardiorespiratory Training Beginning**0.5-2 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Beginning individualized cardiovascular exercise for students needing to start fitness training at a fundamental or low level of intensity. Utilizes stationary bikes, treadmills, elliptical trainers, step climbers and/or rowing machines as training modalities. This course will not challenge students with above average fitness abilities.

KINF 34B Cardiorespiratory Training Intermediate**0.5-2 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Individualized cardiovascular exercise for students able to participate in aerobic activity at a moderate to high fitness level of intensity. Utilizes stationary bikes, treadmills, elliptical trainers, step climbers and/or rowing machines as training modalities.

KINF 36A Circuit Training Beginning**0.5-2 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-108

Beginning Circuit Training for individuals with little or no weight training experience. Course is for students needing to begin at a fundamental or low level intensity of strength training. Utilizes circuit training machines, floor core work, and light dumbbells. This course will not challenge students with above average fitness abilities.

KINF 36B Circuit Training Intermediate**0.5-2 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Individualized circuit training for students with previous strength training experience and capable of performing moderate to high levels of strength development on circuit training equipment. Students need to be familiar with strength and repetition ratios. Utilizes circuit training machines, floor core work, medicine balls, exercise balls, Bosu Balance Trainer and dumbbells.

KINF 38A Aerobics - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Beginning group exercise to improve cardiovascular fitness using aerobic activity. This course is designed for students with little or no previous group fitness experience and have a need to start at a fundamental level of exercise and lower exercise intensity levels. This course will not challenge students with average to above average fitness abilities.

KINF 38B Aerobics - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Lab: 36-54

Group aerobic exercise for students with experience in group fitness and able to exercise at moderate levels of fitness and mid to high target heart rate training zones. Class includes various types of high and low impact aerobic exercises including choreographed movements to music within a group fitness setting. Endurance strength training includes the use of elastic bands, light hand held weights, core exercises and weighted bars.

KINF 51A Agility Test Preparation Law and Fire - Beginning**1 Unit** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 71

Physical agility skills for individuals with little or no agility training. Designed specifically for those interested in law enforcement and fire technology. There may be off-campus assignments.

KINF 51B Agility Test Preparation Law and Fire - Intermediate**1 Unit** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Advisory: KINF 51A

Designed to enhance competence in physical agility testing for individuals who have had instruction in primary agility training. There may be off-campus assignments.

KINF 52A Fitness and Conditioning for Law and Fire - Beginning**1 Unit** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Components of fitness used to perform agility tasks in the fields of law enforcement and fire technology.

KINF 52B Fitness and Conditioning for Law and Fire - Intermediate**1 Unit** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Advisory: KINF 52A

Principles of exercise used to enhance fitness performance in the fields of law enforcement and fire technology.

KINF 53 Physical Training for the Basic Fire Academy**2.5 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Prepares the Basic Fire Academy student for the physical demands of the fire service. Through a supervised individualized training program, the student acquires cardiovascular endurance, flexibility, and strength.

Kinesiology: Individual (KINI)

KINI 4A Badminton - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Beginning badminton fundamentals and techniques, including singles and doubles play.

KINI 4B Badminton - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Intermediate badminton techniques, including singles and doubles play.

KINI 4C Badminton - Advanced**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Advanced badminton techniques, including singles and doubles tournament play.

KINI 18A Golf - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Golf fundamentals with an emphasis on technique, strategy, and rules.

KINI 18B Golf - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Instruction to individuals who have had previous golf experience and have played a regulation eighteen-hole course. Classes will be held at sites both on and off the Mt. SAC campus. Golf clubs and off site classes required.

KINI 18C Golf - Advanced**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Instruction and practice for the proficient golfer (Sub 15 Handicap). Emphasis on golf swing analysis. Golf classes will be held at sites both on and off the MT.SAC campus. Clubs and off-campus classes required.

KINI 25 Mixed Martial Arts**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Introductory course in the sport of mixed martial arts. An integration of various forms of martial arts such as kickboxing, jiu-jitsu, and other forms of traditional martial arts.

KINI 27A Jeet Kune Do - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Fundamentals and principles of Bruce Lee's martial art. Emphasis on footwork, distance, and technique for combat efficiency in self-defense.

KINI 27B Jeet Kune Do - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Intermediate principles of Bruce Lee's martial art. Intermediate level footwork, distance, and technique (punching, kicking, and grappling) for combat efficiency.

KINI 29 Self Defense and Martial Arts**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Basic concepts of self-defense and martial arts. Covers technique in three ranges of combat: grappling, kick and punch, and weapons range. Students will acquire self-defense skills, including escapes from grabs and holds, how and where to strike an assailant, how to roll and fall safely, and theories of attack and defense such as throwing, grappling, and submission techniques.

KINI 30A Filipino Martial Arts - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

The Filipino martial arts of Esgrima and Arnis. Basic weapons training for defense in armed and unarmed scenarios.

KINI 30B Filipino Martial Arts - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

The Filipino martial arts of Esgrima and Arnis. Intermediate weapons training for defense in armed and unarmed scenarios.

KINI 31A JiuJitsu - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Fundamentals of Brazilian JiuJitsu. Basic positions, breakfalls, training techniques, strategy, finishing holds, competition, history, and philosophy. Students are required to provide their own Judo or JiuJitsu gi uniform.

KINI 31B JiuJitsu - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Intermediate Brazilian JiuJitsu. Transitioning from positions, countering submissions and finishing holds, application of strategy, competition, and philosophy. Students provide own uniform.

KINI 33A Kickboxing Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Presents the martial sport of kickboxing including the basic techniques for offense and defense, cardiovascular endurance, strategy and training modes. Designed for students with little or no experience.

KINI 33B Kickboxing Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: KINI 33A

Refines the martial sport of kickboxing. Includes intermediate techniques for offense and defense, cardiovascular endurance, strategy and training modes.

KINI 34 Women's Self Defense**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Techniques for personal protection and safety with emphasis on defensive tactics for women.

KINI 37A Tai Chi Chuan - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Fundamentals of Tai Chi Chuan as a martial art exercise for health and fitness, meditation, relaxation, and self-defense. Basic therapeutic exercises in the Tai Chi Chuan format will be presented.

KINI 37B Tai Chi Chuan - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Intermediate tai chi chuan fundamentals and principles including instruction in a traditional long form.

KINI 37C Tai Chi Chuan - Advanced**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Instruction and practice for the experienced Tai Chi Chuan practitioner. Emphasis will be on the sword form.

KINI 40A Tennis - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Beginning tennis fundamentals and techniques.

KINI 40B Tennis - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Intermediate tennis techniques and strategies for the individual who has previous experience and instruction in tennis.

KINI 40C Tennis - Advanced**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Advanced tennis techniques and strategies for the experienced player.

KINI 47 Wrestling**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Fundamentals of wrestling with emphasis on mat skills, rules, scoring, and wrestling strategy.

KINI 50A Yoga**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Yoga instruction with emphasis on yoga postures, breathing techniques, relaxation strategies, and philosophy.

KINI 50B Yoga - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Intermediate yoga instruction with further development of a deeper and expanded focus on eight-limbs of yoga with emphasizing Asana (intermediate postures), Pranaya (breathing techniques), Dhyana (meditation), and philosophy.

Kinesiology: Team Sport (KINS)

KINS 2A Basketball Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Designed to teach skills, fundamentals, rules, and strategies for team play in basketball for those with little or no experience.

KINS 2B Basketball Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Designed to teach enhancement skills, fundamentals, rules, and strategies for team play in basketball for students with previous experience.

KINS 10A Beginning Soccer**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Fundamental technical skills and tactics to students with beginning soccer ability.

KINS 10B Soccer Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Advisory: KINS 10A

Designed to improve competence in technical and tactical skills for students who have had instruction in soccer. Students will be able to apply learned skills to small and full sided games.

KINS 12A Beginning Baseball**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Beginning-level baseball and training in skills, techniques, and strategies of baseball.

KINS 12B Intermediate Baseball**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Intermediate-level and training in skills, techniques, and strategies of baseball.

KINS 16A Co-Ed Slow Pitch Softball**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Formerly KINS 16

Basic skills, rules, and strategies for team play in the sport of slow-pitch softball.

KINS 16B Co-Ed Slow Pitch Softball Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Intermediate skills, advanced rules, and strategies for team play in the sport of co-ed slow pitch softball.

KINS 24A Volleyball - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Students will learn general volleyball terminology, rules, and strategies, in addition to fundamental volleyball skills including passing, setting, hitting, blocking, and serving. Intended for students taking a college level volleyball course for the first time.

KINS 24B Volleyball - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Designed for individuals with previous experience in techniques and strategies of volleyball. Includes serving and passing consistency, ball control, and transitioning between offense and defense.

KINS 24C Volleyball - Advanced**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Designed for individuals with previous experience in techniques and strategies of volleyball. Includes advanced skills and offensive and defensive strategies.

KINS 26A Beach Volleyball - Beginning**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Basic techniques and strategies of beach volleyball.

KINS 26B Beach Volleyball - Intermediate**0.5-1 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

(May be taken for option of letter grade or Pass/No Pass)

Intermediate techniques and strategies of beach volleyball.

Kinesiology: Theory (KIN)

KIN 3 First Aid and CPR**3 Units** (Degree Applicable, CSU, UC, C-ID #: KIN 101)

Lecture: 54

Advisory: Eligibility for ENGL 68

Training in caring for victims of injuries, sudden illness, and other medical emergencies; includes Community Cardiopulmonary Resuscitation (CPR). Students who successfully pass all requirements, will earn the appropriate American Red Cross First Aid certificate, CPR certificate, or both.

KIN 5 Advanced First Aid/CPR/Emergency Response**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: Eligibility for ENGL 68

First responder training, training and certifications, including laboratory experience for developing the First Aid (FA) and Cardiopulmonary Resuscitation (CPR) skills required by public safety personnel, athletic trainers, emergency response team members, flight attendants, coaches, and nurses. Students who successfully pass all requirements will receive an American Red Cross (ARC) Certificate in Emergency Response, CPR for the professional rescuer, or both.

KIN 13 Sports Officiating**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Introduction to the fundamentals and techniques of officiating various sports. This course will provide students with the opportunity to acquire knowledge, skill, and experience to function effectively as a sport official.

KIN 15 Administration of Fitness Programs**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

Leadership training and administrative skills related to fitness specialists, personal trainers, and physical educators. Current issues, curriculum topics, and practical skills related to careers in fitness and physical education.

KIN 17 Introduction to Kinesiology**3 Units** (Degree Applicable, CSU, UC, C-ID #: KIN 100)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Kinesiology as a profession and academic discipline. Explores sub-disciplines, opportunities in the field, philosophy, scientific basis, and analysis.

KIN 19 Introduction to Care/Prevention of Activity/Sports -Related Injuries**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Techniques and procedures for prevention and treatment of activity and sports-related injuries. Includes the responsibilities of the athletic trainer, policies and procedures of the athletic training room and the operation of rehabilitative modalities.

KIN 24 Applied Kinesiology**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

The study of movement as it relates to exercise and the interrelationships of body segments involved in human movement activity, actions of joints, nerves, and muscle exercise.

KIN 34 Fitness for Living**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Surveys the fundamentals of wellness including the five components of health related fitness, fitness program design, nutrition, weight maintenance, and stress management. Presents solid foundation for optimal health. Multiple opportunities are offered for self-evaluation within this course.

KIN 38 Physiology of Exercise for Fitness**3 Units** (Degree Applicable)

Lecture: 54

Theory of basic physiological concepts as they pertain to exercise training and the prescription of individual fitness programs.

KIN 39 Techniques of Fitness Testing**2 Units** (Degree Applicable, CSU)

Lecture: 36

Theory and techniques of fitness testing, assessment, evaluation, and exercise program design. Includes laboratory experience and practical applications. This course is part of the Fitness Specialist Certificate.

KIN 40 Techniques of Strength Training and Conditioning**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Principles and techniques of strength training and cardiovascular conditioning. Includes both theory and practical instruction of strength training and cardiovascular exercise, special needs considerations, professional responsibilities and liabilities, skills needed for those entering the fitness training job field. This course is a part of Fitness Specialist Certificate.

KIN 44 Theory of Coaching**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Challenges coaches to define their coaching philosophy, objectives, and style; enhance communication and motivational skills; become more effective teachers; and improve team, relationship, risk, and self-management skills. Theory of coaching covers the fundamentals of being a successful coach, on and off the field.

KIN 50 Mt. Sac Fire Academy Physical Ability Entrance Exam**1 Unit** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 9

Prerequisite: Approval to enroll by Fire Technology Office

Physical ability test for admission into the Mt. SAC Fire Academy. Candidates must be approved by Fire Technology Office.

KIN 81 Work Experience for Coaching**2-2.5 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 120-150

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog.

Provides students with on-the-job experience in approved worksites related to coaching. A minimum of 75 paid or 60 non-paid clock hours per semester is required for each unit of credit. Work experience placement is not guaranteed, but assistance is provided by the Coaching Certificate faculty advisor.

KIN 85 Fitness Specialist Work Experience**1 Unit** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 60-75

Prerequisite: Compliance with work experience regulations as designated in the college catalog. Must have completed most courses required for the Fitness Specialist Certificate. Prior approval by professor required.

Final course in the Fitness Specialist Certificate. Provides students finishing the certificate on-the-job skill development in fitness testing, program design, and client relationships. A minimum of 75 paid or 60 non-paid hours is required.

KIN 92 Work Experience - Athletic Training**2-3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 120-225

Prerequisite: Compliance with work experience regulations as designated in the college catalog.

Provides athletic trainer aides and physical education students with actual on-the-job experience in an approved worksite related to classroom instruction. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. Work experience placement is not guaranteed, but assistance is provided by the athletic trainer faculty and staff. Students who repeat this course will improve skills through further instruction and practice. Compliance with work experience regulations as designated in the college catalog.

Korean (KORE)

KORE 1 Elementary Korean**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Elementary course for students without prior exposure to Korean. Includes essential study of grammatical structures, pronunciation, vocabulary, idioms, and an introduction to Korean culture.

KORE 2 Continuing Elementary Korean**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: KORE 1

Further development of elementary skills in Korean including conversational, reading, and writing skills. Emphasis is placed on grammatical structures, the extension of vocabulary and idioms, and a more in-depth discussion of Korean culture.

KORE 3 Intermediate Korean**4 Units** (Degree Applicable, CSU)

Lecture: 72

Prerequisite: KORE 2

Continued development of conversation, reading, and writing skills, with emphasis on intermediate level grammatical structures, vocabulary, and idioms, and in-depth discussions of Korean culture.

KORE 4 Continuing Intermediate Korean**4 Units** (Degree Applicable, CSU)

Lecture: 72

Prerequisite: KORE 3

Continued intermediate study of grammar and vocabulary. Readings and discussion of Korean cultural topics and an introduction to Korean literature.

KORE 60 Korean Culture Through Cinema**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Korean culture through cinema starting from the 1960s, with an emphasis on "New Korean Cinema" of the 2000s, to the present. Analysis of aesthetic, socio-historical, and cultural movements in post-war South Korea. Lecture and class discussion to be conducted in English. Film presentation with English subtitles.

Latin (LATN)

LATN 1 Elementary Latin**4 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Advisory: Eligibility for READ 90 or eligibility for AMLA 91

Emphasizes the ability to read basic Latin as it was written during the early, classical, and post-classical periods. Includes the study of vocabulary, grammar, Roman culture, and the history of the Latin language. For students with little or no prior experience in Latin.

LATN 1H Elementary Latin - Honors**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: Admission to the Honors Program

Advisory: Eligibility for READ 90 or eligibility for AMLA 91

Emphasizes the ability to read basic Latin as it was written during the early, classical, and post-classical periods. Includes the study of vocabulary, grammar, Roman culture, and the history of the Latin language. For students with little or no prior experience in Latin. This is an Honors course. Students may not receive credit for both Latin 1 and Latin 1H.

LATN 2 Continuing Elementary Latin**4 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Prerequisite: LATN 1

Second semester of coursework for students with prior coursework in Latin. Development of vocabulary, grammar, and reading. Explores Roman history and culture.

LATN 2H Continuing Elementary Latin - Honors**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: LATN 1 or LATN 1H and admission to the Honors Program

Advisory: Eligibility for READ 90 or (eligibility for AMLA 33R or eligibility for AMLA 91)

Second semester of coursework for students with prior course work in Latin. Development of vocabulary, grammar, and reading. Explores Roman history and culture. This is an Honors course; credit will not be given for both LATN 2 and 2H.

Latina/o/x and Chicana/o/x American Studies (LCAS)

LCAS 1 Introduction to Chicanx Studies**3 Units** (Degree Applicable, CSU)

Lecture: 54

An introductory survey to disciplinary analysis of the historical, socio-political, economic, educational, cultural experiences, conditions, and influence related to the Chicanx population in the United States. This course examines key topics such as: Colonization, racialization, ethnicity, indigeneity, internal colonialism, sovereignty, (im)migration, citizenship, discrimination, assimilation, stratification, resistance, liberation movements, self-determination, creative and cultural production, and the intersection of racial, ethnic, gender, sexual identities.

LCAS 25 Latino Politics in the United States**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Latino (the group identified as Hispanic by the U.S. Census) political thought and action and how it is influenced and shaped by American institutions such as national, state, and local governments, federal and state constitutions, and United States Supreme Court decisions. Students may not earn credit for both LCAS 25 and POLI 25.

Leadership (LEAD)

LEAD 55 Exploring Leadership**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: Eligibility for ENGL 68

Explores leadership theories and models, values and beliefs. Develops a personal philosophy of leadership that includes an understanding of self, others and community. Prepares students for leadership roles in any environment including college life.

Learning Assistance (LERN)

LERN 48 Basic Math Skills Review**3 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 54

Math fundamentals: adding, subtracting, multiplying and dividing whole numbers, and adding, subtracting and multiplying decimals. Emphasis on math learning strategies such as organization and managing math anxiety.

LERN 49 Math Skills Review**3 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 54

Prerequisite: LERN 48 or appropriate placement

Improves knowledge of basic math. Includes operations and applied problems in whole numbers, fractions, decimals, proportions, percents, and integers. Covers math study strategies such as learning preferences and self-assessment.

LERN 81 Improving Writing**3 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 54

Develop as a writer through practice and reflection. Improve writing process and product through prewriting, writing, editing, and revising. Develop writing strategies and confidence in a community of writers.

Learning Communities (LCOM)

LCOM 80 Learning Communities: Individual Connections**1 Unit** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 18

Corequisite: Concurrent enrollment in a learning community is required.

Explores connections between self, courses, and learning community themes. Develops social networking skills, cognitive strategies, academic behaviors and confidence, and team building as related to success within a learning community. Concurrent enrollment in a learning community is required.

LCOM 90 Learning Communities: Campus Connections**1 Unit** (Degree Applicable)

Lecture: 18

Corequisite: Concurrent enrollment in a learning community is required.

Analyze connections between the individual and the campus. Focus on the benefits of campus involvement and being part of a community. Identify connections between the content area course and the learning community. Explore problem based learning. Concurrent enrollment in a learning community is required. Field trips may be required.

LCOM 100 Learning Communities: Interdisciplinary Connections**1 Unit** (Degree Applicable)

Lecture: 18

Corequisite: Concurrent enrollment in a learning community required

Interprets the connections between real world problems, course content, and learning community themes. Synthesizes interdisciplinary connections utilizing problem-based learning within a learning community. Evaluates successful team selection based on specific criteria including leadership skills and interpersonal relationships to establish collective efficacy. Concurrent enrollment in a learning community is required. Field trips required.

Library & Instructional Media (LIBR)

LIBR 1 Library Research Methods and Resources**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Advisory: Eligibility for ENGL 68

Development of academic research plans to answer research questions with selection, synthesis, and ethical use of sources. Includes research question development and modification, use of a variety of types of sources, synthesis and communication of ideas, and attribution and citation of sources.

LIBR 1A Introduction to Library Research**1 Unit** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 18

Advisory: Eligibility for ENGL 68

Introduction to academic research, with finding, evaluating, and citing sources. Includes research topic development, search techniques, criteria to evaluate information, and ethical use of sources. This class is recommended for students who have not taken LIBR 1.

Linguistics (LING)

LING 2 Languages, Gender, and Power**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Languages as a tool to create, maintain, and challenge social hegemony in regards to race, status, age, nationalism, cultural values, and particularly in regards to gender. Emphasis is placed on the manner in which languages codify these notions and normalize bias. Examples from a variety of languages offer a comparative perspective on the use of gender and on the relation between language and worldview. Linguistic principles also shed light on the foundation of discriminatory practices such as verbal microaggressions, linguistic androcentrism, and the use of profanity. A selection of course topics are also viewed from an anthropological perspective.

LING 3 Languages, Cultures, and Writing in East Asia**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Comparison of East Asian languages and scripts from a cross-cultural and historical perspective. It explores the impact of politics, belief systems, social movements, globalization, and technology on the written languages of East Asia. Class conducted in English.

LING 4 Introduction to World Languages**3 Units** (Degree Applicable, CSU)

Lecture: 54

Analysis of the linguistic diversity in the world and of methods used to classify languages into families and into types. Detailed examination of representative languages to acquaint students with distinctive features of key language families. Focus on how languages differ and relate to each other structurally and historically. Overview of socio-historical forces driving the development of world languages.

Literature (LIT)

LIT 1 Early American Literature

3 Units (Degree Applicable, CSU, UC, C-ID #: ENGL 130)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

American literature of the Seventeenth, Eighteenth, and Nineteenth Centuries. Emphasizes writers who created an American literary identity and shaped America's cultural mythology.

LIT 2 Modern American Literature

3 Units (Degree Applicable, CSU, UC, C-ID #: ENGL 135)

Lecture: 54

Prerequisite: ENGL 1A

Emphasizes characteristic late 19th, 20th, and 21st century concerns as they relate to American literary form and content.

LIT 3 Multicultural American Literature

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Analyzes the representative contributions of diverse groups to American literature and culture. Covering a wide spectrum of historical periods and literary genres, the course will focus on issues of ethnic identity, assimilation, acculturation, cultural pluralism, and family and gender roles in order to heighten awareness of diversity in America. Representative literature may include that of or by Black Americans, Latino/a Americans, Native Americans, Asian Americans, LGBTQ Americans, and people with differing abilities and religions.

LIT 6A Survey of English Literature

3 Units (Degree Applicable, CSU, UC, C-ID #: ENGL 160, ENGL-LIT 160)

Lecture: 54

Prerequisite: ENGL 1A

A chronological study of major works from Beowulf and the Anglo-Saxon period to the mid-18th century.

LIT 6B Survey of English Literature

3 Units (Degree Applicable, CSU, UC, C-ID #: ENGL 165)

Lecture: 54

Prerequisite: ENGL 1A

Major works from the late 18th century on to the Romantic Era through the Victorian and Modern periods to contemporary texts.

LIT 10 Survey of Shakespeare

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A

Shakespeare's histories, tragedies, comedies, and selected sonnets with their historical and literary contexts, emphasizing their relevance to contemporary culture and values.

LIT 11A World Literature to 1650

3 Units (Degree Applicable, CSU, UC, C-ID #: ENGL 140, (ENGL-LIT 180))

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH

Survey of selected works derived from antiquity to 1650 from Europe, the Near and Mid East, Egypt, Asia, Greece, and Rome. The course explores the relationships between world literatures, art, society, politics, and philosophy.

LIT 11B World Literature from 1650

3 Units (Degree Applicable, CSU, UC, C-ID #: ENGL 145, (ENGL-LIT 185))

Lecture: 54

Prerequisite: ENGL 1A

LIT 11B conducts a comparative survey of selected works of literature, in English translation, originating since 1650 to the 21st century, from Europe, Asia, Africa, the Middle East, and South America. The course explores relationships between world literatures, art, culture, politics and philosophy.

LIT 14 Introduction to Modern Poetry

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Examines the significant poetry of England and America in the 20th and 21st centuries, with the major emphasis on contemporary poems.

LIT 15 Introduction to Cinema

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A

Explores the broad range of human experience inherent in the study of film as art. Using a number of films drawn from various genres, examines film from historical, social, technological and aesthetic perspectives.

LIT 20 African American Literature

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A

Surveys Eighteenth through Twenty-first Century writings of African Americans. Emphasizes the oral traditions, the development of protest literature, the interpretation of literary genres and thematic elements of the literary canon.

LIT 25 Contemporary Mexican American Literature

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A

Contemporary Mexican-American literature, drama, and film. Includes discussion of the roles played by gender, religion, language, education, family, ethnic identity, and class. Also addresses application of literary tools such as symbolism, language, and theme.

LIT 36 Introduction to Mythology

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1AM

Major myths, including creation, fertility, and hero myths. Theories and approaches to these archetypal stories and the ways that they reflect and shape culture. Emphasis is on Classical myths, but myths from around the world will be included.

LIT 40 Children's Literature**3 Units** (Degree Applicable, CSU, C-ID #: ENGL 180, ENGL-LIT 145)

Lecture: 54

Prerequisite: ENGL 1A

A survey of children's literature. Emphasis is given to analysis and interpretation of thematic and literary elements, suitability for age group, quality of writing and illustration, award-winning books, and issues related to cultural patterns, bias, and persuasiveness.

LIT 46 The Bible As Literature: Old Testament**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A

Considers the Bible as a collection of literary texts and applies the principles of literary analysis to the Old Testament in their historical and cultural contexts.

LIT 47 The Bible As Literature: New Testament**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A

Considers the Bible as a collection of literary texts and applies the principles of literary analysis to selected books of the New Testament in their historical and cultural contexts.

Manufacturing Technology (MFG)

MFG 110 Introduction to CAD**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Advisory: Eligibility for MATH 51

Basic Computer Aided Design (CAD) and computer applications (AutoCAD and SolidWorks) in engineering and related fields, including basic word processing, spreadsheet, CAD, and presentation applications. Production card and digital calipers required.

MFG 120 CAD for Manufacturing**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Prerequisite: MFG 110 or CSWA Certification

Formerly EDT 18

Intermediate CAD (Computer Aided Design) for engineering related industries, 2D and 3D environments, 3D parametric solid modeling. Construct assemblies & subassemblies; use and editing of mates. Certified SolidWorks Associate (CSWA) exit exam. Production card and digital calipers required.

MFG 130 Manufacturing Processes and Materials**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Common manufacturing processes used to cut, bend, form, mold and cast common metal and plastic alloys. Investigates material properties, structural concepts and joining methods. Includes survey of advanced manufacturing technologies.

MFG 140 Print Reading and Shop Practice**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Print reading, layout, tools, and methods used in fabrication and manufacturing industries. Print reading fundamentals and mastery of tool and process selection, safety; proficiency in basic machine operation skills.

MFG 150 Manual Machining I**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Conventional mill and lathe safety and machining practices, tool nomenclature, lathe and mill operation, application and tooling. Application to Computer Numerical Control (CNC) machines. Production cards and calipers required.

MFG 155 Manual Machining II**2 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 54

Prerequisite: MFG 150

Intermediate application of conventional mill and lathe safety and machining practices, tool nomenclature, lathe and mill operation, application and tooling. Production cards; safety glasses, hearing protection, and calipers required.

MFG 160 Introduction to Mechanical Principles**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: EDT 16 or MFG 110

Use of mechanical demonstration kits, computer aided design (CAD) and other media to survey mechanical devices, concepts, and principles common to manufactured products and manufacturing processes. Analysis, discussion, and problem solving related to mechanical design scenarios and supported by CAD. Emphasis on mechanical literacy. Production cards and calipers required. Field trips may be required.

MFG 180 Introduction to MasterCAM**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Advisory: MFG 155

Use MasterCAM X software to create wire-frame part geometry, add tool paths, and create computer numerical control (CNC) code for CNC mills and CNC lathes. Overview of tooling and tooling nomenclature.

MFG 210 Advanced CAD**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: MFG 120 or CSWA Certification

Formerly EDT 24

Advanced engineering Computer Aided Design (CAD) for developing detailed working drawings in 3D environments, incorporating 3D parametric solid modeling, bill of materials, and surface development. Production card required. Field trip required.

MFG 220 Computer Aided Manufacturing II**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 71

Prerequisite: MFG 120 and MFG 180

Formerly MFG 38B

Advanced use of industry standard computer aided manufacturing (CAM) software (MasterCam) to generate tool paths and create computer numerical control (CNC) code for operation of CNC mills and CNC lathes. Production cards and calipers required.

MFG 250 Introduction to CNC Programming**3 Units** (Degree Applicable)

Lecture: 18 Lab: 108

Prerequisite: MFG 150

Theory and practice of manually developing Computer Numerical Control (CNC) programs. Writing and editing program code for CNC mills and lathes. Methods of transmitting data to CNC machines and operation of CNC mills and lathes.

MFG 260 CNC Operation**3 Units** (Degree Applicable)

Lecture: 18 Lab: 108

Advisory: MFG 250

Operation of computer numerical control (CNC) machines and their applications in manufacturing. Students will learn to analyze and interpret industry prints to determine datums, orient work to the machines, set up, and apply work holding solutions and basic tooling and machining strategies common in the industry. Students will be involved in producing and machining industry representative parts.

Mathematics (MATH)

MATH 5 Support Topics for Elementary Algebra**2 Units**

(May be taken for Pass/No Pass only)

Lecture: 36

Corequisite: MATH 51

Support will focus on essential arithmetic, algebraic, and geometric skills needed for success in Elementary Algebra. Course is for students concurrently enrolled in Math 51. Support topics include order of operations, rules of exponents, geometry, linear, quadratic, rational, and radical equations, systems of equations, basic graphing techniques, factoring, polynomial, rational, and radical expressions, and applications.

MATH 7 Support Topics for Intermediate Algebra**2 Units**

(May be taken for Pass/No Pass only)

Lecture: 36

Corequisite: MATH 71

Support will focus on essential algebra skills needed for success in Intermediate Algebra. Course is for students concurrently enrolled in Math 71. Support topics include real numbers and their properties, algebraic expressions, integer and rational exponents, linear, quadratic, rational, radical, exponential, and logarithmic equations, systems of linear and nonlinear equations, absolute value equations and inequalities, graphing techniques, writing equations of lines, functions and relations, complex fractions, polynomial, rational, radical, and logarithmic expressions, and applications.

MATH 10A Support Topics for Survey of College Mathematics**2 Units**

(May be taken for Pass/No Pass only)

Lecture: 36

Corequisite: MATH 100

Support will focus on promoting mathematical reasoning, critical thinking skills, and essential arithmetic and algebraic skills needed for success in Survey of College Mathematics. Course is for students concurrently enrolled in Survey of College Mathematics (Math 100). Support topics include problem solving strategies, set theory, logic, linear functions, graphing techniques, counting methods, probability, and statistics.

MATH 11 Support Topics for Statistics**2 Units**

(May be taken for Pass/No Pass only)

Lecture: 36

Corequisite: MATH 110

Support will focus on essential skills required for success in Elementary Statistics. For students concurrently enrolled in Elementary Statistics (Math 110). Review and support topics include the use of calculators and technology to enhance understanding. Topics include inequality relationships between numbers, graphing and interpreting linear functions, applications with probabilities including notation, simulations, rounding, and significant digits. Applications with estimation, hypothesis testing using appropriate calculations, and conclusions.

MATH 13 Support Topics for College Algebra**2 Units**

(May be taken for Pass/No Pass only)

Lecture: 36

Corequisite: MATH 130

Support will focus on essential algebra skills needed for success in College Algebra. Course is for students concurrently enrolled in Math 130. Support topics include algebraic expressions, integer and rational exponents, linear and nonlinear equations and inequalities, factoring polynomials, systems of equations and inequalities, graphing techniques and curve sketching, equations of lines, functions and relations, complex fractions, polynomial, rational, radical, exponential, and logarithmic expressions and equations, expanding binomials, and applications.

MATH 14 Support Topics for Business Calculus**2 Units**

(May be taken for Pass/No Pass only)

Lecture: 36

Corequisite: MATH 140

Support will focus on essential algebra skills needed for success in Business Calculus. For students concurrently enrolled in Math 140. Algebra support topics include analyzing linear, polynomial, rational, radical, exponential, and logarithmic functions, solving various equations including polynomial, rational, radical, exponential, and logarithmic equations, solving various inequalities including polynomial, rational, and absolute value inequalities, graphing techniques and curve sketching, summation notation and Riemann sums, limits, differentiation rules and the chain rule, integration techniques, functions of several variables, double integration, and applications.

MATH 15 Support Topics for Trigonometry**2 Units**

(May be taken for Pass/No Pass only)

Lecture: 36

Corequisite: MATH 150

Support will focus on essential geometry and algebra skills needed for success in Trigonometry. Course is for students concurrently enrolled in Math 150. Support topics include angle, triangle and parallelogram relationships, arc length and area of circles and sectors, linear transformations, simplifying algebraic expressions, solving algebraic equations, functions, graphs, unit conversions, and algebraic proofs.

MATH 16 Support Topics for Precalculus**2 Units**

(May be taken for Pass/No Pass only)

Lecture: 36

Corequisite: MATH 160

Support will focus on essential trigonometry and algebra skills needed for success in Precalculus Mathematics. Course is for students concurrently enrolled in Math 160. Support topics include set notation, complex rational expressions and radical expressions, lines, piecewise-defined functions, circles, modeling with functions, factoring, asymptotes, solving inequalities, simplifying exponential expressions, evaluating trigonometric and inverse trigonometric functions, solving exponential, logarithmic, and trigonometric equations, vectors, and systems of equations.

MATH 18A Support Topics for Calculus I**2 Units (Not Degree Applicable)**

(May be taken for Pass/No Pass only)

Lecture: 36

Corequisite: MATH 180

Formerly MATH 18

Support will focus on essential precalculus skills needed for success in Calculus. Course is for students concurrently enrolled in Calculus and Analytic Geometry (Math 180). Precalculus review topics include basic functions and transformations, equations of lines, difference quotients, asymptotes, absolute value inequalities, zeros of polynomial functions, function composition, applications of geometry and Pythagorean theorem, areas under curves using geometric formulas, sequences and series.

MATH 18B Support Topics for Calculus II**2 Units (Not Degree Applicable)**

(May be taken for Pass/No Pass only)

Lecture: 36

Corequisite: MATH 181

Support will focus on essential precalculus and calculus skills needed for success in Calculus and Analytical Geometry II. This course is for students concurrently enrolled in Calculus and Analytical Geometry II (MATH 181). Support topics include trigonometric functions, partial fractions, polynomial graphs, derivatives, antiderivatives, integration, application of integrals, parametric equations and polar coordinates, sequences, series, and power series.

MATH 50 Pre-Algebra**3 Units (Not Degree Applicable)**

Lecture: 54

Prerequisite: LERN 49 or appropriate placement.

Fundamental principles of mathematics designed to ease the transition from arithmetic to algebra. Concepts, computational skills, thinking skills and problem-solving skills are balanced to build proficiency in elementary topics from algebra and mastery in arithmetic.

MATH 51 Elementary Algebra**4 Units (Not Degree Applicable)**

Lecture: 72

Prerequisite: MATH 50 or appropriate placement

Basic algebra, equivalent to first year high school algebra. Includes: operations with signed numbers and algebraic expressions; linear, quadratic, rational, and radical equations; linear inequalities of one and two variables; slope, graphing, and equations of lines; introduction to functions; systems of linear equations; exponent rules; polynomial operations; scientific notation; factoring; rational expressions; variation; radicals; fractional exponents; formulas; applications.

MATH 51A Elementary Algebra - First Half**3 Units (Not Degree Applicable)**

Lecture: 54

Prerequisite: MATH 50 or appropriate placement

Contains the first half of elementary algebra. Operations with signed numbers and algebraic expressions, linear equations and inequalities, exponent rules, polynomial operations, scientific notation, factoring, solving quadratic equations by factoring, rational expressions and equations, formulas, variation, and applications.

MATH 51B Elementary Algebra - Second Half**3 Units (Not Degree Applicable)**

Lecture: 54

Prerequisite: MATH 51A

Contains the second half of elementary algebra. Includes: Cartesian Coordinate System, slope, graphing, and equations of lines, solving systems of linear equations, algebraic operations with radicals, solving equations with radicals, solving second degree equations using methods of completing the square and the quadratic formula. Students must complete both MATH 51A and MATH 51B to have taken the equivalent of Elementary Algebra (MATH 51).

MATH 61 Plane Geometry**3 Units (Degree Applicable)**

Lecture: 54

Prerequisite: MATH 51 or MATH 51B or appropriate placement

Points, lines, polygons and circles; their relationships to each other on plane surfaces; congruence, similarity and area. Introduction to inductive, deductive and indirect reasoning. The formal proof is introduced and practiced throughout the course. Stress is placed on accuracy of statement as a background for analytical and scientific reasoning.

MATH 71 Intermediate Algebra**5 Units** (Degree Applicable)

Lecture: 90

Prerequisite: MATH 51 or MATH 51B or appropriate placement.

Extends concepts from elementary algebra to prepare students for college-level mathematics courses. Polynomial, rational, radical, exponential and logarithmic expressions are simplified, equations solved and functions graphed and studied; linear and nonlinear systems of equations and inequalities; conic sections; sequence, series and the binomial theorem

MATH 71A Intermediate Algebra - First Half**3 Units** (Not Degree Applicable)

Lecture: 54

Prerequisite: MATH 51 or MATH 51B or appropriate placement.

Algebra of functions, polynomials, and rational expressions; functions and their graphs; systems of equations with two or three variables; absolute value and compound inequalities. Covers approximately half of the MATH 71 topics. A student must complete both MATH 71A and 71B to have taken the equivalent of MATH 71, Intermediate Algebra.

MATH 71B Intermediate Algebra - Second Half**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: MATH 71A

Quadratic equations and graphs; exponents, radicals and logarithms; conic sections. Covers remaining MATH 71 topics. A student must complete both MATH 71A AND 71B to have taken the equivalent of MATH 71, Intermediate Algebra.

MATH 71X Practical Intermediate Algebra**5 Units** (Degree Applicable)

Lecture: 90

Prerequisite: MATH 51 or MATH 51B or appropriate placement

Intermediate Algebra for the non-calculus path. Polynomial, rational, radical, exponential, and logarithmic expressions are simplified, equations solved, and real-world phenomena are modeled using least-squares methods, functions graphed and analyzed; linear and nonlinear systems of equations and inequalities; sequences, series, and probabilities; data gathering instruments are used to sample data for curve fitting.

MATH 96 Strategies for Math Success**1 Unit** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 18

Perspectives, understandings, and strategies to utilize a learning system for acquiring, understanding, remembering, and producing mathematical knowledge. Course is appropriate for all levels of mathematics students.

MATH 99 Special Projects in Mathematics**2 Units** (Degree Applicable, CSU)

Lecture: 36

Prerequisite: Instructor authorization

In order to offer selected students recognition for their academic interests and ability and the opportunity to explore their disciplines to greater depth, the Math Department from time to time offers special projects courses. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Instructor authorization needed prior to enrollment.

MATH 100 Survey of College Mathematics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: MATH 71 or MATH 71X or MATH 71B or appropriate placement

Mathematical methods and reasoning. Topics include: set theory, logic, counting methods, probability and statistics, with additional topics selected from numeration and mathematical systems, number theory, geometry, graph theory, and mathematical modeling.

MATH 110 Elementary Statistics**3 Units** (Degree Applicable, CSU, UC, C-ID #: MATH 110)

UC Credit Limitation

Lecture: 54

Prerequisite: MATH 71 or MATH 71X or MATH 71B or appropriate placement

Descriptive and inferential statistics and probability with emphasis on understanding statistical methods. Descriptive analysis of sample statistics, distribution of discrete and continuous random variables, estimation theory, tests of hypotheses, regression, correlation, and analysis of variance.

MATH 110H Elementary Statistics - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: MATH 110)

UC Credit Limitation

Lecture: 54

Prerequisite: (MATH 71 or MATH 71X or MATH 71B or appropriate placement) and acceptance into the Honors Program.

Descriptive and inferential statistics and probability with an emphasis on understanding statistical methods. Descriptive analysis of sample statistics, distribution of discrete and continuous random variables, estimation theory, tests of hypotheses, regression, correlation, and analysis of variance. An honors course designed to provide an enriched experience. May not receive credit for MATH 110 and MATH 110H.

MATH 120 Finite Mathematics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: MATH 71 or MATH 71X or MATH 71B or appropriate placement

Linear programming, matrix theory, probability, statistics, stochastic processes, Markov chains, and math of finance. Applications for business, economics, and social sciences.

MATH 130 College Algebra**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 72

Prerequisite: MATH 71 or MATH 71B or appropriate placement

College-level Algebra course. Study of real numbers and sets, algebraic functions and relations, radicals and exponents, linear and quadratic equalities and inequalities, exponential and logarithmic functions, systems of linear and quadratic equations, complex numbers, series, theory of equations, mathematical induction and binomial formula.

MATH 140 Calculus for Business**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 72

Prerequisite: MATH 130 or MATH 160 or appropriate placement

Calculus for business, social science, and non-science majors. Algebraic, logarithmic, and exponential functions; limits; differentiation with applications; various techniques of integration with applications; differential equations; and multivariable calculus.

MATH 150 Trigonometry**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: MATH 71 or MATH 71B or appropriate placement on assessment measures

Trigonometric functions and inverse trigonometric functions and the graphical representations of these functions; solutions to right and oblique triangles with laws of sines and cosines; vectors; solutions to trigonometric equations; identities; polar coordinates; complex numbers; and DeMoivre's Theorem.

MATH 160 Precalculus Mathematics**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 72

Prerequisite: MATH 150 or appropriate placement

Prepares students for the calculus sequence. Real-valued functions, including algebraic, trigonometric, exponential, and logarithmic functions. Also includes proofs, inequalities, introductory analytical geometry, series, sequences, and vectors.

MATH 180 Calculus and Analytic Geometry**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 72

Prerequisite: MATH 160

Differential and integral calculus with applications. Functions, limits, the derivative, curve sketching, optimization, and rules for differentiation of algebraic, exponential, logarithmic, and trigonometric functions with their inverses, with applications. Indefinite and definite integrals.

MATH 181 Calculus and Analytic Geometry**4 Units** (Degree Applicable, CSU, UC, C-ID #: MATH 220)

Lecture: 72

Prerequisite: MATH 180

Differential and integral calculus with infinite series and applications. Includes applications of integration, techniques of integration, numerical integration, indeterminate forms and improper integrals, differential equations, and polar coordinates.

MATH 245 A Transition to Advanced Mathematics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: MATH 181

A transition to the rigors of upper-division mathematics courses. Basic set theory and logic, relations, functions, mathematical induction, the well-ordering principle, countable and uncountable sets, the Schroder-Bernstein Theorem, the axiom of choice, Zorn's Lemma, the Heine-Borel Theorem, the Bolzano-Weierstrass Theorem. Special emphasis on how to present and understand mathematical proofs.

MATH 260 Linear Algebra**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: MATH 181

Matrices, linear systems, determinants, vector and inner product spaces, linear transforms, eigenvalues, and eigenvectors.

MATH 280 Calculus and Analytic Geometry**5 Units** (Degree Applicable, CSU, UC, C-ID #: MATH 230)

Lecture: 90

Prerequisite: MATH 181

Multivariate and vector calculus, which includes vectors in two and three space and surfaces in space. Analysis of vector-valued functions. Partial derivatives, differentials, the chain rule, directional derivatives, and the gradient. Extrema of functions of several variables with applications. Multiple integrals in various coordinate systems with applications. Vector fields, line integrals, and independence of path. Green's Theorem, surface integrals, flux, divergence, and curl. Stokes' Theorem and the Divergence Theorem.

MATH 285 Linear Algebra and Differential Equations**5 Units** (Degree Applicable, CSU, UC)

Lecture: 90

Prerequisite: MATH 280

First order ordinary differential equations, with applications and numerical methods. Solutions to higher order differential equations using undetermined coefficients, variation of parameters, and power series, with applications. Solutions to linear and non-linear systems of differential equations, including numerical solutions. Matrix algebra, solutions of linear systems of equations, and determinants. Vector spaces, linear independence, basis and dimension, subspace and inner product space, including the Gram-Schmidt procedure. Linear transformations, kernel and range, eigenvalues, eigenvectors, diagonalization and symmetric matrices.

MATH 290 Differential Equations**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: MATH 280

First-order ordinary differential equations, including separable, linear, homogeneous, Bernoulli, and exact, with applications and numerical methods. Solutions to higher-order differential equations using undetermined coefficients, variation of parameters, power series, and Laplace transforms, with applications. Solutions to linear and non-linear systems of differential equations, including numerical solutions.

Medical Terminology (MEDI)

MEDI 90 Medical Terminology**3 Units** (Degree Applicable, CSU)

Lecture: 54

This course is an introduction to the use and meaning of the medical terminology used in various allied health fields.

Mental Health/Psychiatric Technician (MENT)

MENT 40 Introduction to Interviewing and Counseling

3 Units (Degree Applicable)

Lecture: 54

Theory and practice in interviewing skills. Stresses application of counseling theories, helping skills, and consultation theories to allow exploration of self as a helper and learn facilitating skills to bring about change. Emphasis on establishing rapport, obtaining information, and developing a supportive relationship in a variety of mental health settings.

MENT 56 Medical-Surgical Nursing for Psychiatric Technicians

9 Units (Degree Applicable)

Lecture: 162

Prerequisite: Admission to the Psychiatric Technician Program

Corequisite: MENT 56L

Holistic approach to assessment and intervention in the care of the medical-surgical patient. Examines physiological modes of rest and exercise, regulation, circulation, ventilation, reproductive, elimination, and the sensory system; medical-surgical nursing; care of the dying patient and cardiovascular problems; calculations of drug dosage and administration of medications; study of anatomy and physiology of the human body.

MENT 56L Medical-Surgical Clinical Experience

4 Units (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 216

Corequisite: MENT 56

Application, assessment, intervention, and evaluation of nursing treatment in the physiological modes of rest and exercise, regulation, nutrition, elimination, application of emergency procedures, circulation, ventilation, fluids, and electrolytes. Psychosocial aspects of care including interdependence, role function, self-concept, care of aged, and cultural aspects. Development and application of nursing skills for those with medical-surgical problems and special needs. Calculation and administration of medications. Roy's Adaptation Model serves as the conceptual framework.

MENT 58D Advanced Medical-Surgical Nursing and Pharmacology for Psychiatric Technician (PT)

4 Units (Degree Applicable)

Lecture: 72

Prerequisite: MENT 56 and MENT 56L

Corequisite: MENT 58L

Concepts of nursing assessment and intervention for disease processes affecting body systems. Principles related to the safe administration of medications including classifications of medications and knowledge of specific medications. Roy's Adaptation Model serves as the conceptual framework.

MENT 58L Advanced Medical-Surgical Nursing for Psychiatric Technicians Clinical

1.5 Units (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 90

Prerequisite: MENT 56 and MENT 56L

Corequisite: MENT 58D

The application of nursing skills to patients with medical-surgical disorders which includes administration of medications utilizing the Nursing Process. Sister Callista Roy's Adaptation Model serves as the conceptual framework.

MENT 70 Introduction to Psychiatric Technology

1.5 Units (Degree Applicable)

Lecture: 27

Prerequisite: Admission to Psychiatric Technician Program

Corequisite: MENT 70L

Role and function of the Psychiatric Technician. Includes mental health theories of personality development, self-concept, role function, and interdependence. Also includes developmental disabilities theories of sensorimotor techniques and positive behavior support techniques.

MENT 70L Introduction to Psychiatric Technology Clinical

2 Units (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 108

Corequisite: MENT 70

Clinical experience at mental health facilities within the community which serve individuals diagnosed with mental health and/or intellectual, physical, and other developmental disabilities. Acceptance into the Psychiatric Technician Program is required to take this course.

MENT 72 Nursing Care of the Developmentally Disabled Person

7 Units (Degree Applicable)

Lecture: 126

Prerequisite: MENT 56 and MENT 56L and MENT 70 and MENT 70L

Corequisite: MENT 72L

Knowledge, skills, and attitudes necessary to safely teach individuals diagnosed with intellectual and developmental disabilities. Techniques of positive behavior intervention and support, behavior modification, and sensorimotor training are used, focusing on maximizing independence. Examines normal development from infancy to the aged. Examines the etiology of developmental disabilities.

MENT 72L Nursing Care of the Developmentally Disabled Person - Clinical

5.5 Units (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 297

Corequisite: MENT 72

Application of skills needed to teach and provide care for individuals with developmental disabilities.

MENT 73L Psychiatric Nursing for Psychiatric Technicians Clinical**5.5 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 297

Prerequisite: Admission to Psychiatric Technician Program. MENT 56 and MENT 56L

Corequisite: MENT 73T

Clinical instruction in the assessment and treatment of individuals diagnosed with mental disorders.

MENT 73T Psychiatric Nursing for Psychiatric Technicians**6 Units** (Degree Applicable)

Lecture: 108

Prerequisite: MENT 56 and MENT 56L

Corequisite: MENT 73L and PSYC 1A (may have been taken previously)

Advisory: MENT 40

Theoretical instruction in the assessment and treatment of individuals diagnosed with mental disorders, medications used in the treatment of mental disorders, therapeutic communication and other therapeutic techniques, and assertiveness and leadership skills necessary for safe practice as a licensed Psychiatric Technician.

MENT 82 Work Experience in Mental Health Technology**2 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 120-150

Prerequisite: MENT 72 and MENT 73T and compliance with Work Experience regulations as designated in the College Catalog.

Provides students with on-the-job experience in the field of mental health, nursing skills, addiction paraprofessional training, and/or developmental disability, related to classroom instruction, at an approved work site. On-the-job experience at an approved work site. Requires 150 paid or 120 non-paid hours.

Meteorology (METO)

METO 3 Weather and the Atmospheric Environment**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Processes that influence weather and climate: seasonality, structure of the atmosphere, atmospheric stability, severe weather (hurricanes, tornadoes, thunderstorms), climate change, and the causes and effects of air pollution. Students will use a variety of weather instruments and the course may include either field-work or field trips.

METO 3L Weather and Atmospheric Environment Laboratory**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Corequisite: METO 3 (May have been taken previously)

Laboratory applications and problem solving related to the atmospheric environment. Emphasizes the collection and analysis of weather and climate data.

Microbiology (MICR)

MICR 1 Principles of Microbiology**5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 108

Prerequisite: CHEM 10 or CHEM 40

Fundamental concepts of microbiology with emphasis on bacteria. Survey of microbial classification, morphology, physiology, and genetics; beneficial and pathological aspects; growth and control of microbes; virology, immunology, and host-microbe interactions. Important infectious diseases of humans are surveyed. Laboratory exercises examine microbial morphology, physiology, and genetics as well as environmental influences of microorganisms. Laboratory techniques include culturing, examining, and identifying microorganisms. Field trips are required.

MICR 22 Microbiology**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 54

Prerequisite: CHEM 10 or CHEM 40

Advisory: BIOL 1 or BIOL 4 or BIOL 4H

Fundamental concepts of microbiology including viruses, bacteria, fungi, protozoa and parasitic worms.

MICR 26 Introduction to Immunology**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: MICR 1 or MICR 22

Advisory: BIOL 1 or BIOL 4 or BIOL 4H

Immunology including principles of innate and adaptive immunity, B and T lymphocyte structure, function, and development, the major histocompatibility complex, immune system errors, and applications and techniques in the immunology field as they pertain to medical diagnostics, immunohistochemistry, and biotechnology.

Music (MUS)

Correction: Added: Formerly MUS 2 to MUS 110A. 8/23/2022.**MUS 12 History of Jazz****3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

A survey of jazz as a significant American art form from its roots in African music to the present. Major styles, leading performers, significant compositions and recordings, and the social, economic, and cultural contexts of the music will be stressed.

MUS 14A World Music**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Examines the dominant musical cultures of the world within Africa, the Americas, Europe, and Asia and compares these to Western popular music. Identifies vocal and instrumental genres within selected cultures and examines the harmonic, melodic, and rhythmic characteristics of each style. Lectures, films, recordings, and media presentations will assist the student in exploring the ways in which music is used around the world for aesthetic, social, and spiritual purposes.

MUS 14B American Folk Music**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

The study of American folk music by both region and period. Instruction will include lecture, reading, and listening assignments, and various audio-visual materials. No previous musical experience required.

MUS 14BH American Folk Music - Honors**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

The study of American folk music by both region and period. Instruction will include lecture, reading, and listening assignments, and various audio-visual materials. No previous musical experience required. An honors course designed to provide an enriched experience. Students may not receive credit for both MUS 14B and MUS 14BH.

MUS 15 Rock Music History and Appreciation**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Historical survey of rock music from its beginnings in the early 1950s to the present. Rhythm & blues, rockabilly, the British Invasion, Motown, soul, folk rock, hard rock, punk, metal, and various alternative rock styles will be discussed. Personalities and musical styles will be related to the sociology of the time period being studied.

MUS 15H Rock Music History and Appreciation - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Historical survey of rock music from its beginnings in the early 1950s to the present. Rhythm & blues, rockabilly, the British Invasion, Motown, soul, folk rock, hard rock, punk, metal, and various alternative rock styles will be discussed. Personalities and musical styles will be related to the sociology of the time period being studied. An honors course designed to provide enriched experience. Students may not receive credit for both MUS 15 and MUS 15H.

MUS 17B Intermediate Piano**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Advisory: MUS 17A

Reading and performances of piano literature with emphasis on major and minor scales in multiple octaves utilizing multiple textures. Includes use of damper pedal.

MUS 18 Advanced Piano**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Advisory: MUS 17B

Style, technique, and interpretation of piano music from the 17th century to the present are studied collectively and individually. Sight reading, improvisation, and ensemble playing will be emphasized. Recommended for music majors.

MUS 20A Elementary Voice**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Group singing instruction with an emphasis on breathing, posture, performance techniques, and vocal quality. English and American songs are studied and performed.

MUS 20B Intermediate Voice**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Advisory: MUS 20A

Group and individual instruction concentrating on individual vocal development and emphasizing singing techniques required for singing popular, theatrical, and classical music. Includes singing in foreign languages.

MUS 21 Advanced Voice**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Advisory: MUS 20B

Group and individual study of the style, techniques, and interpretation of art songs and songs from operas and musicals. Emphasis will be placed on diction and pronunciation in Italian, German, and French.

MUS 22 Conducting**1.5 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 27

Beat patterns, score reading, and rehearsal techniques for conducting. Includes techniques needed for group direction and leadership.

MUS 23A Elementary Guitar**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Acoustic guitar playing, note reading, strumming, finger picking, and improvisation. Students must furnish their own guitars.

MUS 23B Intermediate Guitar**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Advisory: MUS 23A

Techniques for reading and playing music arranged for the solo guitar. Students must furnish their own acoustic guitar.

MUS 24 Advanced Guitar**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Advisory: MUS 23B

Style, technique, and interpretation of guitar music of the 18th and 19th centuries. Includes sight reading and ensemble playing. Students must furnish their own acoustic guitars.

MUS 25A Jazz Improvisation**1 Unit** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 54

Styles and techniques of jazz improvisation. Students must furnish their own musical instruments to play for and with the class.

MUS 25B Advanced Jazz Improvisation**1 Unit** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 54

Advisory: MUS 25A

Advanced techniques of jazz improvisation. Includes minor, dominant, and pentatonic scales along with arpeggiating polychords, altered chords, chord progressions, and 32-bar jazz standards. Students must furnish their instruments and be able to perform individually and with the class.

MUS 27 Chamber Music**1.5 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 180)

(May be taken four times for credit)

Lab: 81

Prerequisite: Admission by audition

Select ensemble of winds, strings, guitar, and percussion instrumentalists specializing in the performance of chamber music from the medieval period to the present. The course may include brass quintets, woodwind quintets, saxophone quartets, and mixed instrumental ensembles of two through twenty performers. Students must have previous instrumental experience and pass an entrance audition during the first week of instruction. Public performances on campus and in the community are required. Students who repeat this course will improve skills through further instruction and practice.

MUS 29 Choral Workshop**1 Unit** (Degree Applicable, CSU, UC)

(May be taken four times for credit)

Lab: 54

Choral music of all genres with an emphasis on strengthening choral skills, including sight singing, tone, blend, balance and good vocal technique. Covers choral tone of the Renaissance to correct use of the microphone when singing pop or vocal jazz. Students who repeat this course will improve skills through further instruction and practice. Open to all students without an audition.

MUS 30 Collegiate Chorale**1 Unit** (Degree Applicable, CSU, UC)

(May be taken four times for credit)

Lab: 54

A non-auditioned mixed choral ensemble open to all students. A variety of mixed choral repertoire will be studied and performed, from music of the Renaissance to contemporary Pop, Broadway, and Vocal Jazz. Rehearsal time will also be devoted to vocal development and improving music theory skills. Students who repeat this course will improve skills through further instruction and practice. Attendance at performances is required.

MUS 31 Concert Choir**1.5 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 180)

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 81

Prerequisite: Admission by audition

This course is for the study, rehearsal, and performance of repertoire suited for a large mixed choral ensemble. The repertoire will draw from a variety of styles, time periods, and cultures and may include major choral works. Different literature will be studied each semester. Sight singing skills and proper vocal technique are emphasized. Voice placement auditions are held the first week of class. Attendance at all performances including those off-site is required. Students who repeat this course will improve skills through further instruction and practice. Auditions held first week of the semester.

MUS 33 Opera Scenes**1 Unit** (Degree Applicable, CSU, UC)

(May be taken four times for credit)

Lab: 54

Prerequisite: Admission by audition

Preparation and public performance of scenes from various operas, or a complete opera, with piano accompaniment. Opportunities for performing principal roles and opera chorus. Emphasis on healthy vocal production, projection, effective story-telling and communication of text, diction and correct pronunciation of English and foreign languages, characterization, stage deportment, and dance. Students who repeat this course will continue to improve and refine these skills through further instruction and stage experience. Audition required.

MUS 34 Women's Vocal Ensemble**1 Unit** (Degree Applicable, CSU, UC, C-ID #: MUS 180)

Lab: 54

Prerequisite: Admission by audition during the first week of class

This ensemble is for the study, rehearsal and public performance of treble voiced choral literature with an emphasis on the development of skills needed to perform within a specialized ensemble. Repertoire selected throughout the year will include music from different time periods, languages, and styles. Different literature will be studied each semester. This course is repeatable for credit the maximum times allowable by regulation. Attendance is required at all public performances including off-campus locations. Auditions held the first week.

MUS 36 Wind Symphony**1 Unit** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 54

A wind and percussion ensemble open to students with prior instrumental experience. A variety of wind band repertoire will be studied and performed, from music of the medieval period to contemporary compositions. Rehearsal time will also be devoted to instrumental and aural skills development. Opportunities to conduct, arrange and compose music, and perform as a soloist may be provided. Students who repeat this course will improve skills through further instruction and practice. . Public performances on campus and in the community may be required each semester.

MUS 38 Ensemble**0.5-2 Units** (Degree Applicable, CSU, UC)

(May be taken four times for credit)

Lab: 36-108

Prerequisite: Ability to read music or admission by audition

This course is for the study, rehearsal, and public performance of literature appropriate to the ensemble, with an emphasis on the development of skills needed to perform within a specialized ensemble, namely chamber instrumentation, also including percussion, guitar, and piano ensembles. In addition, ensembles particular to Jazz genres would be included, such as combo instrumental ensembles and specialized vocal arrangement ensembles. Different literature will be studied each semester. Choice of ensemble is based on each student's identified major instrument or voice. The course is repeatable for credit the maximum times allowable by regulation. On campus performances may be required.

MUS 39 Laboratory Band**2 Units** (Degree Applicable, CSU, C-ID #: MUS 180)

(May be taken four times for credit)

Lab: 72

Prerequisite: Admission by audition

Study and performance of improvisation, jazz, and pop music of all types. Open to all students with prior instrumental experience. Audition may be required.

MUS 44 Vocal Jazz Ensemble**2 Units** (Degree Applicable, CSU, UC)

(May be taken four times for credit)

Lab: 72

Prerequisite: Admission by audition

This course is for the study, rehearsal, and public performance of literature appropriate for an intermediate vocal jazz ensemble. This group will perform vocal jazz charts accompanied by a rhythm section, as well as a cappella pieces. Topics of study will include basics of singing jazz, vocal improvisation, group singing techniques, and microphone techniques. The ensemble will perform locally and/or at vocal jazz festivals. Attendance at performances and competitions is required. Different literature will be studied each semester. This course is repeatable for credit the maximum times allowable by regulation. Admission by audition each Fall semester.

MUS 45 Chamber Singers**3 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 180)

(May be taken four times for credit)

Lab: 80

Prerequisite: Admission by audition

This course is for the study, rehearsal, and public performance of advanced choral repertoire with an emphasis on the development of skills needed to perform difficult and challenging choral pieces. A wide variety of choral literature is performed publicly several times each semester, and a performance tour occurs each spring semester. Emphasizes advanced musical skills and vocal techniques while focusing on the importance of blend, balance, and tone. Auditions for this course are held each May. This course is repeatable for credit the maximum times allowable by regulation. Off-campus performances are required.

MUS 47 Jazz Ensemble**2 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 180)

(May be taken four times for credit)

Lab: 108

Prerequisite: Admission by audition.

Study and performance of jazz and big band music. Provides an opportunity to learn techniques applicable to the large jazz ensemble. Off-campus public performance required. Students who repeat this course will improve skills through further instruction and practice. Admission by audition.

MUS 48 Men's Vocal Ensemble**2 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 180)

(May be taken four times for credit)

Lab: 54

Prerequisite: Admission by audition the first week of class

This course is for the study, rehearsal and performance of repertoire suited for a men's choral ensemble. The repertoire will be drawn from a variety of styles and time periods. Different literature will be studied each semester. Attendance is required at all public performances including off-campus locations. This course is repeatable for credit the maximum times allowable by regulation. Auditions held the first week.

MUS 49 Wind Ensemble**2 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 180)

Lab: 72

Prerequisite: Admission by audition

The premiere classical wind and percussion ensemble at the College. Students must have previous musical training, a standard band instrument, and pass an entrance audition. A variety of wind band repertoire will be studied and performed, from music of the medieval period to contemporary compositions. Public performances on campus and in the community are required each semester, and a concert tour may be included. Opportunities to conduct, arrange and compose music, and perform as a soloist may be provided to capable students. Students who repeat this course will improve skills through further instruction and practice.

MUS 50 Jazz Improvisation and Performance Choir**2 Units** (Degree Applicable, CSU, C-ID #: MUS 180)

(May be taken four times for credit)

Lab: 72

Prerequisite: Admission by audition

This course is for the study, rehearsal, and public performance of advanced vocal jazz literature with an emphasis on improvisation and skills needed to perform within a highly select vocal jazz ensemble. This choir will perform vocal jazz arrangements, and students will study the historical, theoretical, and technical aspects of both instrumental and vocal jazz. Solo singing techniques and scat singing will be rehearsed, and the choir will perform at least one concert each semester at Mt. SAC along with attending and performing at a variety of musical venues. Work with guest artists and make CD recordings. Attendance is required at assigned public performances. The course is repeatable for credit the maximum number of times allowable by regulation. Admission by audition. Off-campus performances are required.

MUS 51 Contemporary A Cappella Ensemble**2 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 180)

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Prerequisite: Admission by audition

Study, rehearsal, and public performance of contemporary a cappella music with an emphasis on the development of skills needed to perform using microphones in a small a cappella setting. Different literature studied each semester. Ensemble specializing in a cappella performances of current rock, pop, jazz, and country hits. Topics include instrumental emulation, vocal percussion microphone techniques, choreography, pop and jazz solo techniques, and arranging. Off campus performances may be required. The course is repeatable for credit the maximum times allowable by regulation.

MUS 52 Madrigal Singers**2 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 180)

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 80

Prerequisite: Admission by audition

The study, rehearsal, and public performance of early polyphonic choral literature, with an emphasis on the development of skills need to perform with a small, elite, choral ensemble. The primary focus is on literature from the Medieval and Renaissance periods. The number of singers is limited as to conform to performance practices of that time period. Different literature will be studied each semester. Concerts will be performed each semester at Mt SAC along with possible performance tours. Singers focus on proper vocal technique, sight singing, blending and balancing within the choir, and singing in foreign languages. Auditions will be held at the beginning of each semester.

MUS 99 Special Projects in Music**1-2 Units** (Degree Applicable, CSU)

Lab: 54-108

Offered to selected students in recognition of academic interests and abilities to give them the opportunity to explore these interests and abilities in greater depth. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Students must have an instructor's approval before enrolling in this course. Projects must be approved in advance.

MUS 100 Introduction to Western Classical Music**3 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 100)

Lecture: 54

Formerly MUS 13

Survey of art music in western civilization. Topics studied include but are not limited to elements of music, basic musical forms, music periods, styles, and the role of music and musicians in the western world. Attending at least one live concert is required.

MUS 100H Introduction to Western Classical Music - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 100)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Formerly MUS 13H

Survey of art music in western civilization. Topics studied include but are not limited to elements of music, basic musical forms, music periods, styles, and the role of music and musicians in the western world. Attending at least one live concert is required. An honors course designed to provide an enriched experience. Students may not receive credit for both MUS 100 and MUS 100H.

MUS 101 Women in Music**3 Units** (Degree Applicable, CSU)

Lecture: 54

A survey of art music in Western civilization with attention to gender issues, specifically in terms of women in music - as creators, performers, patrons, and listeners - from an historical perspective. Topics include elements of music, critical listening skills, time periods in music history (Medieval to 21st Century), musical styles, music as an expressive art form, and specific composers and musicians whose work speaks to gender-related issues. Appropriate for non-music majors. Attending at least one live concert is required.

MUS 103 Music and Culture of Hip Hop**3 Units** (Degree Applicable, CSU)

Lecture: 54

Introduction to the ideological, social, historical, and cultural influences on hip hop in African and African American history. Course addresses controversies surrounding rap music including violence, sexism, and racial stereotyping. Topics include early success of hip hop, its spread to mainstream culture, growth of "gangsta rap," and the commercial success of rap.

MUS 103H Music and Culture of Hip-Hop - Honors**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Introduction to the ideological, social, historical and cultural influences on hip hop in African and African American history. Course addresses controversies surrounding rap music including violence, sexism, and racial stereotyping. Topics include early success of hip hop, its spread to mainstream culture, growth of "gangsta rap," and the commercial success of rap. An honors course designed to provide an enriched experience. Students may not receive credit for both MUS 103 and MUS 103H.

MUS 105 Western Music History I: Antiquity to 1750**3 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 105)

Lecture: 54

Prerequisite: MUS 110 OR MUS 110A

Formerly MUS 11A

Survey of music history and literature from antiquity to 1750, including cultural, intellectual and social influences, and provides an in-depth examination of the development of Western European music through analysis and synthesis of historical details and stylistic elements of the musical trends of the era. Lectures are augmented by sound recordings. Attending a live concert may be required.

MUS 106 Western Music History II: 1750 to Present**3 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 106)

Lecture: 54

Prerequisite: MUS 110 OR MUS 110A

Formerly MUS 11B

Survey of music history and literature from 1750 to the present, including cultural, intellectual, and social influences. This course provides an in-depth examination of the development of Western European music through analysis and synthesizing of historical details and stylistic elements of the musical trends of the era. Attending at least one live concert is required.

MUS 110 Music Fundamentals**3 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 110)

Lecture: 54

Formerly MUS 7

Introduction to the notation and fundamental theoretical elements of Western music through listening, analysis, and performance. Includes modern staff notation, pitch, rhythm, elements of form, properties of keys, diatonic scales, intervals, and triadic harmony.

MUS 110A Music Fundamentals for Musicians**4 Units** (Degree Applicable, C-ID #: MUS 110)

Lecture: 54 Lab: 54

Formerly MUS 2

Introduction to the notation and fundamental theoretical elements of Western music through listening, analysis, singing, rhythm performance, and dictation. Includes modern staff notation, scales and modes, intervals, tertian harmony, and Roman numeral analysis, as well as the development of sight-singing, rhythm reading, and dictation skills. Intended for students with prior experience in musical performance or composition.

MUS 120 Music Theory I**3 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 120)

Lecture: 54

Prerequisite: (MUS 110 or MUS 7) or (MUS 110A or MUS 2)

Corequisite: (MUS 125 or MUS 5B) (May have been taken previously)

Advisory: (MUS 170 or MUS 17A)

Formerly MUS 3A

Harmony and form as practiced in Western tonal music. Listening, composition, and analysis of music to cover topics including Roman numeral theory, diatonic chord syntax, counterpoint, and chorale-style part writing with diatonic triads.

MUS 125 Musicianship I**1 Unit** (Degree Applicable, CSU, UC, C-ID #: MUS 125)

Lab: 54

Prerequisite: MUS 110 or MUS 110A

Formerly MUS 5B

Audiation of the rhythmic, melodic, and harmonic aspects of music through sight singing, rhythm reading, and dictation. Covers divisional rhythms, diatonic melodies, and primary chord progressions.

MUS 130 Music Theory II**3 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 130)

Lecture: 54

Prerequisite: (MUS 120 or MUS 3A)

Corequisite: (MUS 135 or MUS 6A) (May have been taken previously)

Advisory: (MUS 171 or MUS 10A)

Formerly MUS 3B

Harmony and form as practiced in Western tonal music. Listening, composition, and analysis of music to cover topics including non-chord tones, secondary functions, modulation, period forms, small forms, and chromatic part writing with seventh chords and suspensions.

MUS 135 Musicianship II**1 Unit** (Degree Applicable, CSU, UC, C-ID #: MUS 135)

Lab: 54

Prerequisite: (MUS 125 or MUS 5B)

Corequisite: (MUS 130 or MUS 3B) (May have been taken previously)

Formerly MUS 6A

Audiation of the rhythmic, melodic, and harmonic aspects of music through sight singing, rhythm reading, and dictation. Covers subdivisional rhythms, chromatic melodies, and diatonic chord progressions.

MUS 140 Music Theory III**3 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 140)

Lecture: 54

Prerequisite: (MUS 130 or MUS 3B)

Corequisite: (MUS 145 or MUS 6B) (May have been taken previously)

Advisory: (MUS 172 or MUS 10B)

Formerly MUS 3C

Harmony and form as practiced in Western tonal music. Listening, composition, and analysis of music to cover topics including mode mixture, the Neapolitan, augmented-sixth chords, altered dominants, linear chromaticism, sonata form theory, and part writing with advanced chromaticism.

MUS 145 Musicianship III**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Prerequisite: (MUS 135 or MUS 6A)

Corequisite: (MUS 140 or MUS 3C) (May have been taken previously)

Formerly MUS 6B

Audiation of the rhythmic, melodic, and harmonic aspects of music through sight singing, rhythm reading, and dictation. Covers syncopated rhythms, modulating melodies, and chromatic chord progressions.

MUS 150 Music Theory IV**3 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 150)

Lecture: 54

Prerequisite: (MUS 140 or 3C)

Corequisite: MUS 155 (May have been taken previously)

Pitch, rhythm, and harmony in late-Romantic and post-tonal Western music. Listening, composition, and analysis of music to cover topics including enharmonic reinterpretation, chromatic mediants, synthetic scales, non-tertian harmony, set theory, and serialism.

MUS 155 Musicianship IV**1 Unit** (Degree Applicable, CSU, UC, C-ID #: MUS 155)

Lab: 54

Prerequisite: MUS 6B

Corequisite: MUS 150 (may have been taken previously)

Audiation of the rhythmic, melodic, and harmonic aspects of music through sight singing, rhythm reading, and dictation. Covers polyrhythms, irregular meters, post-tonal melodies, and non-tertian chords.

MUS 160 Individual Instruction**0.5 Units** (Degree Applicable, CSU, UC, C-ID #: MUS 160)

(May be taken four times for credit)

Lab: 27

Prerequisite: Admission by audition and concurrent participation in an appropriate ensemble

Formerly MUS 16

Applied music for students also enrolled in a major performing group. Instruction includes a private one-half hour lesson per week. Individual problems of performance techniques, interpretation, and repertoire are included. Students who repeat this course will improve skills through further instruction and practice.

MUS 170 Piano I**1 Unit** (Degree Applicable, CSU, UC, C-ID #: MUS 170)

Lab: 54

Formerly MUS 17A

Introduction to beginning keyboard skills, including notation. Includes basic technique, major and minor five finger patterns, major scales, sight reading, and basic chord progressions as they are encountered in beginning piano music. No prior musical experience is required.

MUS 171 Piano II**1 Unit** (Degree Applicable, CSU, UC, C-ID #: MUS 171)

Lab: 54

Prerequisite: (MUS 170 or MUS 17A)

Formerly MUS 10A

Developing and refining further keyboard skills, including piano technique, major scales and arpeggios, sight-reading, chord progressions and harmonization and transposition skills, as encountered in upper-beginning and early intermediate piano music.

MUS 172 Piano III**1 Unit** (Degree Applicable, CSU, UC, C-ID #: MUS 172)

Lab: 54

Prerequisite: MUS 171

Formerly MUS 10B

Refining and developing further beginning keyboard skills, including piano technique, major and minor scales and arpeggios, sight-reading, expanded chord progressions, and harmonization and transposition skills are encountered in intermediate piano music.

MUS 180 DJ Performance**0.5-2 Units** (Degree Applicable, CSU)

(May be taken four times for credit)

Lab: 27-108

Prerequisite: Admission by audition

The study, rehearsal, and public performance of Disc Jockeyed (DJ) music and Electronic Dance Music (EDM). Styles include but are not limited to Pop, House, Techno, Trap, Hip Hop, Dubstep, Glitch, Ambient, and Drum and Bass. The skills needed to perform live in DJ and EDM settings will be emphasized. Performers will work collaboratively to put on performances that feature realtime collaboration and integration of industry-standard technologies to produce modern dance-music experiences. Different literature will be studied each semester based on the ensemble composition. This course is repeatable for credit the maximum times allowable by regulation. Admission by audition.

MUS 181 Pop/Rock Band**0.5-2 Units** (Degree Applicable, CSU)

(May be taken four times for credit)

Lab: 27-108

Prerequisite: Admission by audition.

The study, rehearsal, and public performance of commercial music in band configurations. Styles covered will include but are not limited to Pop, Rock, R&B, Country, and Hip Hop. The skills needed to perform live in commercial music settings will be emphasized. Combos will be made up of voice, guitar, keyboard, bass, drum-set, and other traditional instruments. Different literature will be studied each semester based on the ensemble composition. This course is repeatable for credit the maximum times allowable by regulation. Admission by audition.

MUS 185 Advanced Commercial Music Ensemble**0.5-2 Units** (Degree Applicable, CSU)

(May be taken four times for credit)

Lab: 27-108

Prerequisite: Admission by audition

The study, rehearsal, and public performance of advanced-level and experimental commercial music. Genres covered will include Pop, Rock, Hip Hop, Country, Rhythm and Blues, Disc Jockeyed, Electronic Dance, and Experimental Music. This ensemble will focus on emerging techniques that integrate traditional live performance with modern controllerism using a variety of Musical Instrument Digital Interfaces. Students are required to have significant instrumental, vocal and/or disc jockey performance skills. Students will host and perform in innovative musical and multimedia experiences in a variety of settings. The course is repeatable for credit the maximum times allowable by regulation. Admission by audition.

Music Audio (MUSA)

MUSA 100 Fundamentals of Audio Technology**3 Units** (Degree Applicable, CSU, C-ID #: CMUS 100 X)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Fundamental terminology, equipment, techniques, and technical concepts related to audio technology. Topics include the basic principles and practices of signal flow, analog audio, digital audio, computer workstations, musical instrument digital interface (MIDI), synthesis, and sound recording utilizing modern hardware and software. These topics will be explored from a technical perspective.

MUSA 110 Acoustics for Audio Production**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Scientific and practical concepts of acoustic sound for audio production. Topics include the science of sound, sound generation, sound in the free field, acoustic spaces, psychoacoustics, and techniques for acoustic management. Students will be able to critically analyze acoustic phenomena and apply this knowledge in audio production settings.

MUSA 120 Electronic Music**3 Units** (Degree Applicable, CSU, C-ID #: CMUS 110 X)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Creative techniques and elements of electronic audio. Topics include digital audio workstations, musical instrument digital interface (MIDI), synthesis, sampling, sequencing, editing, composition, arranging, and mixing. Compositions are expected of students utilizing electronic audio techniques.

MUSA 130 Business of Audio Production**3 Units** (Degree Applicable, C-ID #: CMUS 140 X)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Business and legal aspects of the audio industry. Topics include contracts, publishing, licensing, distribution, and copyright. In addition, the duties and responsibilities of producers, agents, managers, promoters, and performing artists will be examined. Students will gain a firm understanding of past and current business practices related to audio production.

MUSA 150 Audio Recording**3 Units** (Degree Applicable, C-ID #: CMUS 130 X)

Lecture: 36 Lab: 54

Prerequisite: MUSA 100 and MUSA 110

Intermediate concepts and skills for audio recording. Topics include recording techniques, signal flow, microphone principles and usage, equipment, signal processing, digital audio workstation recording functions, and recording procedures. Students will produce quality audio recordings from a variety of sound sources.

MUSA 160 Live Sound Engineering**3 Units** (Degree Applicable, C-ID #: CMUS 120 X)

Lecture: 36 Lab: 54

Prerequisite: MUSA 100 F

Intermediate concepts and skills for audio engineering live events. Topics will include microphones, mixers, amplifiers, monitoring, setup and teardown, sound reinforcement, cabling and wiring, and duties and roles for stages, clubs, theaters, churches, and industrial venues. Students will be able to engineer a multi-input live sound performance.

MUSA 200 Audio Production**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: MUSA 150 A

Advanced studio-recording techniques. Topics include recording sessions, applied acoustics, multi-microphone configurations, overdub sessions, cue mixes, control room configuration, roles and duties, editing, and mixing. Students will learn to apply audio technology and recording concepts in a multitrack studio environment.

MUSA 210 Audio for Multimedia**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: MUSA 100 and MUSA 120

Intermediate creative, technical, and collaborative techniques for producing audio for recorded multimedia. Topics include games, animation, video, commercials, radio, virtual reality, Internet, and motion graphics. Students will be able to produce quality audio tracks for use in a variety of multimedia settings.

MUSA 220 Sound Design for Live Performance**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: MUSA 120 and MUSA 160

Advanced creative, technical, and collaborative skills for designing and performing audio for live events. Topics include music concerts, theater performances, dance performances, theme parks, and artistic and commercial installations. Students will perform or have their productions performed at a live event or installation.

MUSA 230 Songwriting**3 Units** (Degree Applicable, C-ID #: CMUS 150 X)

Lecture: 54

Prerequisite: MUS 110A or (MUS 2 and MUS 5A) and MUSA 120

Processes and techniques of songwriting. Songs will be analyzed on chord structure, form, rhythm, melody, harmony, and lyrics. Original compositions and performances are expected from all students.

MUSA 250 Audio Capstone**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: MUSA 120 and MUSA 130 and MUSA 150

Advanced creative, organizational, and leadership skills for large-scale audio productions. Students will lead complex multi-track, multi-artist productions from conceptualization to delivery.

MUSA 299 Work Experience in Audio Arts**1-3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Prerequisite: MUSA 150 or MUSA 160 or MUSA 210 and compliance with Work Experience regulations as designated in the College Catalog.

Job experience in audio production in an approved work site. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be distributed throughout the semester. Instructor approval required. A maximum of three units can be earned for this course.

Native American and Indigenous Studies (NAIS)

NAIS 1 Introduction to Native American Studies

3 Units (Degree Applicable, CSU)

Lecture: 54

An introductory survey to the interdisciplinary analysis of the historical, socio-political, economic, educational, and cultural experiences, conditions, and influence related to Native Americans in the United States. The course examines key topics such as: Colonialism, settler colonialism, domination, indigeneity, sovereignty, acculturation, deculturalization, hegemony, land, self-determination, resistance, social movements, decolonization, and the intersection of racial, ethnic, gender, sexual identities.

Nursing (NURS)

NURS 1A The Nursing Process I

5 Units (Degree Applicable, CSU)

Lecture: 45 Lab: 135

Prerequisite: Admission to Nursing Program; ANAT 35 or equivalent and ANAT 36 or equivalent, or ANAT 10A or equivalent and ANAT 10B or equivalent, and MICR 22 or equivalent, or MICR 1 or equivalent, and ENGL 1A or equivalent

Corequisite: NURS 2

Principles of nursing as related to a culturally diverse population, adulthood through senescence. Theory and application of the Nursing Process including meaning of illness, promoting health patterns, hygiene, safety, asepsis, medication administration, elimination, and communication. The Betty Neuman Model serves as the conceptual framework.

NURS 1B The Nursing Process II

5 Units (Degree Applicable, CSU)

Lecture: 45 Lab: 135

Prerequisite: NURS 1A

Corequisite: NURS 2

Principles of nursing as related to a culturally diverse population, adulthood through senescence. Theory and application of the Nursing Process including wound care, legal/ethical aspects, comfort, fluid and electrolytes, spirituality, and nursing trends.

NURS 2 Pharmacology

2 Units (Degree Applicable, CSU)

Lecture: 36

Prerequisite: Admission to Nursing Program and eligibility for MATH 51

Corequisite: NURS 1A

Ethical and legal responsibilities in the administration of medications. Application of mathematical concepts, the nursing process, and drug therapy to the administration of fluids and medications.

NURS 3 Medical-Surgical Nursing: Locomotion/Sensory/Integument/Oncology/Immunology

3.5 Units (Degree Applicable, CSU)

Lecture: 30 Lab: 108

Prerequisite: NURS 1B and NURS 2 or NURS 70 for Advanced Placement or instructor approval

Concepts of nursing assessment and intervention with application to clients with integumentary and immunologic disorders as well as dysfunctions of sensation and locomotion. An introduction to oncology nursing is included. The Betty Neuman Model serves as the conceptual framework.

NURS 4 Maternity Nursing

3 Units (Degree Applicable, CSU)

Lecture: 27 Lab: 81

Prerequisite: NURS 3 or NURS 70

The concepts of anatomy, physiology, and fetal growth and development are applied to the care of maternity patients, newborn infants, and their families. Nursing care on a wellness-illness continuum using the family-centered approach is introduced.

NURS 5 Psychiatric Nursing

3 Units (Degree Applicable, CSU)

Lecture: 27 Lab: 81

Prerequisite: NURS 7 and (PSYC 1A or PSYC 1AH)

Concepts of nursing assessment and intervention with application to clients with psychiatric disorders in a mental health setting. The Betty Neuman Model serves as the conceptual framework.

NURS 6 Pediatric Nursing

3 Units (Degree Applicable, CSU)

Lecture: 27 Lab: 81

Prerequisite: NURS 4 and CHLD 10 or CHLD 10H or PSYC 14 or instructor approval

Concepts of nursing assessment, diagnosis, planning, implementation, and evaluation with application to pediatric clients. The Betty Neuman Model serves as the conceptual framework.

NURS 7 Medical-Surgical Nursing: Nutrition/Elimination/ Surgical Asepsis

7 Units (Degree Applicable, CSU)

Lecture: 63 Lab: 189

Prerequisite: NURS 6

Nursing assessment and intervention with application to clients with problems of nutrition, elimination, and the reproductive systems. Clients in pre-, intra-, and post-operative settings are included. The Betty Neuman Model serves as the conceptual framework.

NURS 8 Medical-Surgical Nursing: Circulation and Oxygenation

5 Units (Degree Applicable, CSU)

Lecture: 45 Lab: 135

Prerequisite: NURS 5 or Advanced Placement (NURS 70)

Corequisite: NURS 9

Nursing assessment and intervention with application to clients with cardiovascular and pulmonary problems. The Betty Neuman Model serves as the conceptual framework.

NURS 9 Leadership in Nursing**1 Unit** (Degree Applicable, CSU)

Lecture: 18

Prerequisite: NURS 5 or instructor approval

Corequisite: NURS 8 (May have been taken previously)

Cognitive and leadership skills for first level management positions. Includes exploration and analysis of current trends and issues in nursing.

NURS 10 Medical-Surgical Nursing: Integration/Regulation**4 Units** (Degree Applicable, CSU)

Lecture: 45 Lab: 81

Prerequisite: NURS 8 and NURS 9

Concepts of nursing assessment and intervention with application to clients with neurological and endocrine disorders. The Betty Neuman Model serves as the conceptual framework.

NURS 11 Preceptorship in Nursing**2 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 108

Prerequisite: NURS 10 or Advanced Placement

Students develop cognitive and leadership skills for a pre-licensed preceptee position and prepare for professional responsibilities in employment under the direct supervision of a qualified Registered Nurse. Includes explanation and analysis of current trends and issues in nursing.

NURS 20 Nursing Work Experience Program**1-4 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog. Current satisfactory status in the Nursing Program.

On-the-job experience for nursing students in an approved work setting related to classroom, theory, and clinical instruction. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester.

NURS 70 Role Transition**3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 36 Lab: 54

Prerequisite: Advanced Placement; PT (Psychiatric Technician) or LVN (Licensed Vocational Nurse); ANAT 35 and ANAT 36 or ANAT 10A and ANAT 10B, and MICR 22, or MICR 1, and ENGL 1A or ENGL 1AH, and PSYC 1A or PSYC 1AH, and CHLD 10 or CHLD 10H or PSYC 14.

For the Licensed Vocational Nurse (LVN), Psychiatric Technician (PT) or advanced placement student transitioning into the role of the Registered Nurse (RN). Theory and application of concepts of physical assessment, the relationship of homeostatic mechanisms to fluid and electrolyte balance and imbalance utilizing the Betty Neuman Model as the conceptual framework.

Nutrition & Food (NF)

NF 1 Introduction to Nutrition as a Career**2 Units** (Degree Applicable, CSU)

Lecture: 36

Prerequisite: NF 10 or NF 25 or NF 25H

Careers in dietetics, nutrition, and the food industry. Includes program requirements for nutrition and dietetics majors, career opportunities, professional organizations, ethics, and future directions. Students should be considering a major in nutrition, dietetics, nutrition science, or food science upon transfer. Field trips may be required.

NF 10 Nutrition for Health and Wellness**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Principles of nutrition and their relationship to optimum health and wellness. Emphasizes nutrient needs, food selection, and weight control during the various life stages from prenatal to adult. Student food intake is evaluated several ways including computer diet analysis. This course is intended for non-health science majors.

NF 12 Sports Nutrition**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Principles of nutrition are studied and applied to the athlete and active individuals. Includes macro and micro nutrient intakes, hydration, pre and post event food choices, supplements and ergogenic aids, body composition, weight loss/gain. This course also examines the cultural, sociological, and psychological influences related to nutrition, fitness and athletic achievement.

NF 20 Principles of Food with Laboratory**3 Units** (Degree Applicable, CSU, C-ID #: NUTR 120)

Lecture: 36 Lab: 54

Prerequisite: Eligibility for ENGL 68 and Eligibility for MATH 50

Application of food science principles with emphasis on ingredient function and interaction, food preparation techniques, sensory evaluation standards, food safety and sanitation, and nutrient composition of food.

NF 25 Introduction to Nutrition Science**3 Units** (Degree Applicable, CSU, UC, C-ID #: NUTR 110)

UC Credit Limitation

Lecture: 54

Prerequisite: ENGL 67

Scientific concepts of nutrition related to the function of nutrients and current health issues with emphasis on individual needs. Topics include: functions and sources of nutrients; scientific principles to analyze and evaluate nutrition information; Dietary Guidelines and current nutrition recommendations; digestion, absorption, and metabolism; health, fitness, and disease; and nutrition in the life span. Students will record their diet, analyze its composition, and evaluate its nutrient content.

NF 25H Introduction to Nutrition Science - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: NUTR 110)

UC Credit Limitation

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Scientific concepts of nutrition related to the function of nutrients and current health issues with emphasis on individual needs. Topics include: functions and sources of nutrients; scientific principles to analyze and evaluate nutrition information; Dietary Guidelines and current nutrition recommendations; digestion, absorption, and metabolism; health, fitness, and disease; and nutrition in the life span. Students will record their diet, analyze its composition, and evaluate its nutrient content. An honors course designed to provide an enriched experience. Students may not receive credit for both NF 25 and NF 25H.

NF 28 Cultural and Ethnic Foods**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Regional, ethnic, cultural, religious, historical, and social influences on food patterns and cuisines. Core components include specialized equipment and utensils related to cultures, traditional foods of selected cultures, geographic factors in food availability, and global food issues. Includes in-depth study of a selected culture group.

NF 30 Introduction to Food Science Technologies**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or AMLA 1A or ENGL 1AM and Eligibility for MATH 51

Food chemistry, food processing, and technology and how these affect the color, flavor, texture, aroma and quality of foods. Core components: government regulation of processing and labeling, sensory evaluation, scientific research methods, function of water in foods, pH and acidity, food processing technologies, nutritional labeling, and packaging; dispersion systems, enzyme reactions, food additives, composition and properties of food.

NF 81 Cooking for Health and Wellness**1 Unit** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 9 Lab: 27

Advisory: (NF 10 or NF 12 or NF 25 or NF 25H or knowledge equivalent to an introductory nutrition course) and (NF 20 or CUL 102 or basic food preparation knowledge, skills, and experience)

Principles and techniques of healthful food preparation, investigation of chronic disease prevention through dietary means, and recipe modification. Includes laboratory experience in preparation of healthful foods and meals. Off-campus meetings may be required.

NF 82 Vegetarian Cuisine**1 Unit** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 9 Lab: 27

Advisory: (NF 10 or NF 12 or NF 25 or NF 25H or knowledge equivalent to an introductory nutrition course) and (NF 20 or HRM 54 or CUL 102 or basic food preparation knowledge, skills, and experience)

Principles and techniques of vegetarian food preparation and investigation of issues related to vegetarian eating practices. Includes laboratory experience in preparation of vegetarian foods and meals. Off-campus meetings may be required.

NF 83 Cooking for Athletic and Physical Performance**1 Unit** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 9 Lab: 27

Advisory: NF 10 or NF 12 or N25 or NF 25H or NF 20

Principles and techniques of meal planning and food preparation to support optimal athletic and physical performance. Content includes development of sport-specific meal plans, analysis of nutrient and fluid requirements for athletes, food preparation skills and techniques, and meal planning for athletic activities with special nutritional challenges during training and competition. Includes laboratory experience in preparation of foods and meals to support athletic and physical performance.

NF 91 Work Experience in Nutrition and Dietetics**1-3 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-225

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog.

Provides students with on-the-job experience in an approved worksite which is related to classroom-based learning. A minimum of 75 paid or 60 unpaid clock hours per semester of supervised work in a clinical, community, or long-term nutrition facility is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. Work experience placement is not guaranteed, but assistance is provided by faculty. Instructor approval required.

Oceanography (OCEA)

OCEA 10 Introduction to Oceanography**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Geological, chemical, physical, and biological aspects of the Earth's ocean. Plate tectonics, physiography of ocean basins and continental margins, ocean sediment, atmosphere and ocean circulation, waves and tides, coasts, and marine ecology. The companion Oceanography Lab (OCEA 10L) is recommended for students needing a lab to transfer to a four-year college or university. Field trip(s) are required.

OCEA 10H Introduction to Oceanography - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

An honors course designed to provide an enriched experience. Geological, chemical, physical, and biological aspects of the Earth's ocean. Plate tectonics, physiography of ocean basins and continental margins, ocean sediment, atmosphere and ocean circulation, waves and tides, coasts, and marine ecology. The companion Oceanography Lab (OCEA 10L) is recommended for students needing a lab to transfer to a 4-year college or university. Field trip(s) required. Students may not receive credit for both OCEA 10 and OCEA 10H.

OCEA 10L Introduction to Oceanography Laboratory**1 Unit** (Degree Applicable, CSU, UC)

Lab: 54

Corequisite: OCEA 10 or OCEA 10H (May have been taken previously)

Laboratory applications and problem solving in oceanography, including related aspects of geology, physics, chemistry, and marine biology. A hands-on approach to the marine environment and oceanic processes. Recommended for students needing a lab to transfer to a 4-year college or university.

OCEA 20 The Coastal Ocean**4 Units** (Degree Applicable)

Lecture: 54 Lab: 54

Coastal oceanography, geology, biology, and climate science introduced through a series of modules. Includes basic principles and hands-on experiences demonstrating principles. Laboratory studies and overnight field trips to the coast required.

Paralegal (PLGL)

PLGL 30 Introduction to Paralegal/Legal**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Federal and state legal systems, role of paralegals and relationship of paralegals to attorneys, basic civil litigation, legal writing, investigation of claims, and legal ethics for paralegals.

PLGL 31 Legal Analysis and Writing**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: PLGL 30 (May have been taken previously)

Formerly PLGL 31A

Law library for legal research and references including reading and analyzing cases, statutes, constitutions, secondary sources, and preparation of case briefs.

PLGL 32 Advanced Legal Analysis and Writing**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: PLGL 30 and (PLGL 31 or PLGL 31A)

Formerly PLGL 31B

Research memoranda, trial briefs, appellate briefs, and other legal document preparation. Westlaw and Lexis-Nexis training.

PLGL 33 Civil Procedure**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: PLGL 30 (May have been taken previously)

Pre-trial procedural steps of litigating a cause of action to post-trial remedies. Jurisdiction, venue, parties, default judgments, pleadings, and pretrial law and motion. Discovery, summary judgments, settlements and preparation for and support at trial, including post-trial remedies and enforcement of judgments.

PLGL 34 Law Office Procedures**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: PLGL 30 (may have been taken previously)

Formerly PLGL 35A.

Procedures utilized by a paralegal in a law office. Court systems, preparation and filing of legal papers and court documents, and drafting specialized documents in estate planning, real estate, divorce, unlawful detainer, adoption, corporations, conservatorships, and guardianships.

PLGL 35 Law Office Technology**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: PLGL 30

Advisory: CISC 15

Personal computer usage for special purposes in the law office. Drafting of legal documents, document control, e-filing, e-discovery, preparation of billing, law office and case load management, and trial graphics and preparation.

PLGL 36 Paralegal Internship**1 Unit** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 75

Prerequisite: (PLGL 31 or PLGL 31A) and (PLGL 33 or PLGL 33A) and (PLGL 34 or PLGL 35A)

Corequisite: (PLGL 31B or PLGL 32) and (PLGL 35 or PLGL 35B) and PLGL 37 and PLGL 39 (All may have been taken previously)

On-the-job experience in the paralegal profession, which relates to student's classroom based learning. Placement is not guaranteed but assistance is provided by the paralegal faculty. A minimum of five hours per week of supervised work (minimum 75 paid clock hours or 60 non-paid clock hours per semester) is required.

PLGL 37 Tort Law**3 Units** (Degree Applicable, CSU)

Lecture: 54

Analysis of the law of torts, including intentional torts such as assault, battery, false imprisonment, defamation, privacy, trespass, and nuisance; negligence; and strict liability. Examination of insurance defense issues.

PLGL 38 Employment and Ethical Issues in Paralegalism**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: (PLGL 31 or PLGL 31A) and (PLGL 33 or PLGL 33A) and (PLGL 34 or PLGL 35A)

Corequisite: (PLGL 32 or PLGL 31B) and (PLGL 35 or PLGL 35B) and PLGL 37 and PLGL 39 (All may have been taken previously)

Job search skills including preparation of professional resumes and cover letters, interviewing techniques, networking, application of these skills in beginning the search for paralegal employment, and paralegal and attorney ethics.

PLGL 39 Contract Law**3 Units** (Degree Applicable, CSU)

Lecture: 54

Laws relating to the formation of contracts. Includes study of the Statute of Frauds, third-party rights, liability for breach of contract, remedies, discharge, and the Uniform Commercial Code.

PLGL 41 Property Law**3 Units** (Degree Applicable, CSU)

Lecture: 54

Examination of the law relating to real and personal property. Analysis of the various forms of ownership of real property; easements, covenants, conditions, and licenses; constitutional questions; types of real estate deeds; and land use controls.

PLGL 42 Family Law**3 Units** (Degree Applicable, CSU)

Lecture: 54

Laws relating to marriage, dissolution, nullity, and legal separation. Includes topics of community property, child custody, child support, spousal support, and prenuptial and antenuptial agreements.

PLGL 43 Wills and Trusts**3 Units** (Degree Applicable, CSU)

Lecture: 54

Legal principles of the laws of wills and trusts, organization, and jurisdiction of the California Probate Courts, estate planning and estate taxes.

PLGL 44 Bankruptcy Law**3 Units** (Degree Applicable, CSU)

Lecture: 54

Creation, scope, and administrative function of federal bankruptcy proceedings, including Chapter 7, 11, and 13 cases.

PLGL 48 Criminal Law and Procedures**3 Units** (Degree Applicable, CSU)

Lecture: 54

General principles of criminal law and procedure, elements of crimes against person and property, parties to a crime, defenses to crimes. Analysis of procedural law relating to arrest, search and seizure, rights to counsel and a jury, evidentiary issues, sentencing, and appeal.

PLGL 49 Evidence Law**3 Units** (Degree Applicable, CSU)

Lecture: 54

Evidence law in civil and criminal cases: principles of relevance and competence of evidence, hearsay and character evidence rules, evidentiary privileges, use and authentication of writings. Use of evidence at trial, burdens of proof and presumptions, constitutional issues.

PLGL 100 The Litigation Practice and eDiscovery**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Role of eDiscovery in modern day litigation, court rules and procedure, overview of the Electronic Discovery Reference Model (EDRM) process, data privacy laws, and related ethical issues.

PLGL 101 Project Management Principles in eDiscovery**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Project management, review of the lifecycle of litigation, and application of project management principles to eDiscovery.

PLGL 102 Litigation Support Technology from Data Collection to Trial**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Role of the litigation lifecycle from data collection, document review, and production to use at trial. Role of technology and litigation support department and teams in the acquisition of data and eDiscovery processing.

PLGL 103 Litigation Support Applications**3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Advisory: PLGL 102

Use of litigation support software and technology in the forensic data collection process and eDiscovery. Practical training in contemporary document review software.

Philosophy (PHIL)

PHIL 3 Introduction to Logic**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHIL 110)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

The use of arguments both in their occurrence in ordinary discourse and in academic disciplines within the humanities, social sciences, and natural sciences with particular focus on deductive logic. Deductive and inductive reasoning techniques will be critically examined to establish their logical correctness or identify their fallaciousness.

PHIL 3H Introduction to Logic - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHIL 110)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

The use of arguments in ordinary discourse and in academic disciplines within the humanities, social sciences, and natural sciences with particular focus on deductive logic. Deductive and inductive reasoning techniques will be critically examined to establish their logical correctness or identify their fallaciousness. An honors course is designed to provide an enriched experience. Students may not receive credit for both PHIL 3 and PHIL 3H.

PHIL 5 Introduction to Philosophy**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHIL 100)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Philosophical ideas concerning knowledge, reality, and values. Topics will include the sources and limits of knowledge and the nature of reality. Other topics may include the nature of self, truth, ethics, religion, science, language, beauty and art, political theory, and mind.

PHIL 5H Introduction to Philosophy - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHIL 100)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Philosophical ideas concerning knowledge, reality, and values. Topics will include the sources and limits of knowledge and the nature of reality. Other topics may include the nature of self, truth, ethics, religion, science, language, beauty and art, political theory, and mind. An honors course is designed to provide an enriched experience. Students may not receive credit for both PHIL 5 and PHIL 5H.

PHIL 8 Critical Thinking**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Effective use of critical thinking in contemporary living, including recognizing faulty arguments, the usefulness of validity and truth, and identifying and avoiding common fallacies in thinking.

PHIL 9 Critical Thinking and Writing**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Function and use of formal and informal logic, argument, critical evaluation, and language in written composition.

PHIL 9H Critical Thinking and Writing - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A and Acceptance into the Honors Program

Function and use of formal and informal logic, argument, critical evaluation, and language in written composition. An honors course is designed to provide an enriched experience. Students may not receive credit for both PHIL 9 and PHIL 9H.

PHIL 12 Introduction to Ethics**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHIL 120)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Concepts of morality and values, representative ethical theories, and applications to moral problems.

PHIL 12H Introduction to Ethics - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHIL 120)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Concepts of morality and values, representative ethical theories, and applications to moral problems. An honors course is designed to provide an enriched experience. Students may not receive credit for both PHIL 12 and PHIL 12H.

PHIL 15 Major World Religions**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

History, doctrines, and practices of the world's major and enduring religions. Religion is approached as the expression of one's ultimate concern as a means of understanding the historic and ideological foundations and aspirations of the peoples of the world. The following (or more) religions are presented and examined both appreciatively and critically: Hinduism, Buddhism, Jainism, Sikhism, Taoism, Confucianism, Judaism, Christianity, Islam. Off-campus assignments are required.

PHIL 15H Major World Religions - Honors**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

History, doctrines, and practices of the world's major and enduring religions. Religion is approached as the expression of one's ultimate concern as a means of understanding the historic and ideological foundations and aspirations of the peoples of the world. The following (or more) religions are presented and examined both appreciatively and critically: Hinduism, Buddhism, Jainism, Sikhism, Taoism, Confucianism, Judaism, Christianity, Islam. Off-campus assignments are required. An honors course is designed to provide an enriched experience. Students may not receive credit for both PHIL 15 and PHIL 15H.

PHIL 20A Introduction to Ancient Philosophy**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHIL 130)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Major philosophers and philosophical ideas from pre-Socratic to Medieval Period. Emphasis on the development of Greek philosophy from the pre-Socratics through Aristotle and may also include Hellenistic, Roman, Medieval, and non-Western thinkers.

PHIL 20AH Introduction to Ancient Philosophy - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHIL 130)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Major philosophers and philosophical ideas from pre-Socratic to Medieval Period. Emphasis on the development of Greek philosophy from the pre-Socratics through Aristotle and may also include Hellenistic, Roman, Medieval, and non-Western thinkers. An honors course is designed to provide an enriched experience. Students may not receive credit for both PHIL 20A and PHIL 20AH.

PHIL 20B Introduction to Modern Philosophy**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHIL 140)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Major philosophers and philosophical ideas from the Renaissance to the present, with an emphasis on Western philosophy.

PHIL 20BH Introduction to Modern Philosophy - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHIL 140)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Major philosophers and philosophical ideas from the Renaissance to the present, with an emphasis on Western philosophy. An honors course designed to provide an enriched experience. Students may not receive credit for both PHIL 20B and PHIL 20BH.

PHIL 99 Special Projects Philosophy**2 Units** (Degree Applicable, CSU)

Lecture: 36

Offers students recognition for their academic interests in philosophy and the opportunity to explore the discipline of philosophy to greater depth. The content of the course and the methods of study vary from semester to semester and depend on the particular project under consideration.

Photography (PHOT)

PHOT 1A Laboratory Studies: Beginning Black and White Photography**1 Unit** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 54

Corequisite: PHOT 10

Extended black-and-white laboratory experiences to improve skills through further instruction and practice, as well as pursue more advanced projects and experiments.

PHOT 1B Laboratory Studies: Advanced Black and White Photography**1 Unit** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 54

Corequisite: PHOT 11 or PHOT 11A or PHOT 12 or PHOT 17

Extended advanced black and white laboratory experiences. Using medium and large format cameras to improve skills and pursue more advanced photographic printing, processing, and enlarging techniques.

PHOT 1C Laboratory Studies: Studio Photography**1 Unit** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 54

Corequisite: PHOT 11 or PHOT 11A or PHOT 11B or PHOT 14 or PHOT 16 or PHOT 17 or PHOT 18 or PHOT 20 or PHOT 26 or PHOT 28 or PHOT 30

Extended studio photography experiences to supplement those available through the regular program. Provides students the opportunity to improve skills through further instruction and practice, as well as pursue more advanced projects and experiments.

PHOT 1D Laboratory Studies: Computer Applications in Photography**1 Unit** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 54

Corequisite: PHOT 9 or PHOT 11B or PHOT 19 or PHOT 24 or PHOT 26

Extended computer laboratory experiences to supplement those available in the regular program. Provides students the opportunity to improve skills through further instruction and practice, as well as pursue more advanced projects and experiments.

PHOT 5 Digital Cameras and Composition**1 Unit** (Degree Applicable)

Lecture: 18

Use of digital cameras and image editing software to create well-composed, quality photographs for use in Graphic Design and other applications. Camera required after first class meeting. Field trip required.

PHOT 9 Digital Image Editing for Photographers**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Software and techniques including digital workflow practices, digital image editing, enhancing and retouching methods commonly used in photography.

PHOT 10 Basic Digital and Film Photography**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 54

The basic mechanical, optical, and chemical principles of photography, including traditional darkroom techniques and digital image systems. Laboratory experience involves problems related to camera and image editing and output techniques.

PHOT 11A Intermediate Photography**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 10

Formerly PHOT 11

Professional photography techniques and studio lighting. Includes studio and field assignments related to problems encountered while professionally photographing people and products. Topics include medium and large format film, continuous and strobe lighting.

PHOT 11B Digital Capture Workflow**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 10

Advisory: PHOT 11A

Formerly PHOT 25

Advanced application of digital capture and workflow using digital single-lens reflex (DSLR) medium and large format digital camera systems and software to produce high-quality digital photographs. Field trips may be required.

PHOT 12 Photographic Alternatives**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 54

Prerequisite: PHOT 10

Advisory: PHOT 11 or PHOT 11A

Alternative photographic processes. Instant films: lifts and transfers, specialized lighting, stain toning, emulsion coating, and scanography will be applied to produce images not considered common to making photographic prints.

PHOT 14 Commercial Lighting**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: PHOT 10

Advisory: PHOT 11 or PHOT 11A or PHOT 11B

Studio and location lighting techniques for commercial photographic applications. Field trips may be required.

PHOT 15 History of Photography**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Survey of the history of photography from early 1800s to the present, introducing various concepts of photo representation and their impact on society. Field trip required.

PHOT 16 Fashion and Editorial Portrait Photography**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 11 or PHOT 11A

Advisory: PHOT 11B

Fashion and editorial portrait photography with studio and location lighting techniques, creative concepts, styling, and working with models.

PHOT 17 Photocommunication**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 10

Enhancing visual communication of commercial, documentary, and fine art imagery. Includes using camera tools (lens, aperture, shutter), lighting, color, and design to create images that clearly communicate messages.

PHOT 18 Portraiture and Wedding Photography**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 10

Advisory: (PHOT 11 or PHOT 11A) and PHOT 11B

Professional studio and field techniques for portrait and wedding photography. Off-campus assignment or field trips may be required.

PHOT 19 Digital Color Management**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 9 and PHOT 10

Digital color management software and hardware skills, techniques, and digital workflow practices commonly used in photography.

PHOT 20 Color Photography**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 10

Color principles as they relate to commercial and artistic styles of photography, including lighting, color theory, color management, exaggerated and unique color schemes, and applied color psychology principles.

PHOT 21 Exploring Color Photography**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 20

Use of color principles as they relate to commercial and artistic styles and innovative use of color applications. Includes lighting and unusual techniques, exaggerated and unique color schemes, light-painting, lighting effects, high dynamic range (HDR) effects, and oversize output.

PHOT 24 Advanced Digital Image Editing for Photographers**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 9 and PHOT 10

Advanced digital image editing, archiving, and retouching for photographers.

PHOT 26 Video for Photographers**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: (PHOT 11 or PHOT 11A) OR PHOT 11B

Teaches advanced photography students how to create moving images for commercial applications using Digital Single-Lens Reflex (DSLR) cameras. Using principles of framing and composition, storyboarding, production, camera, sound, and editing techniques, students will produce a commercial advertising reel representing their work. Field trips may be required.

PHOT 28 Photography Portfolio Development**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: (PHOT 11 or PHOT 11A) and PHOT 11B and PHOT 20 and (PHOT 12 or PHOT 16 or PHOT 18)

Advisory: PHOT 14

Development of a photography portfolio for use in job application or gallery exhibition purposes. Field trips may be required.

PHOT 29 Studio Business Practices for Commercial Artists**3 Units** (Degree Applicable)

Lecture: 54

Studio business practices for commercial artists. Small business operations, pricing services based on the licensing business model, copyright basics, project production, and estimating and invoicing. Field trips may be required.

PHOT 30 Advertising Photography**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: (PHOT 11 or PHOT 11A) OR PHOT 11B

Advisory: PHOT 14

Overview of the commercial and advertising photographic industry including specialties and styles. Field trips may be required.

PHOT 50 Drone Basic Still and Motion Camera Operator**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 10

Basic drone camera operating and flight maneuvers used by photographers and cinematographers to capture still and motion footage through drone technology. Field trips are required.

PHOT 51 Drone Advanced Still and Motion Camera Operator**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 50

Advanced flight operations with advanced ground station control, large multi-rotor platforms, camera and gimbal assembly, digital single lens reflex (DSLR) digital video camera systems, tandem flight controllers, and pre- and post-production skills for commercial productions. Field trips required.

PHOT 55 Drone Photogrammetry and Mapping**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 10

Photogrammetry and orthomosaic photography for mapping and 3 dimensional (3D) modeling providing a comprehensive introduction to hardware, software, and technique using Unmanned Aerial Systems (UAS) drones for private and commercial use.

PHOT 56 Drone Inspection and Thermal Imaging**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: PHOT 10

Basic drone flight operations using thermal and multispectral high resolution imaging for industrial and public safety applications. Field trips are required.

PHOT 58 Photography & Video Social Media Marketing**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Basic photography, video, lighting, and image editing techniques for social media platforms, including live streaming to create and manage image content.

PHOT 98 Work Experience in Photography**1-3 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-225

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Advisory: PHOT 10 and (PHOT 11 or PHOT 11A) and PHOT 20

Provides students with on-the-job experience in professional photography and related areas in an approved work site to strengthen and broaden skills in the workplace. A minimum of 75 paid or 60 non-paid clock hours per semester is required for each unit of credit. It is recommended that the hours per week are equally distributed throughout the semester.

PHOT 99 Special Projects in Photography**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: PHOT 10 and approval by instructor

Offers students the opportunity to explore the discipline in greater depth. Instructor authorization needed prior to enrollment. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Students repeating this course will make individual contracts of a more advanced nature with the instructor to ensure that proficiencies are enhanced.

Physical Science (PHSC)

PHSC 3 Energy Science**4 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Prerequisite: Eligibility for MATH 100 and Eligibility for ENGL 68

Physical principles underlying the various forms of energy production, the role of energy in modern society, and an understanding of the wider environmental and societal impacts of different energy production technology choices. Course topics will include: fossils fuels, nuclear energy, hydro, wind, solar energy, biofuels, and energy distribution and storage. Field trips required.

PHSC 9 Physical Science**4 Units** (Degree Applicable, CSU, UC, C-ID #: PHYS 140)

Lecture: 54 Lab: 54

Prerequisite: Eligibility for MATH 71 and Eligibility for ENGL 68

Designed for the non-science major. A primarily non-mathematical, conceptual approach to basic principles of physics and chemistry and their practical applications. Critical thinking is stressed in such topics as motion, energy, heat, electricity and magnetism, sound and light, radioactivity, atomic theory, chemical reactions, and modern physics. Includes lab.

Physics (PHYS)

PHYS 1 Physics**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 54

Advisory: Completion of Math 71 or the equivalent

Discovery of concepts of physics through guided activities in a workshop style. Topics include light and geometrical optics, electricity and DC circuits, magnetism, linear and rotational motion, forces, momentum, energy, harmonic motion, waves, and nuclear and atomic physics.

PHYS 2AG General Physics**4 Units** (Degree Applicable, CSU, UC, C-ID #: PHYS 105)

UC Credit Limitation

Lecture: 54 Lab: 54

Prerequisite: MATH 150

The basic principles of physics. Includes theory, applications, laboratory, and problem solving in mechanics, heat, fluids, and wave motion.

PHYS 2BG General Physics**4 Units** (Degree Applicable, CSU, UC, C-ID #: PHYS 110)

UC Credit Limitation

Lecture: 54 Lab: 54

Prerequisite: PHYS 2AG or equivalent

Continuation of Physics 2AG. Includes electricity and magnetism, including direct current (DC) and alternating current (AC) circuits, geometrical and physical optics, relativity, quantum physics, atomic and nuclear physics. Laboratory includes use of computers to analyze data and simulate electric circuits.

PHYS 4A Engineering Physics**5 Units** (Degree Applicable, CSU, UC, C-ID #: PHYS 205)

UC Credit Limitation

Lecture: 72 Lab: 54

Prerequisite: PHYS 2AG

Corequisite: MATH 181 (May have been taken previously)

Calculus-based course. Studies linear and rotational motion, forces, momentum, work, energy, oscillations, gravitation, and waves. Includes laboratory experience with significant use of computers for data acquisition and analysis.

PHYS 4B Engineering Physics**5 Units** (Degree Applicable, CSU, UC, C-ID #: PHYS 210)

UC Credit Limitation

Lecture: 72 Lab: 54

Prerequisite: PHYS 4A

Corequisite: MATH 280 (May have been taken previously)

Calculus-based course covering heat, kinetic theory of gases, thermodynamics, electromagnetism including direct current (DC) and alternating current (AC) circuits, and Maxwell's equations. Laboratory includes significant use of computers for data acquisition, analysis, and simulation. Continuation of Physics 4A.

PHYS 4C Engineering Physics**5 Units** (Degree Applicable, CSU, UC, C-ID #: PHYS 215)

UC Credit Limitation

Lecture: 72 Lab: 54

Prerequisite: PHYS 4B

Calculus-based course covering fluids, sound, electromagnetic waves, relativity, and modern physics. Continuation of Physics 4A and 4B.

PHYS 6A General Physics with Calculus**5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 72 Lab: 54

Prerequisite: MATH 180

First semester of a two-semester calculus-based physics course for life science majors. Includes statics and dynamics of particles and rigid bodies, Newton's laws of motion, conservation principles, rotational motion, simple harmonic motion, wave motion, heat and sound, introduction to hydrostatics and hydrodynamics with an emphasis on life science topics.

PHYS 6B General Physics with Calculus**5 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 71 Lab: 48

Prerequisite: PHYS 6A

Second semester of the calculus based physics course for life science majors. Topics include electricity, magnetism, optics, relativity, atomic and nuclear physics with an emphasis on life science applications.

PHYS 99 Special Projects in Physics**2 Units** (Degree Applicable, CSU)

Lecture: 36

Corequisite: PHYS 1 or PHYS 2AG or PHYS 4A (May have been taken previously)

In order to offer selected students recognition for their academic interests and ability, and the opportunity to explore their disciplines to greater depth, the various departments from time to time offer Special Projects courses. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Student must have instructor's authorization before enrolling in this class. Field trips may be required as part of this course.

Political Science (POLI)

POLI 1 Introduction to American Government and Politics**3 Units** (Degree Applicable, CSU, UC, C-ID #: POLS 110)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AM or AMLA 1A

Principles and problems of government with particular emphasis on national government in the United States. This course satisfies the requirement for a course in the Constitution of the United States and the principles of State and local government as required by Title 5 of the California Administrative Code.

POLI 1H Introduction to American Government and Politics - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: POLS 110)

Lecture: 54

Prerequisite: Principles and problems of government with particular emphasis on national government in the United States. This course satisfies the requirement for a course in the Constitution of the United States and the principles of State and local government as required by Title 5 of the California Administrative Code. An honors course designed to provide an enriched experience. Students may not receive credit for both POLI 1 and POLI 1H.

POLI 2 Comparative Politics**3 Units** (Degree Applicable, CSU, UC, C-ID #: POLS 130)

Lecture: 54

Prerequisite: POLI 1 or POLI 1H and Eligibility for ENGL 1A

Comparative analysis of different political systems, including political institutions, processes, policies, histories and the environments in which they occur.

POLI 5 Political Theory I - Ancient to Contemporary**3 Units** (Degree Applicable, CSU, UC, C-ID #: POLS 120)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Ancient to contemporary theories of political institutions, social change, and political philosophy.

POLI 7 Political Theory II - Early Modern to Contemporary**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AM or AMLA 1A

Advisory: POLI 5

Major political philosophers and theories from the late nineteenth century to the present. Prepares students majoring in political science for further study in the discipline by providing adequate background preparation in political philosophy.

POLI 9 International Relations**3 Units** (Degree Applicable, CSU, UC, C-ID #: POLS 140)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Historical and political background of world politics and core international relations theories and concepts. Attention is given to the historical development of world politics, to fundamental theories and concepts in International Relations, and to an examination of international, national, sub-national, and transnational actors and their institutions, interactions, and processes.

POLI 10 Environmental Politics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Advisory: Eligibility for ENGL 1A and (POLI 1 or POLI 1H)

Global environmental problems including an analysis of political theories and comparative policies in the emerging field of environmental politics.

POLI 25 Latino Politics in the United States**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Latino (the group identified as Hispanic by the U.S. Census) political thought and action and how it is influenced and shaped by American institutions such as national, state, and local governments, federal and state constitutions, and United States Supreme Court decisions. Students may not earn credit for both POLI 25 and LCAS 25.

POLI 35 African American/Black Politics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Methods and strategies employed by African American and Black American populations in their quest to gain equal access and participation in American institutions. Students may not earn credit for both POLI 35 and AABS 35.

Psychology (PSYC)

PSYC 1A Introduction to Psychology**3 Units** (Degree Applicable, CSU, UC, C-ID #: PSY 110)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Advisory: Eligibility for READ 100 or (completion of AMLA 33R or AMLA 91)

Psychological approaches to the study of behavior and mental processes. Topics include the history of psychology, psychological research methods, biological psychology, sensation and perception, consciousness, learning, memory, cognition, intelligence, language, lifespan development, motivation and emotion, applied psychology (e.g., gender and sexuality and stress and health), social psychology, personality, psychological disorders, and psychological treatment.

PSYC 1AH Introduction to Psychology - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: PSY 110)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Advisory: Eligibility for READ 100 or (completion of AMLA 33R or AMLA 91)

Psychological approaches to the study of behavior and mental processes. Topics include the history of psychology, psychological research methods, biological psychology, sensation and perception, consciousness, learning, memory, cognition, intelligence, language, lifespan development, motivation and emotion, applied psychology (e.g., gender and sexuality and stress and health), social psychology, personality, psychological disorders, and psychological treatment. An honors course designed to provide an enriched experience. Students may not receive credit for both PSYC 1A and PSYC 1AH.

PSYC 1B Biological Psychology**3 Units** (Degree Applicable, CSU, UC, C-ID #: PSY 150)

Lecture: 54

Prerequisite: PSYC 1A or PSYC 1AH

Advisory: Eligibility for ENGL 1A

Biological mechanisms of behavior. Includes evolution and genetics with emphasis on neuronal and synaptic transmission. Develops a conceptual framework and awareness of the scientific method. Stresses specific methods of investigation for the discipline.

PSYC 3 Introduction to Research Methods in Psychology**4 Units** (Degree Applicable, CSU, UC, C-ID #: PSY 205B)

Lecture: 54 Lab: 54

Prerequisite: PSYC 1A or PSYC 1AH and (PSYC 10 or MATH 110 or MATH 110H) and (ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A)

Research methods in psychology. Includes systematic observation, research design, survey development, execution and analysis of experimental and other research methods, and American Psychological Association (APA) publication style writing.

PSYC 3H Introduction to Research Methods in Psychology - Honors**4 Units** (Degree Applicable, CSU, UC, C-ID #: PSY 205B)

Lecture: 54 Lab: 54

Prerequisite: PSYC 1A or PSYC 1AH and (PSYC 10 or MATH 110 or MATH 110H) and (ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A and acceptance into the Honors Program)

Research methods in psychology. Includes systematic observation, research design, survey development, execution and analysis of experimental and other research methods, and American Psychological Association (APA) publication writing style. An honors course designed to provide an enriched experience. Students may not receive credit for both PSYC 3 and PSYC 3H.

PSYC 5 Psychology of Reasoning and Problem Solving**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

The components involved in reasoning and problem solving from a psychological perspective. These components assess many facets of the critical thinking process, including perception, learning, memory, thought and language, reasoning, argument, hypothesis testing, likelihood and uncertainty, decision making (logical fallacies, heuristics, cognitive distortions), problem solving, creativity, and behavior modification. This course also contains a practical application element involving systematic introspection and analysis of one's cognitive processes.

PSYC 10 Statistics for the Behavioral Sciences**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54 Lab: 54

Prerequisite: MATH 71 or MATH 71X or MATH 71B or (eligibility for MATH 110)

Advisory: PSYC 1A and SOC 1

Statistical principles of the behavioral sciences emphasizing research design, scales of measurement, distributions, graphing, descriptive statistics, measures of central tendency, measures of variability, z-test, independent and dependent t-tests, inferential statistics, confidence intervals, linear correlations and regression, and analysis of variance, including multivariate factorial designs and chi square analyses. Statistical analyses through the use of computerized statistical packages are interpreted through lab experience.

PSYC 14 Developmental Psychology**3 Units** (Degree Applicable, CSU, UC, C-ID #: PSY 180)

UC Credit Limitation

Lecture: 54

Advisory: ENGL 1A or ENGL 1AM or AMLA 1A

Psychological principles of human development across the lifespan, from birth to death. This course does not fulfill the Title 22 requirements for Child Development majors.

PSYC 14H Developmental Psychology - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: PSY 180)

Lecture: 54

Prerequisite: Acceptance into the Honors program

Advisory: ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Psychological principles of human development across the lifespan, from birth to death. This course does not fulfill the Title 22 requirements for Child Development majors. An honors course designed to provide an enriched experience. Students may not receive credit for both PSYC 14 and PSYC 14H.

PSYC 15 Introduction to Child Psychology**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Examines the psychology of the child from conception through adolescence. Emphasis on physical, cognitive, and psychosocial development as it pertains to the child's psychological experiences. Includes psychological disorders and therapies specific to children and adolescents. This course does not fulfill Title 22 requirement for child development majors.

PSYC 17 Introduction to Human Services**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: PSYC 1A or PSYC 1AH or SOC 1 or SOC 1H

History, philosophy and development of human services in America. Explores careers in human services, self-exploration in matching personal and professional interests to entry levels of human services employment.

PSYC 19 Abnormal Psychology**3 Units** (Degree Applicable, CSU, UC, C-ID #: PSY 120)

Lecture: 54

Prerequisite: PSYC 1A or PSYC 1AH

Psychological, biological, and sociocultural approaches to understanding abnormal behavior, including DSM-5 psychiatric disorders such as anxiety, depressive, and psychotic disorders. The exploration of psychological principles underlying psychopathology.

PSYC 20 Introduction to Social Psychology**3 Units** (Degree Applicable, CSU, UC, C-ID #: PSY 170)

Lecture: 54

Prerequisite: ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Influence of social factors on human thought, feelings and behavior. Topics include: aggression, prejudice and stereotypes, interpersonal attraction, attitudes and attitude change, conformity and obedience, group dynamics, gender roles, cultural norms, person perception, and social cognition and perception.

PSYC 25 The Psychology of Women**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Advisory: PSYC 1A (taken prior or concurrently) and ENGL 1A (taken prior or concurrently)

A biopsychosocial analysis of the role of gender in the experience of women. Psychological, sociocultural and biological factors, and current scholarly research relating to women's gender identity, development, socialization, motivation, mental health, and relationships.

PSYC 26 Psychology of Sexuality**3 Units** (Degree Applicable, CSU, UC, C-ID #: PSY 130)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Explores the factors involved in establishing and maintaining intimate sexual relationships. The focus of the course is on the findings of social psychologists concerning sexuality and love relationships in our culture.

PSYC 33 Psychology for Effective Living**3 Units** (Degree Applicable, CSU, C-ID #: PSY 115)

Lecture: 54

Emphasis on comprehension and application of psychological principles to daily life and personal growth. Topics include interpersonal relationships, sexuality, self and social influence, positive psychology, career and work, marriage and intimate relationships, parenting, aging, physical health, and other circumstances encountered in the life cycle. Considers personality development, psychological disorders, and therapeutic approaches, while emphasizing the importance of multicultural sensitivity and scientific research in the aforementioned topics.

PSYC 99 Special Projects in Psychology**1-3 Units** (Degree Applicable, CSU)

Lecture: 18-54

Prerequisite: PSYC 1A or PSYC 1AH and Eligibility for ENGL 1A or ENGL 1AH

Advisory: READ 100

Offers selected students recognition for their academic interest in psychology and the opportunity to explore the discipline of psychology in greater depth. The content of the course and the methods of study vary from semester to semester and depend on the particular project under consideration.

Public Health (PUBH)

PUBH 20 History of Western Medicine**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Examines the contributions made to the art and science of medicine from Hippocrates to the present day. Emphasis is placed on early Greek and Islamic contributions in early history, medicine in the Renaissance, the scientific revolution, and the growth and development of medical education and medicine as a profession.

PUBH 22 Introduction to Epidemiology**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: PUBH 24 and (MATH 110 or MATH 110H)

Epidemiology and biostatistics as applied to public health problems. Examines the distribution and determinants of disease, health conditions, and events as they occur in populations. Topics covered include measures of disease frequency, study design, measures of association, causality, epidemiologic investigation, and application of study results in shaping policy effecting health services, screening, genetics, and public and environmental health.

PUBH 24 Introduction to Public Health**3 Units** (Degree Applicable, CSU, UC, C-ID #: PHS 101)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Organization and function of public health including the philosophy, purpose, history, organization, function, tools, activities, and outcomes of public health practice at the global, national, state, and community levels. Instruction prepares students to identify and assess important national and international problems and ethical issues facing public health today.

PUBH 26 Introduction to Global Public Health**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: (PUBH 24 or BIOL 24) and (MATH 110 or MATH 110H or MATH 110S or PSYC 10 or SOC 23 or BUSC 17)

Advisory: Eligibility for READ 100 or (AMLA 33R or AMLA 91)

Health and disease in terms of global processes and socioeconomic influences, including poverty, migration, urbanization, environmental change, culture and behavior, and economic interdependence. Major communicable and noncommunicable diseases will be considered as well as health inequities and the impact of global health on public health policy.

PUBH 27 Public Health and the Environment**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: PUBH 24

Environmental health is the field that investigates the biological, chemical, and physical influences on human health. The course focuses on issues of environmental exposures, resulting health effects, and appropriate controls for these hazards. Emphasis is placed on food safety, pests and pesticides, air quality, global climate change, water quality, wastewater, solid and hazardous wastes, industrial hygiene, and radiation.

PUBH 28 Public Health and Bioethics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: PUBH 24

Ethical theories and current ethical issues in public health and health policy including resource allocation, the use of summary measures of health, the right to health care, patient rights and consent, and conflicts between autonomy and health promotion efforts.

PUBH 29 Public Health Microbiology**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: PUBH 24 and (MICR 1 or MICR 22)

Diversity and properties of microbial agents that impact public health. Environmental factors that affect the occurrence, distribution, and impact of these agents on the community and the world, such as water quality and food production.

PUBH 30 Principles of Public Health and Infectious Disease Epidemiology**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: (MICR 1 or MICR 22) and (PUBH 24) and (MATH 110 or MATH 110H or PSYC 10 or SOC 23)

Advisory: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Major concepts and principles in public health and epidemiology with an emphasis on infectious diseases. The role of epidemiology in the formulation of public health policy and its impact on clinical decisions through evidence-based medicine is explored.

PUBH 99 Special Projects in Public Health**2 Units** (Degree Applicable, CSU)

Prerequisite: Instructor permission.

Offers selected students recognition for their academic interest in public health and the opportunity to explore the discipline of public health in greater depth through the development of research proposal or project in the discipline. The content of the course and methods of study vary from semester to semester and depend upon the particular project under consideration. Instructor authorization is required to enroll in this course.

Radio & Television (R-TV)

R-TV 01 Introduction to Electronic Media**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

History, structure, function, economics, content, and evolution of radio, television, film, the Internet, and new media. Includes the social, political, regulatory, ethical, and occupational impact of the electronic media.

R-TV 02 On-Air Personality Development**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: R-TV 11A (may have been taken previously)

Developing personality, style, and voice for work along with an understanding of the business for all areas of the industry, including disc jockey, newscaster, sportscaster, voice-over artist, and voice-tracking. Developing content for on-air shows. Review the basics of the production studio and its components.

R-TV 03 Sportscasting and Reporting**1.5 Units** (Degree Applicable)

Lecture: 27

Corequisite: R-TV 11A (May have been taken previously)

Sportscasting, interviewing, reporting, and play-by-play for radio and television. Legalities and ethics of covering sports and techniques for working with professional sports teams and equipment technicians. Practical experience will be provided through coverage of Mt. SAC's athletic teams.

R-TV 04 Broadcast News Field Reporting**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: R-TV 01 and R-TV 05 and R-TV 11A (May have been taken previously)

Techniques used to research and cover a variety of news events including working with police and other emergency personnel, interviewing techniques and story developments. Emphasis will be placed on legal and ethical issues concerning news coverage.

R-TV 05 Radio-TV Newswriting**3 Units** (Degree Applicable, CSU)

Lecture: 54

Writing, editing, reporting radio and TV news, and utilizing the Associated Press Wire Service. Emphasis on factual and concise content and the ability to work under deadline. Students provide newscasts for the campus radio stations.

R-TV 06 Broadcast Traffic Reporting**1.5 Units** (Degree Applicable)

Lecture: 27

Advisory: R-TV 01

Preparation and delivery of traffic reports for radio and television, including anchored and airborne reports. Includes history and development of techniques involved in radio and television traffic reporting through lecture and hands-on practice. Interpretation and reading of police codes as they relate to traffic, accidents, and emergency situations including broadcast rules and liabilities as they apply to traffic reporting.

R-TV 09 Broadcast Sales and Promotion**3 Units** (Degree Applicable)

Lecture: 54

Strategies and legalities for creating commercial campaigns for radio and television including demographic targeting, marketing strategies, and copywriting. Includes creation of contests and promotional campaigns.

R-TV 10 Radio Programming and Producer Techniques**3 Units** (Degree Applicable)

Lecture: 54

Programming, management, and producing techniques for various radio station formats such as music, news, talk, and sports.

R-TV 11A Beginning Radio Production**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: R-TV 01

Operation of standard radio production equipment for both tape-based and digital production utilizing various audio editing software technologies. Production skills concentrate on the use of voice, music, and sound effects as applied to a variety of broadcasting elements.

R-TV 11B Advanced Radio Production**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: R-TV 11A

Techniques in non-linear recording, editing and mixing utilizing various audio editing software technologies as these skills apply to a variety of applications in the broadcasting industry. Develop mastery of the concepts and skills required to work in a professional radio studio environment.

R-TV 13 Interview, Talk, and Community Affairs Programming**3 Units** (Degree Applicable)

Lecture: 54

Creation of programming for talk shows, interview, and community affairs programming. Includes research and interview techniques, guest selection, vetting, and legal considerations.

R-TV 14 Media Aesthetics**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Media aesthetics for film, television, and other filmed entertainment. Examines the broad subject areas of form, content, aesthetics, meaning, cinematic history, and culture. Explores the diverse possibilities presented by the cinematic art form through an examination of a wide variety of productions, national cinemas, and film movements. Topics include modes of production, narrative and non-narrative forms, visual design, editing, sound, genre, ideology, and critical analysis. Stresses critical, theoretical and practical analysis. Material is presented from a producer and artist point of view and is intended for those pursuing a career in film, television, and other electronic visual media.

R-TV 15 Broadcast Law and Business Practices**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: R-TV 01 (May have been taken previously)

The broadcasting industry as a business. Legal and Federal Communications Commission (FCC) regulatory issues in broadcasting, new and emerging media, as well as unions, contracts, negotiations, residuals, and mergers.

R-TV 17 Introduction to Podcasting**3 Units** (Degree Applicable)

Lecture: 54

Introduction to podcasting, including programming, announcing, promotions, and legal and copyright issues through the creation of an actual podcast.

R-TV 18 Introduction to Screenwriting**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Screenwriting for television and motion picture production. Includes characterization, visualization, structure, and form.

R-TV 19A Beginning Video Production**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36 Lab: 54

Advisory: R-TV 14

Video production focused on in-studio and on-location single camera film-style production techniques. Introduction to the theory and best practices in the disciplines of digital cinematography, lighting for film and television, dialogue audio recording, in addition to mixing dialogue against sound effects and music. Directing narrative content. Editorial skills development using non-linear editing applications. Production of short-form narrative style content.

R-TV 19B Advanced Video Production**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: R-TV 19A

Video production techniques emphasizing narrative storytelling, film-style aesthetics, and production.

R-TV 20 Beginning TV Studio Production**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Studio production for TV news, sitcom, talk shows, and other live forms. Training in camera, audio, lighting, switching, signal flow, directing, graphics, editing, and program export.

R-TV 21 Remote Multicamera Production**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: R-TV 19A

Remote video production using both multi-camera and single-camera techniques. Instruction in remote production truck setup, shooting live sports, and other events.

R-TV 22 Editing for Film and Television**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Prerequisite: R-TV 19A

Focus on the workflow, principles, and aesthetics in editing content. This includes documentaries, commercials, music videos, episodic television, and feature films. In-depth training utilizing standard film and television industry non-linear editing software and backend shared storage technologies. Survey of current non-linear editing applications, systems configurations, and topologies. Survey on the roles and responsibilities of the craft editor, post production supervisor and the requisite skill sets necessary to enter the post production industry.

R-TV 23 Reality Show Production**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: R-TV 19A

Types and production of reality show television programs. Authoring and pitching of reality show concepts. Instruction in specific equipment skills in lighting, multicamera shooting, editing and related skills. Includes production of a reality show.

R-TV 24 American Film History**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

History of American film and filmmakers from 1895 to the present. Development and changes are examined in relation to historical, sociological, economic, political, cultural, artistic, and technological contexts.

R-TV 25 World Cinema**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Worldwide cinema history and current global cinema trends. Growth of cinema in key countries from their beginnings to the present day. Both national and multinational co-productions are explored. Provides critical methodology and practical tools for examining and interpreting international film movements and genres.

R-TV 28 Introduction to Writing for Electronic Media**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Writing for cinema and electronic media. Conceptualization, structure, and writing dramatic and non-dramatic scripts for cinema, television, and new media.

R-TV 29 Introduction to Audio Production for Film and Television**3 Units** (Degree Applicable, CSU)

Lecture: 36 Lab: 54

Audio production for TV and film, including sound design, editing, and mixing with audio recording equipment and software. Theory and practice of sound design and aesthetics, microphone use, digital recording equipment, and production workflow.

R-TV 31 History of Radio DJs**3 Units** (Degree Applicable)

Lecture: 54

Traces the history of music radio through study of the most influential disc jockeys in broadcasting history.

R-TV 32 Social Media in Broadcasting**3 Units** (Degree Applicable)

Lecture: 54

Creating compelling online content and properly using social media to engage and grow a radio, television (TV), or podcast audience on the Internet. Emphasis on proper management of social media presence through branding and how broadcast companies and performers use social media to compete in the new media marketplace.

R-TV 35 Pop Culture in the Media**3 Units** (Degree Applicable)

Lecture: 54

Examines American Pop Culture and its various forms as it applies to the 1920s through the 2000s through the major fads and follies of those decades as reflected in and influenced by radio, TV, and film.

R-TV 36 Beginning Commercial Voice-Overs**3 Units** (Degree Applicable)

Lecture: 54

Development of voices for radio and television commercials, character voices, narrations, and animation. Also covers auditioning, working with agents and agencies, and understanding voice-over contracts.

R-TV 37 Advanced Voice-Overs Techniques**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: R-TV 07A or R-TV 36

Advanced voice-over techniques for radio and TV commercials, animation, and narration. Further development of audition and recording session skills.

R-TV 38 Radio Broadcasting Rules and Regulations**1.5 Units** (Degree Applicable)

Lecture: 27

Corequisite: R-TV 01 (may have been taken previously)

Federal Communication Commission (FCC) rules, regulations, documentation, and licensing. SoundExchange rules regarding digital performances and the Digital Media Copyright Act and its impact on Internet streaming and podcasting.

R-TV 39 Social Media and Online Ethics**3 Units** (Degree Applicable)

Lecture: 54

Ethical and responsible decision making in news and social media and online activities as it relates to broadcasting and in accordance with Federal Communications Commission rules and standards.

R-TV 41 Video Engineering**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Video engineering for television, video assist for film, and other electronic media. Covers the role of the video engineer in a variety of settings, signal recording and distribution, wiring video systems for remote and studio productions, troubleshooting, and working with live productions.

R-TV 96A Beginning Campus Radio Station Lab: Studio Procedures and Equipment Operations**1-2 Units** (Degree Applicable)

Lab: 54-108

Corequisite: R-TV 01 and R-TV 11A and R-TV 38 (corequisite courses may have been taken previously)

Basic operation of the college radio stations. Activities focus on studio equipment operation, automated broadcasting, and station procedures. Suitable for students interested in both on-air and behind-the-scenes employment.

R-TV 96B Intermediate Campus Radio Station Lab: On-Air and Behind-the-Scenes Skills**1-2 Units** (Degree Applicable)

Lab: 54-108

Prerequisite: R-TV 96A

Participation in the college radio stations. Activities focus on developing disc jockey (DJ), news anchor, and news reporter skills for students interested in on-air positions and music selection, as well as production and programming for students interested in behind-the-scenes careers.

R-TV 96C Advanced Campus Radio Station Lab: Program Hosting and Management Skills**1-2 Units** (Degree Applicable)

Lab: 54-108

Prerequisite: R-TV 96B

Participation in the college radio stations including individual show creation and execution as well as management skills.

R-TV 97A Radio and Entertainment Industry Seminar**1 Unit** (Degree Applicable)

Lecture: 18

Prerequisite: R-TV 01 and R-TV 11A and R-TV 15 and R-TV 38

Corequisite: R-TV 97B

Discussion and evaluation of professionalism and problem-solving techniques related to on-the-job experience in the Radio Broadcasting industry through an off-campus internship.

R-TV 97B Radio/Entertainment Industry Work Experience**1 Unit** (Degree Applicable)

Lab: 60-75

Prerequisite: R-TV 01 and R-TV 11A and R-TV 15 and R-TV 96A

Corequisite: R-TV 97A

On-the-job experience in the radio or entertainment industry in order to strengthen and broaden skills in the workplace. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester.

R-TV 99 Special Projects in Broadcasting and Entertainment Industry**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: R-TV 01 and completion of any six R-TV course units.

Offers students the opportunity to explore the discipline in greater depth. Instructor authorization needed prior to enrollment. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Students repeating this course will make individual contracts of a more advanced nature with the instructor to make sure that proficiencies are enhanced.

R-TV 100 Work Experience in Film and TV**1-3 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Prerequisite: Completion of 12 units of R-TV courses, from among the following: R-TV 18, R-TV 19A, R-TV 19B, R-TV 20, R-TV 21, R-TV 22, R-TV 23, and R-TV 29. Compliance with Work Experience regulations as designated in the College Catalog.

Real-world on-the-job work experience working in the Film, Television or Media production. Students have the option of either working on production crews for on-campus projects and/or at an approved off-campus work site. A minimum of sixty (60) unpaid or seventy-five (75) paid hours of supervised work is required for each unit of credit.

R-TV 101 Work Experience in Broadcast Entertainment**1-2 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-150

Prerequisite: Completion of R-TV 01 and R-TV 97A and R-TV 97B and any three other R-TV units. Compliance with Work Experience regulations as designated in the College Catalog.

On-the-job experience at an approved work site in the broadcast or entertainment industries. A minimum of 60 unpaid or 75 paid hours of supervised work is required for each credit.

Radiologic Technology (RAD)

RAD 1A Clinical Experience 1A**4.5 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 256

Prerequisite: ANAT 10A and ANAT 10B and RAD 50 and RAD 91

Corequisite: RAD 61A and RAD 61B and RAD 61C

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on upper and lower limbs, shoulder girdle, pelvis, chest, and abdomen. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 1B Clinical Experience 1B**2.5 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 150

Prerequisite: RAD 1A

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on upper and lower limbs, shoulder girdle, pelvis, chest, and abdomen. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 2A Clinical Experience 2A**4.5 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 256

Prerequisite: RAD 1B

Corequisite: RAD 62A and RAD 62B and RAD 62C

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 2B Clinical Experience 2B

2.5 Units (Degree Applicable, CSU)
 (May be taken for Pass/No Pass only)
 Lab: 144
 Prerequisite: RAD 2A

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 3A Clinical Experience 3A

7 Units (Degree Applicable, CSU)
 (May be taken for Pass/No Pass only)
 Lab: 384
 Prerequisite: RAD 2B
 Corequisite: RAD 63

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 3B Clinical Experience 3B

2.5 Units (Degree Applicable, CSU)
 (May be taken for Pass/No Pass only)
 Lab: 150
 Prerequisite: RAD 3A

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 3C Clinical Experience 3C

7 Units (Degree Applicable, CSU)
 (May be taken for Pass/No Pass only)
 Lab: 384
 Prerequisite: RAD 3B

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 4 Clinical Experience 4

4 Units (Degree Applicable, CSU)
 (May be taken for Pass/No Pass only)
 Lab: 240
 Prerequisite: RAD 3C

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 7A Computed Tomography Clinical Experience 7A

2 Units (Degree Applicable)
 (May be taken for Pass/No Pass only)

Corequisite: RAD 70

Computed Tomography (CT) clinical experience in the radiology department of affiliated clinical sites under the supervision of a registered Radiologic Technologist, supervisor, or physician. Emphasis on Computed Tomography procedures of the head, neck, spine, musculoskeletal, chest, abdomen, pelvis, and special procedures. Image display, post processing, and quality assurance is included. Intended for students enrolled in Computed Tomography Certificate Program. Health physical, background check, drug test, and CPR certification is required. Prior to enrolling in this course, student must possess a valid California Certified Radiologic Technologist (CRT) license and be certified and registered by the American Registry of Radiologic Technologists (ARRT) in one of the following supporting disciplines: Radiologic Technology, Nuclear Medicine or Nuclear Medicine Technology Certification Board (NMTCB) certification, or Radiation Therapy.

RAD 7B Computed Tomography Clinical Experience 7B

7 Units (Degree Applicable)
 (May be taken for Pass/No Pass only)

Prerequisite: RAD 7A and RAD 70
 Corequisite: RAD 71 and RAD 72

Continued Computed Tomography (CT) clinical experience in the radiology department of affiliated clinical sites under the supervision of a registered Radiologic Technologist, supervisor or physician. Emphasis on Computed Tomography procedures of the head, neck, spine, musculoskeletal, chest, abdomen, pelvis, and special procedures. Image display, post processing and quality assurance is included. Intended for students enrolled in Computed Tomography Certificate Program. Health physical, background check, drug test, and CPR certification is required. Prior to enrolling in this course, student must possess a valid California Certified Radiologic Technologist (CRT) license and be certified and registered by the American Registry of Radiologic Technologists (ARRT) in one of the following supporting disciplines: Radiologic Technology, Nuclear Medicine or Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy.

RAD 30 Radiographic Pathology**1.5 Units** (Degree Applicable)

Lecture: 27

Corequisite: RAD 3A

Concepts related to disease and etiological considerations with emphasis on radiographic appearance of disease and impact on exposure factor selection.

RAD 31 Fluoroscopy and Radiobiology**4 Units** (Degree Applicable)

Lecture: 72

Prerequisite: RAD 62A

Corequisite: RAD 3C

Radiobiology, radiation physics, exposure reduction, fluoroscopy equipment and operation, image evaluation, quality control, and patient considerations. Intended for students enrolled in Radiologic Technology Program.

RAD 32 Digital Imaging in Radiology**2 Units** (Degree Applicable)

Lecture: 36

Prerequisite: RAD 61A

Digital image acquisition and display in radiology. Content imparts an understanding of the components, principles, and operation of digital imaging systems found in diagnostic radiology. Factors impacting image acquisition, display, archiving, and retrieval are discussed. Principles of digital system quality assurance and maintenance are presented. Intended for students enrolled in Radiologic Technology program.

RAD 40 Mammography Principles and Procedures**3 Units** (Degree Applicable)

Lecture: 54

Corequisite: RAD 3C

Advanced course designed to provide students with the necessary skills to become California state certified in Mammographic Radiologic Technology and meet the Mammography Quality Standards Act guidelines. Includes coursework in breast anatomy/physiology, patient care, mammography procedures, positioning, compression, interventional procedures, imaging of patients with breast implants, pathology, image evaluation, instrumentation, technique, physics, and quality assurance/quality control. Enrollment limited to current Radiologic Technology program students.

RAD 50 Introduction to Radiologic Science and Health Care**3 Units** (Degree Applicable, CSU)

Lecture: 54

Foundations of radiography and the practitioner's role in the healthcare delivery system. Principles, practices and policies of healthcare organizations are examined and discussed in addition to the professional responsibilities of the radiographer. Includes radiation safety and a foundation in ethics and law related to the practice of medical imaging. Intended for students enrolled in Radiologic Technology Program.

RAD 61A Theory of Radiologic Technology**4 Units** (Degree Applicable, CSU)

Lecture: 72

Prerequisite: RAD 50 and PHYS 1

Corequisite: RAD 1A and RAD 61B and RAD 61C

Structure of the atom, radiation, radiographic equipment, exposure factor formulation, technique charts, and radiation protection. Intended for students enrolled in Radiologic Technology Program.

RAD 61B Radiographic Procedures I**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: ANAT 10A and ANAT 10B and MEDI 90 and RAD 50 and RAD 91

Corequisite: RAD 1A and RAD 61A and RAD 61C

Knowledge base necessary to perform standard imaging procedures and special studies. Consideration is given to the evaluation of optimal images. Focus on anatomy and positioning of the upper and lower limbs, chest, and abdomen. Intended for students enrolled in Radiologic Technology Program.

RAD 61C Radiographic Procedures I Laboratory**1.5 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 27

Prerequisite: RAD 50 and RAD 91 and ANAT 10A and ANAT 10B and MEDI 90

Corequisite: RAD 1A and RAD 61A and RAD 61B

Practical application of standard imaging procedures and special studies. Consideration is given to the evaluation of optimal images. Focus on anatomy and positioning of the upper and lower limbs, chest, and abdomen. Intended for students enrolled in Radiologic Technology Program.

RAD 62A Theory of Radiologic Technology**4 Units** (Degree Applicable, CSU)

Lecture: 72

Prerequisite: RAD 61A and RAD 1B

Corequisite: RAD 2A and RAD 62B and RAD 62C

Areas of X-ray production and interaction with matter, principles of imaging, imaging equipment, radiation protection. Introduction to digital radiography to include picture archiving and communication system (PACS). Intended for students enrolled in Radiologic Technology Program.

RAD 62B Radiographic Procedures II**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: RAD 61A and RAD 61B and RAD 61C

Corequisite: RAD 2A and RAD 62A and RAD 62C

Knowledge base necessary to perform standard imaging procedures and special studies. Consideration is given to the evaluation of optimal images. Focus on anatomy and positioning of the vertebral column, bony thorax, cranium, special studies, gastrointestinal and genitourinary system. Intended for students enrolled in Radiologic Technology Program.

RAD 62C Radiographic Procedures II Laboratory**1.5 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 27

Prerequisite: RAD 61A and RAD 61B and RAD 61C

Corequisite: RAD 2A and RAD 62A and RAD 62B

Practical application of standard imaging procedures and special studies. Consideration is given to the evaluation of optimal images. Focus on anatomy and positioning of the vertebral column, bony thorax, cranium, gastrointestinal (GI) system and genitourinary (GU) system. Intended for students enrolled in Radiologic Technology Program.

RAD 63 Theory of Radiologic Technology**1 Unit** (Degree Applicable, CSU)

Lecture: 18

Corequisite: RAD 3A

Special imaging studies, advanced imaging modalities, and basic principles of computed tomography. Intended for students enrolled in Radiologic Technology Program.

RAD 64 Theory of Radiologic Technology**4 Units** (Degree Applicable, CSU)

Lecture: 72

Corequisite: RAD 3C

Analytical review of the radiologic technology core curriculum. Serves as preparation for state certification and national registry exams. Intended for students enrolled in Radiologic Technology Program.

RAD 70 Computed Tomography Sectional Anatomy and Pathology**2 Units** (Degree Applicable)

Lecture: 36

Corequisite: RAD 7A

Detailed study of gross anatomical structures will be conducted systematically for location, relationship to other structures, function, and common pathologic conditions. Anatomical structures are located and identified in axial (transverse), sagittal, coronal, and orthogonal (oblique) planes with a focus on the characteristic appearance of each anatomical structure and pathology as it appears on Computed Tomography (CT) images.

RAD 71 Computed Tomography Procedures and Patient Care**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: RAD 70

Corequisite: RAD 72 and RAD 7B

Procedures for Computed Tomography (CT) imaging of adults and pediatric patients. Procedures include, but are not limited to, indications for procedure, patient care and safety, positioning, contrast media usage, patient assessment, scout image, selectable scan parameters, and archiving of the images. CT procedures will be taught for differentiation of specific structures, patient symptomology, and pathology. CT images studied will be reviewed for quality, anatomy, and pathology.

RAD 72 Computed Tomography Physics and Instrumentation**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: RAD 70

Corequisite: RAD 71

Physical principles and instrumentation involved in Computed Tomography (CT). Physics topics covered include x-radiation in forming the CT image, CT beam attenuation, linear attenuation coefficients, tissue characteristics, and Hounsfield numbers application. CT system and operations, the CT process, image quality, and radiation protection practices for the CT patient will be covered.

RAD 91 Patient Care in Radiologic Sciences**3 Units** (Degree Applicable, CSU)

Lecture: 45 Lab: 27

Concepts of optimal patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures are described, pharmacology, venipuncture, as well as infection control procedures using standard precautions. The role of the radiographer in patient education is identified. Intended for students enrolled in Radiologic Technology Program.

Reading (READ)

READ 70 Approaches to Reading**3 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 54

Entry level reading course which includes comprehension, vocabulary strategies, and self-reflection on reading.

READ 80 Exploring Reading Strategies**3 Units** (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 54

Prerequisite: READ 70 or appropriate placement

Reading comprehension, vocabulary strategies, and self-awareness of reading capabilities using narrative and expository text.

READ 90 Reading College Texts**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: READ 80 or appropriate placement on assessment measures

Examine cross-disciplinary college-level texts and apply critical reading and vocabulary strategies. Emphasis on integration and synthesis of academic information through vocabulary acquisition, cross disciplinary textbook analysis, comprehension, and critical thinking as applied to all types of academic reading including digital texts.

READ 100 Analysis and Critical Reading**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: READ 90 or appropriate placement on assessment measures

Critical reading course focusing on the effective use of critical thinking in a cross-disciplinary framework. Emphasis on the development of critical reading skills of interpretation, analysis, and evaluation of a variety of academic texts across disciplines.

Respiratory Therapy (RESD)

RESD 102 Theory and Principles of Respiratory Therapy**2 Units** (Degree Applicable, CSU)

Lecture: 36

Prerequisite: ANAT 10A and ANAT 10B and CHEM 10 and MATH 51 and MEDI 90

Corequisite: (RESD 51A or RESD 104) and (RESD 52 or RESD 106)

Formerly RESD 50.

History of respiratory care, patient confidentiality, patient safety, principles of infection control, bloodborne and airborne pathogens, ethical and legal implications of practice, professionalism, physical principles of respiratory care, and computer applications in respiratory care.

RESD 104 Respiratory Therapy Science**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Prerequisite: MATH 51, and MEDI 90, and CHEM 10, and ANAT 10A, and ANAT 10B.

Corequisite: (RESD 50 or RESD 102) and (RESD 52 or RESD 106)

Formerly RESD 51A.

Principles of respiratory therapy equipment. Emphasis placed on methods of administration of therapy and application of specialized equipment in the clinical setting. Also includes respiratory physiology and oxygen transport.

RESD 106 Pulmonary Anatomy and Physiology**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: MEDI 90 and CHEM 10 and ANAT 10A and ANAT 10B and MATH 51

Corequisite: (RESD 51A or RESD 104) and (RESD 50 or RESD 102)

Formerly RESD 52.

A study of the function and interaction of the cardiovascular and pulmonary systems.

RESD 108 Pharmacology for Respiratory Care**1.5 Units** (Degree Applicable, CSU)

Lecture: 27

Prerequisite: (RESD 50 or RESD 102) and (RESD 51A or RESD 104) and (RESD 52 or RESD 106)

Formerly RESD 62.

Commonly used respiratory care drugs with emphasis on dosage, indications, contraindications, adverse reactions, and expected outcomes.

RESD 110 Respiratory Therapy Science**4 Units** (Degree Applicable, CSU)

Lecture: 54 Lab: 54

Prerequisite: (RESD 102 or RESD 50) and (RESD 104 or RESD 51A)

Corequisite: RESD 112 and RESD 114

Formerly RESD 51B.

Basic principles of respiratory therapy equipment. Emphasis is placed on the methods of administration of therapy and the application of specialized equipment in the acute care setting and the application of mechanical ventilation in the clinical setting.

RESD 112 Cardiopulmonary Pathophysiology**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: RESD 110

Formerly RESD 53.

Etiology, anatomic alterations of the lungs, overview of the cardiopulmonary clinical manifestations, and general management of commonly encountered cardiopulmonary diseases.

RESD 114 Comprehensive Pulmonary Assessment**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: RESD 110 and RESD 112

Formerly RESD 60.

Techniques of pulmonary assessment, including history taking, clinical laboratory data, pulmonary function testing data, chest X-rays, physical exam findings, arterial blood gas data, hemodynamic monitoring data, exhaled gas monitoring data, nutrition, and synopsis of findings, which includes extensive practice in interpreting this data.

RESD 116 Special Procedures for Respiratory Care**1.5 Units** (Degree Applicable, CSU)

Lecture: 27

Prerequisite: RESD 110 or RESD 51B

Corequisite: RESD 200A

Formerly RESD 57B.

Application and skills development in bronchoscopy, chest tubes, mechanical ventilation, microbiology, and arterial blood gas puncture.

RESD 200A Techniques of Respiratory Therapy**2.5 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 143

Prerequisite: RESD 51B OR RESD 110

Corequisite: RESD 57B OR RESD 116

Formerly RESD 56A.

Clinical practice in intensive care and mechanical ventilator procedures in the treatment of adult and pediatric patients in a hospital setting. The student is expected to perform basic therapeutic modalities mastered in RESD 51A or RESD 104 and RESD 51B or RESD 110 and apply concepts learned in the first academic sessions of the Respiratory Therapy Program. Instruction in the application of therapeutic modalities and diagnostic procedures performed in the general management and treatment of adult and pediatric patients requiring respiratory care are introduced.

RESD 200B Techniques of Respiratory Therapy**6 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 324

Prerequisite: RESD 56A or RESD 200A

Corequisite: (RESD 55 or RESD 202) and (RESD 58 or RESD 204)

Formerly RESD 56B.

Clinical practice in the hospital setting. The student is expected to perform basic therapeutic modalities mastered in RESD 104 or RESD 51A and RESD 51B and apply concepts learned in the first three semesters of the Respiratory Therapy Program. Instruction in the application of therapeutic modalities and diagnostic procedures performed in the management and treatment of adult and pediatric patients requiring respiratory care. Emphasis of intensive care and mechanical ventilator procedures are introduced.

RESD 200C Techniques of Respiratory Therapy**2.5 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 143

Prerequisite: RESD 55 or RESD202

Formerly RESD 56C.

Clinical practice in the hospital setting. Continued practice of intensive care and mechanical ventilator procedures in the treatment of adult and pediatric patients.

RESD 200D Techniques of Respiratory Therapy**6 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lab: 324

Prerequisite: RESD 56C or RESD 200C

Corequisite: RESD 59 or RESD 206 and RESD 61 or RESD 208

Formerly RESD 56D.

Clinical practice including adult and neonatal intensive care requiring demonstration of all learned clinical skills. Application of therapeutic modalities and diagnostic procedures performed in the management and treatment of adult and pediatric intensive care patients. A six-week rotation is done in the neonatal intensive care unit. The student is expected to perform basic therapeutic modalities mastered in RESD 104 or RESD 51A and RESD 51B and apply concepts learned in the first four semesters of the Respiratory Therapy Program.

RESD 202 Adult Respiratory Intensive Care**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: RESD 200B or RESD 56B

Formerly RESD 55.

Provides an in-depth approach to the current modalities and monitoring tools of respiratory care. Emphasis is on the adult patient who is critically ill with cardiopulmonary failure.

RESD 204 Neonatal Intensive Care**3 Units** (Degree Applicable, CSU)

Lecture: 54

Corequisite: RESD 200B and RESD 202

Formerly RESD 58.

Emphasizes neonatal pathophysiologies, etiologies, and ramifications. Encompasses the newest techniques in monitoring equipment used in the treatment and maintenance of the premature infant. Designed primarily for respiratory therapists and nurses.

RESD 206 Respiratory Therapeutic Modalities**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: RESD 55 or RESD 202

Corequisite: (RESD 56D or RESD 200D) and (RESD 61 or RESD 208)

Formerly RESD 59.

Advanced practitioner review and evaluation of patient data, equipment manipulation, and therapeutic respiratory therapy procedures. Student self-assessment and preparation for board examinations, credentialing and employment. Students are required to purchase self-assessment examinations.

RESD 208 Current Issues in Respiratory Care**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: RESD 56C or RESD 200C

Corequisite: RESD 200D and RESD 206

Formerly RESD 61.

Explores recently developed health care techniques and strategies for diagnostics, assessment, and therapeutics and their impact on respiratory therapists.

Science, Technology, Engineering, and Mathematics (STEM)

STEM 99 Special Projects in Science, Technology, Engineering, and Mathematics**1-2 Units** (Not Degree Applicable)

Lecture: 18-36 Lab: 18

Prerequisite: Approved Independent Study Learning Contract

Offers students recognition for their academic interest in science, technology, engineering, and mathematics (STEM) by providing an opportunity for them to engage in an original research project to explore their chosen discipline in greater depth. The content of the course and the methods of study will vary from semester to semester and depend on the nature of the research project under consideration. Student will apply for and obtain Institutional Review Board (IRB) approval for any research project involving human subjects, and conduct research in an ethical manner following these guidelines. Instructor authorization is required to enroll in this course.

Sign Language & Interpreting (SIGN)

SIGN 101 American Sign Language 1**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Fundamentals of American Sign Language. Preparation for visual/gestural communication followed by intensive work on comprehension skills; modeling of grammatical structures; general information about Deaf Culture. One out-of-class observation required.

SIGN 101H American Sign Language 1 - Honors**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: Acceptance into the Honors Program

Fundamentals of American Sign Language. Preparation for visual and gestural communication followed by intensive work on comprehension skills; modeling of grammatical structures; general information about Deaf Culture. One out-of-class observation required.

SIGN 102 American Sign Language 2**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: SIGN 101 or SIGN 101H

Further study of American Sign Language (ASL) focusing on comprehension skills, grammatical structures and practice in the expressive aspects of the language, as well as exposure to Deaf culture. Students are expected to attend outside events at their own expense.

SIGN 103 American Sign Language 3**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: SIGN 102

American Sign Language (ASL) focused on developing comprehension skills, advanced grammatical structures with continued emphasis on expressive skills in narrative. Aspects of Deaf culture will be studied. Field trips required.

SIGN 104 American Sign Language 4**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Prerequisite: SIGN 103

Expressive and conversational skills in American Sign Language (ASL) along with continued focus on grammatical and cultural features.

SIGN 105 American Sign Language 5**4 Units** (Degree Applicable, CSU)

Lecture: 72

Prerequisite: SIGN 104

Advanced American Sign Language (ASL) communication skills with emphasis on signing descriptive narratives and strengthening conversational skills. Target language practice includes holding discussions and making major decisions and health issues with substantial use of classifiers. Further exposure to Deaf cultural components.

SIGN 108 Fingerspelling**2 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 36

Prerequisite: SIGN 102

Receptive and expressive fingerspelling.

SIGN 201 Introduction to Deaf Studies**3 Units** (Degree Applicable, CSU)

Lecture: 54

Topics central to the Deaf community including deaf education, Deaf and hearing relationships, and Deaf history. Topics include early intervention and education of deaf children, communication strategies and their effectiveness, anatomy and causes of deafness, and Deaf people as a cultural group. Gives a holistic perspective of Deaf people applicable to further studies in Deaf culture and community.

SIGN 202 American Deaf Culture**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

American Deaf cultural norms, values, mores and institutions.

SIGN 210 American Sign Language Structure**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: SIGN 103

Linguistic structure of American Sign Language, including phonology, morphology and syntax. Sociolinguistic issues will also be discussed.

SIGN 220 Translation: American Sign Language and English**4 Units** (Degree Applicable, CSU)

Lecture: 72

Prerequisite: SIGN 104

Corequisite: SIGN 210 (May have been taken previously)

American Sign Language (ASL) and English translation by comparing texts and manual narrative in both languages.

SIGN 223 Principles of Interpreting**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: SIGN 103 and Eligibility for ENGL 1A

Aspects of interpreting theory and process including the history of sign language interpreting. Examines the interpreter's role and ethical standards.

SIGN 225 Ethical Decision Making for Interpreters**2 Units** (Degree Applicable)

Lecture: 36

Prerequisite: SIGN 223 and SIGN 231

Development of ethical decision-making skills through the analytical construct of the Demand/Control Schema (DC-S) for interpreting work. Includes professional work effectiveness and professional wellness.

SIGN 227 Cognitive Processing for Interpreters**4 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54 Lab: 54

Prerequisite: ENGL 1A and SIGN 104

Corequisite: SIGN 223 (May have been taken previously)

Development of cognitive processing skills necessary for interpreting between American Sign Language (ASL) and English. Constructing and deconstructing meaning, memory, listening, and attending will be covered. Includes memory building, restating, cloze, and listening exercises.

SIGN 231 Interpreting**4 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54 Lab: 54

Prerequisite: SIGH 227 and SPCH 1A

Skill development in consecutive interpreting from American Sign Language (ASL) to English and English to ASL. Processing skills and task management will be emphasized.

SIGN 232 Advanced Interpreting**4 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54 Lab: 54

Prerequisite: SIGN 231

Refines interpreting skills with emphasis on simultaneous interpreting. Intensive skill development in interpreting from English to American Sign Language (ASL) and ASL to English.

SIGN 239 Applied Interpreting**2 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 36

Prerequisite: SIGN 232

Capstone class to the interpreter training program. Course emphasizes application of knowledge and skills developed. Students will develop a direct connection to the field of interpreting and explore continuing education opportunities. Students are required to complete 40 hours of out-of-class interpreting and participation in out-of-class interpreting continuing education.

SIGN 240 Vocabulary Building for Interpreters**2 Units** (Degree Applicable, CSU)

(May be taken for Pass/No Pass only)

Lecture: 36

Prerequisite: SIGN 104

Vocabulary expansion in both ASL and English with the goal of improving interpretations between these two languages. The course will focus on context, semantics, and parts of speech in determining culturally appropriate vocabulary choices. Interpreting students will learn to apply their growing vocabularies to ASL-English interpretations.

SIGN 250 Interpreting with Classifiers**1.5 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 18 Lab: 27

Prerequisite: SIGN 104 and SIGN 210

An overview of the common forms of ASL classifier predicates. Developing skill in establishing figure/ground, visualization, and shifting perspectives. Applying classifier predicates within the context of interpreting from English into American Sign Language.

SIGN 260 Video Interpreting**1.5 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 18 Lab: 27

Prerequisite: SIGN 231

Video interpreting and skill development as a video interpreter. Includes video relay interpreting (VRS), video remote interpreting (VRI), technical components used in video interpreting, and ethical consideration of the video interpreter. Lab portion of the course will focus on skill development in video interpreting.

SIGN 299 Special Projects in Sign Language/Interpreting**2 Units** (Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 36

In order to offer students the opportunity to explore their disciplines to greater depth, the various departments from time to time offer Special Projects courses. The content of each course and the methods of study vary from semester to semester, and depend on the particular project under consideration. Students must have an instructor's authorization before enrolling in this class.

Sociology (SOC)

SOC 1 Introduction to Sociology**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 110)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Systematic study of human relations and social structures emphasizing the interaction between personality, culture and society. Special consideration is given to an understanding of group behavior, personality formation, social organization, and social change.

SOC 1H Introduction to Sociology - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 110)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Systematic study of human relations and social structures emphasizing the interaction between personality, culture, and society. Special consideration is given to an understanding of group behavior, personality formation, social organization, and social change. An honors course designed to provide an enriched experience. Students may not receive credit for both SOC 1 and SOC 1H.

SOC 2 Contemporary Social Problems**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 115)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Sociological principles and concepts as applied in the understanding of social problems. Special emphasis on the analysis of social values, social organization, role, status and stress, and also on the study of controversial public issues that arise in contemporary American society. Students will be encouraged to evaluate and discuss both the theoretical and practical approaches to social problems. An honors course designed to provide an enriched experience. Students may not receive credit for both SOC 2 and SOC 2H.

SOC 2H Contemporary Social Problems - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 115)

Lecture: 54-54

Prerequisite: Acceptance into the Honors Program

Sociological principles and concepts as applied in the understanding of social problems. Special emphasis on the analysis of social values, social organization, role, status and stress, and also on the study of controversial public issues that arise in contemporary American society. Students will be encouraged to evaluate and discuss both the theoretical and practical approaches to social problems.

SOC 4 Introduction to Gerontology**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

The characteristics, life circumstances, and problems of people as they progress through life. Emphasizes theoretical perspectives on the process of aging and the adjustment to aging. Covers sociological factors and social institutions that affect individuals as they move through the life course.

SOC 5 Introduction to Criminology**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 160)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

A scientific analysis of the nature, extent, and causes of violations of societal rules of behavior that are formally defined as crime and delinquency. Includes an analysis of the theoretical perspectives of the sociology of deviance on the criminal justice system and the impact of crime on society.

SOC 5H Introduction to Criminology - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 160)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

A scientific analysis of the nature, extent, and causes of violations of societal rules of behavior that are formally defined as crime and delinquency. Includes an analysis of the theoretical perspectives of the sociology of deviance on the criminal justice system and the impact of crime on society. An honors course designed to provide an enriched experience. Students may not receive credit for both SOC 5 and SOC 5H.

SOC 7 Sociology of Religion**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

An analysis of religion as a social institution. Focus is on the influence that religion has on American society, religious movements, norms, symbols, and the social manifestations of religious observable facts. Field trips may be required.

SOC 12 Introduction to Research Methods in the Social Sciences**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 120)

Lecture: 54

Prerequisite: (SOC 1 or SOC 1H) and (SOC 23 or PSYC 10 or MATH 110 or MATH 110H or MATH 110S) and Eligibility for ENGL 68

Students examine fundamental elements of empirical research and the ways in which sociologists gather, evaluate, and critique social data. Includes attention to the nature of theory, hypotheses, variables, and ethics of research. Application of qualitative and quantitative analytic tools, including logic and research design, such as survey, observational, experimental, case study, and comparative historical research. Computer applications recommended.

SOC 14 Marriage and the Family**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 130)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Sociological functions of dating, engagement, weddings, marriage, and the family. Focuses on influences and theories of mate selection, love, and interpersonal attraction. Covers trends and changes in marriage, the family, and gender roles. Explores different types of families and family patterns.

SOC 14H Marriage and the Family - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 130)

Lecture: 54

Prerequisite: Acceptance in the Honors Program.

Sociological functions of dating, engagement, weddings, marriage, and the family. Focuses on influences and theories of mate selection, love, and interpersonal attraction. Covers trends and changes in marriage, the family, and gender roles. Explores different types of families and family patterns. An honors course designed to provide an enriched experience. Students may not receive credit for both SOC 14 and SOC 14H.

SOC 15 Child Development**3 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Theoretical aspects of physical, social, emotional, and cognitive development from conception through adolescence. Requires observation of children.

SOC 20 Introduction to Race and Ethnicity**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 150)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Ethnic and racial groups in the U.S. and social factors leading to prejudice, discrimination, and stereotypes. Four major ethnic groups (Blacks, Asians, Native Americans, and Latinos) examined with emphasis placed on historical experiences, contemporary circumstances and future trends. An honors course designed to provide an enriched experience. Students may not receive credit for both SOC 20 and SOC 20H.

SOC 20H Introduction to Race and Ethnicity - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 150)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Ethnic and racial groups in the U.S. and social factors leading to prejudice, discrimination, and stereotypes. Four major ethnic groups (Blacks, Asians, Native Americans, and Latinos) examined with emphasis placed on historical experiences, contemporary circumstances, and future trends.

SOC 23 Introduction to Statistics in Sociology and Social Sciences**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 125)

UC Credit Limitation

Lecture: 54

Prerequisite: (SOC 1 or SOC 1H) and eligibility for MATH 110

Basic statistical methods and analyses commonly used in sociological research. Topics include descriptive and inferential statistics usually include levels and types of measurement; measures of central tendency and dispersion; normal, t, and chi-square distributions; probability and hypothesis testing; correlation and regression. Computers and calculators will be utilized. Data sets will be problems from the various social sciences.

SOC 36 Asian American Communities**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

A socio-cultural study of Asian Americans that includes race, class, and gender. Explores the contemporary experiences of peoples originating in the Pacific Islands, Southeast Asia, South Asia, and East Asia. Emphasizes social structure, social change, and offers a theoretical framework for analysis.

SOC 40 Introduction to Sex and Gender Roles**3 Units** (Degree Applicable, CSU, UC, C-ID #: SOCI 140)

Lecture: 54

Advisory: SOC 1 or SOC 1H (taken prior or concurrently) and eligibility for ENGL 1A (taken prior or concurrently)

Sociological analysis of the social construction of gender, masculinity, and femininity historically and cross-culturally. Examines the debates on sex and gender. It analyzes the impact of economic and political change on gender expectations and practices. This course focuses on macro-analyses of how institutions shape gender and microanalyses of how individuals are socialized and how they practice gender.

SOC 40H Introduction to Sex and Gender Roles - Honors**3 Units** (Degree Applicable, CSU, C-ID #: SOCI 140)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Advisory: SOC 1 or SOC 1H (taken prior or concurrently)

Sociological analysis of the social construction of gender, masculinity, and femininity historically and cross-culturally. Examines the debates on sex and gender. It analyzes the impact of economic and political change on gender expectations and practices. This course focuses on macro-analyses of how institutions shape gender and microanalyses of how individuals are socialized and how they practice gender. An honors course designed to provide an enriched experience. Students may not receive credit for both SOC 40 and SOC 40H.

SOC 99 Special Projects in Sociology**2 Units** (Degree Applicable, CSU)

Lecture: 36

Offers students recognition for their academic interests in sociology and the opportunity to explore the discipline of sociology to greater depth. The content of the course and the methods of study vary from semester to semester and depend on the particular project under consideration.

SOC 110 Introduction to Social Justice**3 Units** (Degree Applicable, CSU, UC, C-ID #: SJS 110)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Intersectional study of minority groups in the United States such as race, ethnicity, gender, class, religion, sexuality, and other marginalized groups. Examines social justice movements in relation to minority groups in the United States to provide a basis for a better understanding of the socio-economic, cultural, and political conditions among key social groups.

SOC 130 Introduction to LGBTQ Studies**3 Units** (Degree Applicable, CSU, UC, C-ID #: SJS 130)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

This introductory course examines a broad range of contemporary gay, lesbian, bisexual, transgender, and queer issues in various contexts including bio-medical, sociological, political, racial, and sexual.

Spanish (SPAN)

SPAN 1 Elementary Spanish**4 Units** (Degree Applicable, CSU, UC)

UC Credit Limitation

Lecture: 72

Conversing, reading, and writing in Spanish at the elementary level. Includes essentials of pronunciation, vocabulary, idioms, and grammatical structures along with an introduction to Hispanic culture.

SPAN 1S Spanish for the Spanish Speaking**4 Units** (Degree Applicable, CSU, UC, C-ID #: SPAN 100)

UC Credit Limitation

Lecture: 72

Formerly SPAN 11

Provides Spanish-speaking students opportunity to improve skills in standard Spanish grammar and vocabulary and to broaden their understanding of Hispanic cultures. Focuses on developing vocabulary, improving orthography, and the use of grammatical structures, both oral and written. Class instruction conducted in Spanish.

SPAN 2 Continuing Elementary Spanish**4 Units** (Degree Applicable, CSU, UC, C-ID #: SPAN 110)

UC Credit Limitation

Lecture: 72

Prerequisite: SPAN 1

Further development of conversational, reading, and writing skills in Spanish with special emphasis on verbs, grammar, and expansion of vocabulary. Further study of Hispanic culture.

SPAN 2S Continuing Spanish for the Spanish Speaking**4 Units** (Degree Applicable, CSU, UC, C-ID #: SPAN 110)

UC Credit Limitation

Lecture: 72

Prerequisite: SPAN 1S or SPAN 11 or equivalent

Formerly SPAN 12

Provides continuing intermediate Spanish-speaking students with previous formal study of Spanish with further development and improvement of skills in standard Spanish and a broader understanding of Hispanic cultures. Culturally-based topics are the focus of readings and class discussions. Class instruction conducted in Spanish.

SPAN 3 Intermediate Spanish**4 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Prerequisite: SPAN 2

Further development of communicative proficiency in Spanish. Further study and review of grammar. Increasing emphasis on reading and writing as tools in exploring Hispanic civilization.

SPAN 4 Continuing Intermediate Spanish**4 Units** (Degree Applicable, CSU, UC, C-ID #: SPAN 210)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 72

Prerequisite: SPAN 3

Increased proficiency in speaking, reading and writing Spanish. Review of grammar, increased vocabulary building. Readings and discussions on Hispanic cultural topics. Introduction to Hispanic literature.

SPAN 30 Spanish Composition: Exploring U.S. Latino Topics**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: SPAN 3 or SPAN 2S or Instructor Approval

Develop and practice written standard Spanish. Attention is paid to using appropriate vocabulary, syntactical structures, and stylistic patterns. Emphasis on effective and nuanced written communication based on current US-Latino issues and other relevant topics.

SPAN 50 Spanish of the Barrio: A Socio-linguistic Perspective**3 Units** (Degree Applicable)

Lecture: 54

Advisory: Ability to understand basic conversational Spanish

Study of the variation of Spanish spoken in communities in Los Angeles. Takes into account the historical development of the dialect and its socio-linguistic implications, particularly in regards to Chicano and Mexican-American identity. The course draws examples from well-known literary works, plays, movies, and music.

SPAN 53 Conversational Spanish**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: SPAN 2 or equivalent

Development of intermediate Spanish conversational skills. Emphasis on collaborative activities and practical use of the language. Extensive exposure to Hispanic culture. Grammar is presented in context.

SPAN 54 Continuing Conversational Spanish**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Prerequisite: SPAN 53

Development of advanced Spanish conversational skills. Emphasis on collaborative activities and practical use of the language. Extensive exposure to Hispanic culture. Grammar is presented in context.

SPAN 60 Latin American Culture Through Cinema**3 Units** (Degree Applicable, CSU)

Lecture: 54

Introductory study of Latin American culture through film from the 20th Century to the present. The course will explore history, literature, art, music, geography, culture, customs, and traditions of Latin America through film. Lectures and class discussions conducted in English. All films with English subtitles.

Speech (SPCH)

SPCH 1A Public Speaking**4 Units** (Degree Applicable, CSU, UC, C-ID #: COMM 110)

Lecture: 72

Prerequisite: Eligibility for ENGL 68

Study and apply rhetorical principles to research and analyze topics, write basic and advanced speech outlines, and deliver effective public speeches. Perform speaking and listening assignments that utilize effective verbal, vocal and physical communicative strategies, and critical thinking techniques. Students may not receive credit for both SPCH 1A and SPCH 1AH.

SPCH 1AH Public Speaking - Honors**4 Units** (Degree Applicable, CSU, UC, C-ID #: COMM 110)

Lecture: 72

Prerequisite: Acceptance into the Honors Program

Study and apply rhetorical principles to research and analyze topics, write basic and advanced speech outlines, and deliver effective public speeches. Perform speaking and listening assignments that utilize effective verbal, vocal and physical communicative strategies, and critical thinking techniques. An honors course designed to provide an enriched experience. Students may not receive credit for both SPCH 1A and SPCH 1AH.

SPCH 2 Survey of Communication Studies**4 Units** (Degree Applicable, CSU, UC)

Lecture: 72

Corequisite: ENGL 1A or ENGL 1AH (can be taken previously)

Basic theories and competencies in interpersonal, small group, public speaking, and intercultural communication. Students will examine and practice human communication principles and theories to develop critical thinking and communication competencies in a variety of contexts. Oral presentations are required.

SPCH 3 Voice and Diction**3 Units** (Degree Applicable, CSU, UC)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

Improvement of the speaking voice and oral communication style, including proper control and projection of the voice, vocal expressiveness, articulation, and pronunciation. Develops accuracy of sound production for standard American speech through use of the International Phonetic Alphabet. Emphasizes individual diagnosis and extensive oral practice.

SPCH 4 Performance of Literature**3 Units** (Degree Applicable, CSU, UC, C-ID #: COMM 170)

Lecture: 54

Theory, principles, and techniques of the performance of literature in solo and duo formats. Practical training in critical reading, editing, and performance of poetry, prose, drama, essay, and experimental forms of performance text drawn from a diverse range of cultural viewpoints and voices. Texts will include prose, poetry, drama, and nonfiction. Appreciation of various genres of literature through textual analysis, oral reading, and evaluation.

SPCH 6 Group Communication**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Theory, principles, application, and evaluation of group communication processes, including problem-solving, conflict management, decision making, and leadership.

SPCH 7 Intercultural Communication**3 Units** (Degree Applicable, CSU, UC, C-ID #: COMM 150)

Lecture: 54

Theoretical dynamics of culture within communication contexts, and a practical exploration into improving intercultural communication competence for more effective interactions with others in a diverse society. Students may not receive credit for both SPCH 7 and SPCH 7H.

SPCH 7H Intercultural Communication - Honors**3 Units** (Degree Applicable, CSU, UC, C-ID #: COMM 150)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Theoretical dynamics of culture within communication contexts, and a practical exploration into improving intercultural communication competence for more effective interactions with others in a diverse society. Students may not receive credit for both SPCH 7 and SPCH 7H.

SPCH 8 Professional and Organizational Speaking**4 Units** (Degree Applicable, CSU)

Lecture: 72

Corequisite: ENGL 1A or ENGL 1AH (may have been taken previously)

Speech communication principles as employed in organizations, including decision making, leadership, conflict resolution, and communication networks as well as substantial skills development in preparing and delivering oral presentations within professional contexts and in the workplace. Oral presentations are required. Students may not receive credit for both SPCH 8 and SPCH 8H.

SPCH 8H Professional and Organizational Speaking - Honors**4 Units** (Degree Applicable, CSU)

Lecture: 72

Prerequisite: Acceptance into the Honors Program

Corequisite: ENGL 1A and ENGL 1AH (may be taken previously)

Speech communication principles as employed in organizations, including decision making, leadership, conflict resolution, and communication networks as well as substantial skills development in preparing and delivering oral presentations within professional contexts and in the workplace. Oral presentations are required. An honors course designed to provide an enriched experience. Students may not receive credit for both SPCH 8 and SPCH 8H.

SPCH 9 Introduction to Persuasion**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Examines historical and contemporary approaches to persuasive messages throughout time. It will also focus on the presentation of persuasive appeals, and learning to construct, deliver, and critique persuasive messages.

SPCH 15 Forensics: Fundamentals of Contest Speech and Debate**2 Units** (Degree Applicable, CSU, C-ID #: COMM 160 B)

(May be taken four times for credit)

Lecture: 18

Advisory: SPCH 1A or SPCH 1AH

Participation in one or more intercollegiate competitions or community events as part of the Mt. SAC Forensics Team. Instructions in preparatory procedures for these performances, including techniques in persuasive oratory, interpretation, expository, impromptu, speech analysis, and debate. Tournament or community event attendance required outside regularly scheduled class hours. Students who repeat this course will benefit from additional competition experiences.

SPCH 16 Forensics: Individual Event Team**3 Units** (Degree Applicable, CSU)

(May be taken four times for credit)

Prerequisite: Admission by audition

Speech performance skills and participation in multiple intercollegiate speaking competitions or community events as members of the Mt. SAC Forensics Team. Auditions are held prior to the first week of class and are scheduled through the coaching staff. Tournament or community event attendance is required outside regularly scheduled class hours. Students who repeat this course will benefit from additional competition experiences.

SPCH 17 Forensics: Debate Team

3 Units (Degree Applicable, CSU)
(May be taken four times for credit)

Prerequisite: Admission by Audition

Speaking and argumentation skills and participation in multiple intercollegiate speaking competitions or community events as members of the Mt. San Antonio College (Mt. SAC) Forensics Team. Auditions are held prior to the first week of class and are scheduled through the coaching staff. Emphasis is on intercollegiate debate and limited preparation speaking. Tournament or community event attendance required outside regularly scheduled class hours. Students who repeat this course will benefit from additional competition experiences.

SPCH 18 Forensics: Reader's Theater Team

3 Units (Degree Applicable, CSU)
(May be taken four times for credit)

Prerequisite: SPCH 15

Speech performance skills and participation in multiple public performances, including a regional, state, or national-level forensics competition, as members of the Mt. SAC Forensics Team. Students will perform in one or more reader's theater pieces. Tournament attendance required outside regularly scheduled class hours. Students who repeat this course will benefit from additional competition experiences.

SPCH 20 Argumentation and Debate

3 Units (Degree Applicable, CSU, UC, C-ID #: COMM 120)
Lecture: 54

Prerequisite: SPCH 1A or SPCH 1AH and (ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A)

Rhetorical principles of argumentation in both theory and practice. Emphasis is given to rational discussion, reasoned advocacy in written and spoken arguments, and critical thinking.

SPCH 20H Argumentation and Debate - Honors

3 Units (Degree Applicable, CSU, UC, C-ID #: COMM 120)
Lecture: 54

Prerequisite: SPCH 1A or SPCH 1AH and (ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A and acceptance into the Honors Program)

Rhetorical principles of argumentation in both theory and practice. Emphasis is given to rational discussion, reasoned advocacy in written and spoken arguments, and critical thinking. Rhetorical principles of argumentation in both theory and practice. Emphasis is given to rational discussion and reasoned advocacy. An honors course designed to provide an enriched experience. Students may not receive credit for both SPCH 20 and SPCH 20H. Off-campus tournaments may be required.

SPCH 26 Interpersonal Communication

3 Units (Degree Applicable, CSU, UC, C-ID #: COMM 130)
Lecture: 54
Prerequisite: Eligibility for ENGL 68

Dynamics of everyday one-to-one communication focusing on the roles behavior, psychology, and environment play in friendship, family, intimate, and workplace relationships. Factors that influence communication such as nonverbal cues, language, perception, culture, power dynamics, listening, self-concept, and health and personal well-being. Problems in relational communication and conflict management as well as adaption and success in interpersonal effectiveness.

SPCH 26H Interpersonal Communication - Honors

3 Units (Degree Applicable, CSU, UC, C-ID #: COMM 130)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Dynamics of everyday one-to-one communication focusing on the roles behavior, psychology, and environment play in friendship, family, intimate, and workplace relationships. Factors that influence communication such as nonverbal cues, language, perception, culture, power dynamics, listening, self-concept, and health and personal well-being. Problems in relational communication and conflict management as well as adaption and success in interpersonal effectiveness. An honors course designed to provide an enriched experience. Students may not receive credit for both SPCH 26 and SPCH 26H.

SPCH 30 Introduction to Communication Theory

3 Units (Degree Applicable, CSU, UC, C-ID #: COMM 180)

Lecture: 54

Corequisite: ENGL 1A or ENGL 1AH (may be taken previously)

Advisory: READ 100

Prominent issues in communication theory across the social sciences, introduction to the professional field of communication, and practice of multiple research methods for students preparing for upper division study in communication or related disciplines.

SPCH 30H Introduction to Communication Theory - Honors

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Corequisite: ENGL 1A or ENGL 1AH (may be taken previously)

Advisory: READ 100

Prominent issues in communication theory across the social sciences, introduction to the professional field of communication, and practice of multiple research methods for students preparing for upper division study in communication or related disciplines. Students may not receive credit for both SPCH 30 and SPCH 30H. This course will be enhanced by requiring each student to complete more substantial assignments related to these topics.

SPCH 99 Special Projects in Speech

0.5-2 Units (Degree Applicable, CSU)

(May be taken four times for credit)

Lecture: 9-36

Prerequisite: Instructor authorization needed prior to enrollment

Offers selected students recognition for their academic interests and ability and the opportunity to explore their disciplines to greater depth, the various departments from time to time offer special projects courses. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Instructor authorization needed prior to enrollment.

Study Techniques (STDY)

STDY 80 Foundations for Academic Success

3 Units (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 54

College success course emphasizing academic achievement that promotes learning through self awareness, time management, listening, note taking, oral and written communication, test taking, memorization, and the use of campus resources using a brain-based perspective.

STDY 85A Basic Overview of Strategies for Academic Success**1 Unit** (Not Degree Applicable)

Lecture: 18

College success study techniques course emphasizing memory, motivation, note-taking, test-taking, and time management strategies.

STDY 85C Success Skills for Online Learning**1 Unit** (Not Degree Applicable)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18

Prepares students to take online classes and introduces students to strategies for online learning. Introductory college success course overview for online learning using a brain-research perspective emphasizing success strategies.

STDY 100 University-level Practices for Academic Success**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advanced transfer-level college success course emphasizing research-based effective practices for academic success, including self-knowledge and self-regulation, learning theories, preparation for transfer, academic study strategies, health and wellness, and critical thinking.

Surveying (SURV)

SURV 1A Surveying**3 Units** (Degree Applicable, CSU, UC, C-ID #: ENGR 180)

Lecture: 36 Lab: 54

Prerequisite: MATH 150 or MATH 160 or MATH 180

Surveying and use and care of surveying instruments such as steel tape, engineer's level, theodolite, and total station. Includes horizontal and vertical measurements, layout, traverse, area computations, analysis and adjustments of systematic and random errors, stadia surveying, and mapping.

SURV 1B Surveying**3 Units** (Degree Applicable, CSU, UC)

Lecture: 36 Lab: 54

Prerequisite: SURV 1A

Land surveying including coordinate geometry, missing data, construction surveying, volumes, property surveying, control surveying, California Coordinate System, and horizontal and vertical curves. Introduces photogrammetric methods, 3-D laser scanning, Global Positioning System (GPS), Geographic Information System (GIS), mapping project, method of least squares, and land survey descriptions. Field trips are required.

SURV 1C Computer-Aided Drafting for Surveyors and Civil Engineers**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Prerequisite: SURV 1A

Computer-aided mapping, topographic and boundary maps, symbols; cross-section, profile, and route details; digital terrain model; area and volume computations from computer-generated maps. Surface modeling.

Technology-Related Courses (TECH)

TECH 60 Customer Relations for the Technician**2 Units** (Degree Applicable)

Lecture: 36

Customer relations (soft skills) for the technician including benefits of knowing and using effective customer contact tools, proper customer interactions, ethics, and maintaining customer satisfaction.

TECH 89 Preparation for Work Experience**1 Unit** (Not Degree Applicable)

Lecture: 18

Preparation for Work Experience in Engineering and Industrial Technology related occupations including opportunities for assessment of personal performance, improving technical knowledge, professionalism, the culture of work, developing an internship into employment, avoiding injury, and workers' compensation. Instructor authorization is required prior to enrollment.

Theater Arts (THTR)

THTR 9 Introduction to Theater Arts**3 Units** (Degree Applicable, CSU, UC, C-ID #: THTR 111)

Lecture: 54

Aesthetic, artistic, technical, and business aspects of theater.

THTR 10 History of Theater Arts**3 Units** (Degree Applicable, CSU, UC, C-ID #: THTR 113)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A or ENGL 1AH or ENGL 1AM or AMLA 1A

Historical and anthropological development of dramatic literature and performance with an emphasis on non-Eurocentric, anti-racist, and anti-colonial perspectives.

THTR 11 Principles of Acting I**3 Units** (Degree Applicable, CSU, UC, C-ID #: THTR 151)

Lecture: 54

Introduction to the basic principles and techniques of acting as an artistic discipline. Analysis of the action, given circumstances, and language of dramatic literature. Rehearsal of monologue and scene work.

THTR 12 Principles of Acting II**3 Units** (Degree Applicable, CSU, UC, C-ID #: THTR 152)

Lecture: 54

Prerequisite: THTR 11

Practical preparation for professional rehearsal and audition scenarios through advanced scene work and audition technique.

THTR 13 Play Rehearsal and Performance - Technical**1-2 Units** (Degree Applicable, CSU, C-ID #: THTR 192)

(May be taken four times for credit)

Lab: 54-108

Prerequisite: Admission by interview/Portfolio Review

Planning, preparation, and presentation of college-sponsored dramatic presentations. Emphasis on technical theater, including light, deck, sound, costume, and stage management.

THTR 14 Stagecraft**3 Units** (Degree Applicable, CSU, UC, C-ID #: THTR 171)

Lecture: 36 Lab: 54

Theory and practice of scenery construction, scenic painting, and stage rigging. Practical work in scene construction and rigging with the opportunity to perform these tasks in actual theater situations.

THTR 15 Play Rehearsal and Performance - Acting**1-3 Units** (Degree Applicable, CSU, UC, C-ID #: THTR 191)

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 54-162

Prerequisite: Admission by audition

Planning, preparation, and presentation of college-sponsored dramatic presentations. Emphasis on acting. Attendance at performances is required.

THTR 16 Theatrical Make-Up**3 Units** (Degree Applicable, CSU, UC, C-ID #: THTR 175)

Lecture: 45 Lab: 36

Theory and practice of makeup for the stage. Emphasis will be on the design and application of straight, stylized, character, and other make-up techniques.

THTR 17 Acting for the Camera**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: THTR 11

Study in performance for TV and films. Background, methodology, and techniques of acting for the camera. Includes TV equipment and how to make it work for the TV actor; study of image, type, and character, evaluation and use of scripts and monologues with practical exercises, and on-camera scenes in various styles such as TV drama, sit-coms, and commercials. Assists students to prepare for an occupation in the performing areas of television and film.

THTR 18 Technical Theater Practicum**1 Unit** (Degree Applicable, CSU, UC, C-ID #: THTR 192)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 54

Technical preparation and operation of productions presented to the community. The student will be involved in one or more of the following areas: stage scenery construction, stage lighting set up, property construction, stage sound set up, costume construction and make-up. Crew assignments will be given to the student upon enrollment. The availability of assignments is contingent upon the requirements of the production.

THTR 19 Theatrical Costuming**3 Units** (Degree Applicable, CSU, UC, C-ID #: THTR 174)

Lecture: 36 Lab: 54

Theatrical costuming design and construction. Includes the study of costume history, principles of costume design, fibers and textiles, basic costume construction, and design rendering techniques. Costume crew assignments for major productions will provide practical instruction in actual performance demands on costumes and their proper maintenance. Class is suitable for people interested in costuming for theater, dance, film, television, and reenactments.

THTR 20 Introduction to Script Analysis for the Theater**3 Units** (Degree Applicable, CSU, C-ID #: THTR 114)

Lecture: 54

Advisory: ENGL 67

Socially conscious and equitable analysis of dramatic literature for practical application in contemporary theater arts. This class focuses on the reading and analysis of dramatic literature written by black, indigenous, people of color (BIPOC) playwrights. Students may not earn credit for both THTR 20 and ETHS 20.

THTR 21 Introduction to Theater Design**3 Units** (Degree Applicable, CSU, C-ID #: THTR 172)

Lecture: 36 Lab: 54

Survey of scenery, lighting, properties, costumes, makeup, and sound design for the theater. Through demonstration and laboratory experiences, students will gain an appreciation for theatrical design by learning to identify fundamental principles for creating a design and using standard techniques to communicate a design.

THTR 22 Stage Lighting**3 Units** (Degree Applicable, CSU, C-ID #: THTR 173)

Lecture: 36 Lab: 54

Theory and practice of stage lighting. This course covers the study and execution of stage lighting with an emphasis on lighting instruments, control consoles, color theory, and the necessary paperwork used for conveying the design.

THTR 25 Theatrical Playwriting**3 Units** (Degree Applicable, CSU, UC)

Lecture: 54

Playwriting for the stage. Students will create and critique their own plays as well as study and critique plays from established authors and productions. Includes basics of linear, episodic, 'A'-B, and ritual structures.

THTR 26 Sound for Theater**3 Units** (Degree Applicable)

Lecture: 36 Lab: 54

Materials, processes, and concepts of creating audio for the live theater. Fundamentals of sound, audio and recording technology, techniques and protocols for creating sound cues, and a critical approach to sound design for theatrical productions.

THTR 27 Introduction to Stage Management**3 Units** (Degree Applicable, CSU)

Lecture: 54

Analysis of stage management protocols, documentation, and techniques for live theater. Practical application of preparation methods focused primarily on auditions, rehearsals, meetings, and performances.

THTR 28 Directing for the Stage**3 Units** (Degree Applicable, CSU)

Lecture: 54

Advisory: Eligibility for ENGL 68

Fundamental techniques for beginning stage directors. Exercises and practical scenarios for organizing and executing a rehearsal and production process.

THTR 31 Movement for the Stage**3 Units** (Degree Applicable, CSU)

Lecture: 45 Lab: 27

The art of physical communication as it applies to live theater productions. Students will discover and explore structured physical play, period movement and gesture, unarmed stage combat, and stimulus response exercises as a means to inform and illuminate a dramatic literature text. By examining various kinesthetic methodologies, students will become more adept at creating fully realized, physically expressive characters. This class is designed for actors and all interested students.

THTR 40 Theatrical Work Experience**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: Compliance with work experience regulations as designated in the College Catalog.

Work experience in an approved work site relating to classroom-based learning for students in the theatrical arts. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. It is recommended that the hours per week be equally distributed throughout the semester. Instructor approval required. A maximum of 4 units can be earned for this course.

THTR 60A Theater for Young Audiences - Performance**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Rehearsal protocol and technique for performers through the development and production of theater for young audiences. Novice performers are able to experience a full rehearsal process culminating in the practical application of learned principles in a series of public performances at local elementary schools. Field trips are required.

THTR 60B Theater for Young Audiences - Design**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Basic design principles of sound, scenery, costume, and properties through the development of an original theater production for young audiences. Students will have the opportunity to develop and execute theatrical design elements of a performance in front of an audience. Field trips are required.

THTR 60C Theater for Young Audiences - Stage Management**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lab: 108

Principles and techniques of stage management in theater for young audience productions. Students will learn to collaborate with other artists through the scheduling and management of rehearsals and a six-week tour of an original production to local at-need elementary schools. Students will experience real-world production deadlines and management challenges through the practical application of a full production process. Field trips required.

THTR 99 Special Projects in Theater**1-2 Units** (Degree Applicable, CSU)

Lab: 54-108

In order to offer students recognition for their academic interests and ability, and the opportunity to explore their disciplines in greater depth, the various departments from time to time offer Special Projects courses. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Students must have instructor's authorization before enrolling in this class. Students who repeat this course will make individual contracts with the instructor to ensure that proficiencies are enhanced.

Welding (WELD)

WELD 30 Metal Sculpture**2 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18 Lab: 54

Welding processes used in the metal sculpting industry to create three-dimensional art forms. Covers design, pre-construction analysis, and cost estimates for projects. Includes use of equipment for oxyfuel welding, gas metal arc welding (GMAW), gas tungsten arc welding (GTAW), shielded metal arc welding (SMAW), and flux-cored arc welding (FCAW). Includes demonstrations and exercises in welding as it relates to the art industry.

WELD 40 Introduction to Welding**2 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 54

Fundamentals of welding processes related to the areas of fabrication, construction, machine tool, aerospace, and the transportation industries.

WELD 50 Oxyacetylene Welding**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

Oxyacetylene fusion welding (OAW), non-fusion welding and cutting, brazing and brazed welding (OFB), gas tungsten arc welding (GTAW), and fusion and non-fusion welding. Develops understanding of and fundamental skills in modern welding practices.

WELD 51 Basic Electric Arc Welding**2 Units** (Degree Applicable)

Lecture: 18 Lab: 54

Electric arc welding and cutting processes (SMAW, GTAW, GMAW, FCAW, and PAC) and their similarities and differences. Exploring each of these arc welding processes to gain more experience and skill welding with these processes and also gain an understanding of each of these different welding processes' strengths and weaknesses. Lab and shop safety.

WELD 53A Welding Metallurgy**3 Units** (Degree Applicable, CSU)

Lecture: 54

Designed for students seeking a career in welding and welding inspection. Covers structure of matter, chemical, physical, and mechanical properties of metals, principles of alloying, solid state diffusion, plastic deformation, and heat treatment.

WELD 60 Print Reading and Computations for Welders**3 Units** (Degree Applicable)

Lecture: 54

Reading prints and performing computations for welding fabrication operations. Interpreting and visualizing prints, title blocks, welding symbols, specifications, notes, and bills of materials. Computations necessary to calculate materials, costs, sizes, and fractional, decimal, and metric conversions.

WELD 70A Beginning Arc Welding**3 Units** (Degree Applicable)

Lecture: 18 Lab: 108

Develops manipulative skills and techniques for shielded metal arc (SMAW) and flux cored arc (FCAW) welding processes in the flat and horizontal positions using AC and DC welding currents on carbon steel.

WELD 70B Intermediate Arc Welding**3 Units** (Degree Applicable)

Lecture: 18 Lab: 108

Advisory: WELD 70A

Welding high alloy steel with both Shielded Metal Arc (SMAW) and Flux Core Arc (FCAW) welding processes in the vertical and overhead positions with an introduction to Gas Metal Arc (GMAW) and Gas Tungsten (GTAW) welding.

WELD 70C Certification for Welders**3 Units** (Degree Applicable)

Lecture: 18 Lab: 108

Prerequisite: WELD 70B

Building construction for the advanced arc welding student. Special emphasis will be placed on welding symbols and the American Welding Society's (AWS) D1.1 and D1.3.

WELD 80 Construction Fabrication and Welding**3 Units** (Degree Applicable)

Lecture: 18 Lab: 108

Advisory: WELD 40 and WELD 51 and WELD 70A

Theory and practical applications of welding used in industry and construction. Designed to adapt and upgrade skills to industry standards and develop fabrication skills to supplement and augment welding skills. Includes project models such as ornamental iron gates and fences and material storage components.

WELD 81 Pipe and Tube Welding**3 Units** (Degree Applicable)

Lecture: 18 Lab: 108

Advisory: WELD 70B or WELD 70C

Welding in all positions as applied to the pipe industry. Welding processes include shielded metal arc welding (SMAW), gas tungsten arc welding (GTAW), gas metal arc welding (GMAW), flux cored arc welding (FCAW) using a variety of materials and configurations on subcritical and critical piping and tubing.

WELD 90A Gas Tungsten Arc Welding**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18 Lab: 108

Prerequisite: WELD 70A

Advanced gas tungsten arc welding (GTAW) or tungsten inert gas (TIG) of steel, aluminum, corrosion resisting steel (CRES), and exotic metals. All position welds with many surfaces and transitions.

WELD 90B Semiautomatic Arc Welding Process**3 Units** (Degree Applicable, CSU)

(May be taken for option of letter grade or Pass/No Pass)

Lecture: 18 Lab: 108

Prerequisite: WELD 70C

Semiautomatic welding processes including gas metal arc welding (GMAW), flux cored arc welding (FCAW), and submerged arc welding (SAW) with solid and tubular wires with and without gas shielding. All position welds with many varying thicknesses will be covered.

WELD 91 Automotive Welding, Cutting and Modification**3 Units** (Degree Applicable)

Lecture: 18 Lab: 108

Prerequisite: WELD 70B

This course covers the welding and cutting of metals used in fabrication in the automotive industry. Gas metal arc (GMAW/MIG), gas tungsten arc (GTAW/TIG), plasma arc cutting (PAC), and oxy-fuel Cutting (OFC) and welding will be demonstrated as they are used in the automotive industry, with an emphasis placed on specific applications and situational uses of each of these processes.

WELD 96 Work Experience in Welding**1-4 Units** (Degree Applicable)

(May be taken for Pass/No Pass only)

Lab: 60-300

Prerequisite: WELD 70B and Compliance with work experience regulations as designated in the college catalog

Provides actual on-the-job experience in welding at an approved work site which is related to classroom instruction. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit.

Zoology (ZOOL)

ZOOL 3 Fundamentals of Zoology**5 Units** (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 108

Prerequisite: BIOL 1 or BIOL 4 or BIOL 4H

Evolution, phylogenetics, anatomy, physiology, ecology, and natural history of the major phyla of invertebrate and vertebrate animals. Emphasis on a taxonomic review of the animal kingdom and their relationships to each other on the tree of life, animal adaptations and behavior, basic anatomy and physiology, cell biology, reproduction and development, genetics, ecology, and evolution. Field trips are required.



**2022-23
CATALOG**

**ADULT and
CONTINUING EDUCATION**



Adult and Continuing Education Programs

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ADULT AND CONTINUING EDUCATION PROGRAMS OVERVIEW

Adult education courses are designed to support students towards a career or college pathway, as well as to provide developmental, educational, and lifelong learning opportunities. Courses and programs are defined categorically under the California Education Code, Section 84711, whereby state funding is authorized for specific categories. Categories currently provided by Mt. SAC noncredit include: Basic Skills (including tutoring), English as a Second Language (ESL and VESL), Citizenship, Education for Older Adults, Adults with Disabilities, Secondary Education, Short-Term Vocational, and additional courses defined as adult education curricula.

Select options in left navigation for information about individual programs.
School of Continuing Education Website (<http://www.mtsac.edu/continuinged/>)

The Adult Basic Education department is committed to providing basic skills instruction and support services that prepare adult students to transition into college and employment.

ABE Certificates of Competency

Noncredit Certificates of Competency represent sequences of courses in Basic Skills, Career Development, English as a Second Language, or Secondary Education, which allow the student to develop individual competencies based on their personal educational goals and objectives. Each certificate is unique, but all provide the student an opportunity to gain skills necessary to advance in their careers, transition into a new career, or prepare for future advanced academic studies and training.

Students are encouraged to gain more information by calling the College telephone number listed in each of the specific Certificates of Competency that follow.

The Adult Basic Education department is committed to providing basic skills instruction and support services that prepare adult students to transition into college and employment. These services are offered at no cost:

- Basic Skills Instruction (Reading, Writing, and Mathematics)
- Armed Services Vocational Aptitude Battery (ASVAB) Preparation
- Support Services to EDD and WIOA I students
- Academic and Career Counseling/Advising
- Computer Literacy and Keyboarding Classes
- Typing Test Certification

As part of the enrollment process, students **must** attend an orientation and complete assessments before starting classes. Orientation sessions are offered weekly in both the day and evening, and registration can be done at any time during the semester. Counselors and educational advisors are available to provide students with the following services:

- Identifying career and academic goals
- Enrolling into college
- Financial aid information

- Educational and career planning
- Career development courses and services to prepare students for employment

For more information on Adult Basic Education programs and services, contact (909) 274-4845.

Course Prefix	Course Name	Units
BS ABE01	Career Information and Guidance	
BS ABE02	Adult Basic Education	
BS ABE05	Career Development	
BS ASVB1	ASVAB Preparation 1	
BS ASVB2	ASVAB Preparation 2	
BS BIO50	Biology Basic Skills	
BS CNSL4	Orientation for Noncredit Programs	
BS EPCS	English Preparation for College Success	
BS HCM1	Transitional Math for Health Careers 1	
BS HSEMA	HSE Preparation: Mathematics	
BS HSERL	HSE Preparation: Reasoning through Language Arts	
BS HSESC	HSE Preparation: Science	
BS HSESS	HSE Preparation: Social Studies	
BS MCCR	Math for College and Career Readiness	
BS LRN01	Short-Term Review	
BS LRN03	Math Skills Review	
BS LRN06	Personal Computer Applications	
BS LRN50	Learning Support Laboratory	
BS LRN76	Improving Reading Comprehension	
BS LRN81	Improving Writing	
BS MPS	Math Preparation for Statistics Success	
BS MPSTM	Math Preparation for BSTEM Success	
BS MTH01	Developmental Mathematics Concepts and Applications	
BS RWCCR	Reading and Writing for College and Career Readiness	
BS STD80	Foundations for Academic Success	
BS TR01	All Subject Tutoring	

ASVAB Test Preparation

Certificate of Competency
#36870

This short-term program prepares students to successfully pass the Armed Services Vocational Aptitude Battery (ASVAB) exam. Career development is also provided to increase employability and work skills. The program is designed to assist students to achieve the maximum score which allows for additional work opportunities within the military. Students must pass both core courses to earn the ASVAB certificate.

Program Learning Outcomes

- Students will achieve a sufficient score to enter a branch of the military (Army, Air Force, Marines, Navy, Coast Guard).
- Students will demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BS ASVB1	ASVAB Preparation 1	
BS ASVB2	ASVAB Preparation 2	

Basic Career Readiness

Certificate of Competency
#30805

This certificate provides courses that will improve the entry-level basic skills needed for employment. Career Development includes personal career assessment, basic interview skills, and job search techniques that students can apply to current and future employment. Students will increase basic skills in reading comprehension, writing, math and basic computer literacy. Students are required to take Career Development and may take either Personal Computer Applications or Adult Basic Education or both. For more information, contact the Adult Basic Education Department at (909) 274-4845.

Program Learning Outcomes

Upon completion of Personal Computer Applications and Career Development courses, students will be able to demonstrate proficiency in software applications and work readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BS ABE02	Adult Basic Education	
BS ABE05	Career Development	
BS LRN06	Personal Computer Applications	

Basic Skills

Certificate of Competency
#24058

The Basic Skills Certificate of Competency provides courses that will improve basic reading, writing, and mathematics skills. Improved literacy will benefit students in obtaining employment, advancing their careers, or preparing for future advanced academic studies. Students will progress through different levels within this sequence based on individual need. Other elective courses provide students with the necessary admissions, assessment, educational planning, and enrollment into credit.

Required Courses

Course Prefix	Course Name	Units
BS ABE02	Adult Basic Education	
BS LRN01	Short-Term Review	

Recommended Electives

Course Prefix	Course Name	Units
BS ABE01	Career Information and Guidance	
BS CNSL4	Orientation for Noncredit Programs	

College Readiness for Healthcare Programs

Certificate of Competency
#38783

This is a short-term program to prepare students in noncredit programs and adult schools to successfully transition into healthcare college credit courses. Career development and academic counseling are also provided to increase employability, work skills, and provide a pathway to community college healthcare courses.

Program Learning Outcomes

- Students will achieve sufficient score on occupational and college program entry level tests.
- Students will be prepared to transition to college or career programs.
- Students will demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BS ABE02	Adult Basic Education	
PLUS Choose one (1) course from the following:		
BS HCM1	Transitional Math for Health Careers 1	
VOC HEP	Healthcare Exam Preparation	

Recommended Electives

Course Prefix	Course Name	Units
BS ABE01	Career Information and Guidance	
BS ABE05	Career Development	

College Readiness for Math and English

Certificate of Competency
#42033

This is a short-term noncredit program to prepare students to transition successfully into transfer-level college math and English credit courses. Career development and academic counseling are also provided to increase time management skills, study skills, and provide a pathway to community college credit courses.

Program Learning Outcomes

- Students will use appropriate types of supporting details including properly formatted direct quotations, paraphrase, and summary for textual support.
- Students will revise writing in response to feedback.
- Students will develop critical thinking skills in the interpretation of texts in both discussion and writing.
- Students will formulate effective thesis statements that focus the essay's argument and advance a clear assertion about the subject.
- Students will develop arguments in response to prompts, using close reading and critical analyses of texts as well as relevant factual support.
- Students will apply numerical and algebraic reasoning skills to statistical analysis of data sets.
- Students will perform algebraic computations according to the appropriate order of operations for calculations by hand and with technology.
- Students will calculate mean, median, mode, standard deviation, quartiles, and range.
- Students will construct and interpret various graphical representations of statistical data.

- Students will apply knowledge of linear equations to scatterplots, correlation, prediction, residuals, and linear regression models.
- Students will solve probability problems using decimals, fractions, percentages, exponents, or factorials
- Students will graph basic functions in function notation.
- Students will perform algebraic operations and graph inequalities.
- Students will apply algebraic methods, including factoring, to reduce and solve quadratic and other polynomial equations.
- Students will solve rational equations and inequalities.
- Students will apply properties of exponents to solve exponential and radical equations.
- Students will determine solutions to systems of equations using elimination, substitution, and matrix row operations.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Required Courses

Course Prefix	Course Name	Units
BS ABE02	Adult Basic Education	
BS EPCS	English Preparation for College Success	
or		
BS MPS	Math Preparation for Statistics Success	
or		
BS MPSTM	Math Preparation for BSTEM Success	

Recommended Electives

Course Prefix	Course Name	Units
BS ABE01	Career Information and Guidance	
BS ABE05	Career Development	

Financial and Database Management

Certificate of Completion #36115

This short-term program is intended to prepare students to become bookkeepers and entry level database developers. Career development is also provided to increase employability and work skills. This program is specifically for noncredit students who are seeking training in business fields for immediate entry-level employment. Furthermore, this program will also provide foundational skills and training for students to enter into more advanced accounting and database development training programs. Students must pass both core courses to earn the Financial and Database Management certificate.

Program Learning Outcomes

- Students will be prepared to gain employment.
- Students will demonstrate job readiness skills.
- Students will progress through the employment ladder by obtaining additional skills in database management and bookkeeping.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC FDB1	Financial and Database Management 1	
VOC FDB2	Financial and Database Management 2	

Elective Course

Course Prefix	Course Name	Units
BS ABE05	Career Development	

Adults with Disabilities

The School of Continuing Education's (SCE) ***IMPACT** Program provides education for adults with intellectual disabilities (ID) and other developmental disabilities (DD). A comprehensive curriculum is under development to prepare students for employment, living independently, participating in college life, and becoming more independent in the community. The College campus and surrounding community provide a rich environment for instruction and skill development. **IMPACT** enables students with ID/DD to attend college and maximize their potential for integration into the mainstream of society.

**(Independent living skills, Mobility training, Physical health and well-being, Advocacy for self, College career and job readiness skills, and Technology training)*

Purpose:

- To provide a coordinated instructional program designed to help students develop their social, personal, academic, vocational, and independent living skills.
- To provide an inclusive, structured environment that enables individuals with ID/DD to develop and manage appropriate patterns of behavior within a social and vocational context.
- To develop a person-centered educational and vocational plan by assessing the interests, needs, and capabilities of each participant.

For more information, on **IMPACT** please contact the Department at (909) 274-4192.

Course Prefix	Course Name	Units
ACCS IBSID	Introduction to Banking for Students with Intellectual Disabilities	
ACCS ILCS	Independent Living Skills - Consumer Skills	
ACCS ILHFS	Independent Living Skills - Health and Fitness Skills	
ACCS ILMS	Independent Living Skills - Money Skills	
ACCS ILPLS	Independent Living Skills - Practical Living Skills	
ACCS ILSBB	Independent Living Skills - Basic Budgeting and Money Management	
ACCS ILSHS	Independent Living Skills - Human Sexuality	
ACCS ILSPC	Independent Living Skills - Personal Care	
ACCS ILSRR	Independent Living Skills - Romantic Relationships	
ACCS ILSSS	Independent Living Skills - Safety Skills	
ACCS MBS	Independent Living Skills - Memory Building Skills	
DSPS ELL01	Lifelong Learning for the Special Needs Population	
DSPS IAEP	Interacting with Emergency Personnel and Authorities	

Education for Older Adults

Courses designed for older adults (age 55+ years)¹ provide the full continuum of education for the pursuit of long-standing educational goals. Classes are offered in the arts, decorative arts, and health, and

are conducted at various senior and community centers and residential facilities throughout the Mt. San Antonio College District.

¹ Although courses are designed for the older adult, anyone 18 years of age or older may enroll.

Course Prefix	Course Name	Units
OAD BHTH1	Brain Health 1	
OAD BHTH2	Brain Health 2	
OAD ELL04	Lifelong Learning for Older Adults	
OAD ELL05	Lifelong Learning through Current World Events	
OAD FNA03	Oil Painting	
OAD FNA04	Watercolor Painting	
OAD FNA32	Drawing-Beginning Through Advanced	
OAD MOX01	Healthy Aging	
OAD MOX02	Healthy Aging - Principles of Slow Movement	
OAD MOX04	Healthy Aging - Principles of Posture and Flexibility	
OAD MOX06	Healthy Aging - Principles of Aquatic Resistance	
OAD MOX11	Healthy Aging: Fall Prevention, Balance and Mobility	

Mountie Volunteer Program (MVP)

The MVP Program provides volunteer opportunities for interested EOA student participants.

Generations Program

The Generations Program provides educational opportunities that foster inter-generational relationships, and links generations for the good of society, such as student athletes providing volunteer hours for the Education for Older Adults program.

For more information on Education for Older Adults, please call (909) 274-4192.

Class Locations

BPAQ - Baldwin Park Aquatic Center

4100 Baldwin Park Boulevard, Baldwin Park
(626) 813-5270

BPSC - Baldwin Park Julia McNeil Senior Center

4100 Baldwin Park Boulevard, Baldwin Park
(626) 813-5245

BRDG - Bridgecreek Retirement Center

3601 Holt Avenue, West Covina
(626) 332-1135

CMRNPK - Cameron Park Community Center

1305 E. Cameron Avenue, West Covina
(626) 919-6966

COUN - Country View Assisted Living

824 Cameron, West Covina
(626) 962-3511

COV-AT - Atria-Covina

825 W. San Bernardino Road, Covina
(626) 967-9621

CROSAS - Carolyn Rosas Park

18500 E. Farjardo St., Rowland Heights
(626) 854-5557

CSCC - Covina Senior & Community Center

815 N. Barranca Avenue, Covina
(626) 430-2284

DBC - Diamond Bar Center

1600 S. Grand Avenue, Diamond Bar
(909) 839-7070

DBL - Diamond Bar Library

21800 Copley Drive, Diamond Bar
(909) 861-4978

ESGVJC - East San Gabriel Valley Japanese Community Center

1203 W. Puente Avenue, West Covina
(626) 960-2566

EMSD - Serento Casa Senior Living

1740 S. San Dimas Avenue, San Dimas
(909) 544-4869

GPP - Ganesha Park Pool

1575 N. White Avenue, Pomona
(909) 620-2329

HERI - Heritage Park Community Center

2900 Brea Canyon Road, Diamond Bar
(909) 396-5699

HHCC - Hacienda Heights Community Center

1234 Valencia Avenue, Hacienda Heights
(626) 333-3250

HILL - Hillcrest Homes

2705 Mountain View Drive, La Verne
(909) 392-4358

IRC - Irwindale Recreation Center

16053 Calle de Paseo, Irwindale (Behind Irwindale City Hall)
(626) 430-2227

IRWN - Irwindale Senior Citizen's Center

16116 Arrow Highway, Irwindale
(626) 430-2284

LPSC - La Puente Senior Center

16001 E. Main Street, La Puente
(626) 855-1585

LV - La Verne Community Center

3680 D Street, La Verne
(909) 596-8776

MAS - Masonic Home

1650 Old Badillo Street, Covina

(626) 251-2200

MSAG - Mt. San Antonio Gardens

900 E. Harrison Avenue, Pomona
(909) 624-5061

PANPK - Pantera Park

738 Pantera Drive, Diamond Bar
(909) 839-7060

PLUM - Stanley Plummer Building

245 E. Bonita Avenue, San Dimas
(909) 394-6290

PSC - Palomares Senior Center

499 E. Arrow Highway, Pomona
(909) 620-2324

PATH - Rowland Heights Community Center

18150 Pathfinder Road, Rowland Heights
(562) 691-1624

RAN - West Park Senior Living

801 Cypress Way, San Dimas
(909) 592-9662

RGNT - Regency Grand at West Covina

150 S. Grand Avenue, West Covina
(626) 332-3344

SD - San Dimas Senior/Community Center

201 E. Bonita Avenue, San Dimas
(909) 394-6293

SDMS - San Dimas Retirement Center

834 W. Arrow Highway, San Dimas
(909) 599-4512

SDSR - San Dimas Swim & Racquet Club

990 W. Covina Blvd., San Dimas
(909) 592-1430

SOP - Shadow Oak Park Community Center

2121 Shadow Oak Drive, West Covina
(626) 965-0328

VILLA - Walnut Valley Senior Living Community

19850 Colima, Walnut
(909) 595-5030

WALT - Walnut Senior Center

21215 La Puente Road, Walnut
(909) 598-6200

WPK - Washington Park

865 E. Grand Avenue, Pomona
(909) 620-2305

WCSCC - West Covina Senior Citizen's Center

2501 E. Cortez Street, West Covina

(626) 331-5366

WPCC - Westmont Park Community Center

1808 W. 9th Street, Pomona
(909) 620-2329

WSSC - William Steinmetz Senior Center

1545 S. Stimson Avenue, Hacienda Heights
(626) 934-7041

English as Second Language

Classes and programs are available for English language learners at all levels of proficiency, from low literacy to advanced and ready to transition into credit or career pathways. Classes and services include:

- Orientation and assessment for level placement (Foundations – Level 6)
- Core level classes focusing on integrated skills (grammar, listening, speaking, reading, and writing)
- Skill-focused classes (Speaking, Writing, Pronunciation, and Reading)
- Specialized courses (TOEFL preparation, Citizenship preparation)
- Transition to credit and/or career training program (VESL Career Paths)
- English for Special Uses (ESU) courses (Accounting, Real Estate, and Healthcare)
- Supplemental ESL workshops, tutoring, and conversation groups
- Academic and career counseling, educational planning, and annual career conference
- Workshops and classroom presentations on college and career options
- ESL Certificates include:
 - VESL Career Paths
 - ESL - Beginning Level
 - ESL - Intermediate Level
 - ESL - Advanced Level

See the left menu for more details.

The ESL office and registration services are located in the Language Center, Building 66. For more information, please contact us at (909) 274-5235, email us at ESLreg@mtsac.edu, or visit us on our website (<https://www.mtsac.edu/esl/>).

VESL Career Paths

**Certificate of Competency
#35611**

VESL Career Paths is a two-semester program designed to facilitate advanced level ESL students in transitioning from noncredit ESL to credit and/or vocational certificate programs. The VESL Program builds upon advanced English language proficiency, computer literacy, and education and career exploration skills. Students take the group of courses together in cohorts and must successfully complete the two-semester program in order to receive a VESL certificate.

VESL is for students who:

- Need more language and work skills for better job opportunities
- Want a college degree but need to improve English and study skills before transferring to credit
- Have a college degree and work experience from native country, but need to improve their English so they can earn a vocational certificate
- Need more English and computer skills in order to be more active in their family's life and in their community

Students who complete the VESL program:

- Increase English proficiency
- Gain experience using computers
- Learn how to design and give media presentations
- Develop job search and interviewing skills
- Earn a Certificate of Competency for VESL
- Earn a General Office Skills Certificate of Completion

Program Outline

Course Prefix	Course Name	Units
Required Courses		
ESL VSPK	VESL Speaking	
ESL VVRT	VESL Writing	
BS CNSL5	Career and Life Planning for ESL	
VOC CS41	Office Management Skills	
VOC CSB15	Microcomputer Applications	

Course Prefix	Course Name	Units
Recommended Electives		
ESL LANG2	VESL Language and Computer Skills Lab	
ESL LANG3	English for Special Uses	
ESL TOEFL	TOEFL Preparation (Test of English as a Foreign Language)	
ESL VHLTH	English for Health Professionals	
ESL 72	American English Pronunciation	
ESL 90	Accelerated Writing for English Language Learners	
VOC CS11	Computer Keyboarding	
VOC CS12	Intermediate Computer Keyboarding	
BS LRN50	Learning Support Laboratory	

VESL 1 (1st Semester)

- Office Management Skills (VOC CS41)
- VESL Speaking (ESL VSPK)
- VESL Writing (ESL VVRT)
- Career and Life Planning for ESL (BS CNSL5)

VESL 2 (2nd Semester)

- Microcomputer Applications (VOC CSB15)
- English (AMLA, credit English, or an elective)

*NOTE: Students are **required** to take **ALL** classes in the VESL program together.

COST: The VESL program is free, with the exception of course books and campus parking permit.

ESL - Beginning Level

Certificate of Competency

#38082

ESL students are placed within the sequence of beginning-level ESL courses according to their English abilities. Students progress through this sequence based on individual needs before transitioning into intermediate-level ESL courses or employment. Supplemental courses including speaking, writing, reading, pronunciation, vocational language, and learning support courses will assist their progress through the sequence and may be taken along with ESL level courses as needed.

Courses are offered all year long, including winter and summer intersessions. Classes are offered days, evenings and weekends.

Program Learning Outcomes

Upon successful completion of this program, students placed within the ESL Foundations through ESL Level 2 will be able to successfully complete the sequence of beginning level courses and demonstrate their skill achievement in beginning-level English language proficiency by passing the department standardized comprehensive final examination.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
ESL FDN	ESL - Foundations	
ESL PLVL1	ESL - Pre-Level 1	
ESL LVL1	ESL - Level 1	
ESL LVL2	ESL - Level 2	

Recommended Electives

Course Prefix	Course Name	Units
ESL SPKP1	ESL - Speaking A for Beginners (Pre-1)	
ESL WRTP1	ESL - Writing A for Beginners (Pre-1)	
ESL SPKA	ESL - Speaking A	
ESL WRTA	ESL - Writing A	
ESL READA	ESL - Reading A	
ESL PRONA	ESL - Pronunciation A	
ESL LANG1	ESL Language Skills Laboratory	
ESL LANG3	English for Special Uses	
BS LRN50	Learning Support Laboratory	

ESL - Intermediate Level

Certificate of Competency

#38097

ESL students are placed within the sequence of intermediate-level ESL courses according to their English abilities. Students progress through this sequence based on individual needs before transitioning into advanced-level ESL courses or employment. Supplemental courses including speaking, writing, reading, pronunciation, vocational language, and learning support courses will assist their progress through the sequence and may be taken along with ESL level courses as needed.

Courses are offered all year long, including winter and summer intersessions. Classes are offered days, evenings and weekends.

Program Learning Outcomes

Upon successful completion of this program, students placed within ESL Level 3 and ESL Level 4 will be able to successfully complete the

sequence of intermediate level courses and demonstrate their skill achievement in intermediate-level English language proficiency by passing the department standardized comprehensive final examination.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
ESL LVL3	ESL - Level 3	
ESL LVL4	ESL - Level 4	

Recommended Electives

Course Prefix	Course Name	Units
ESL SPKB	ESL - Speaking B	
ESL WRTB	ESL - Writing B	
ESL READB	ESL - Reading B	
ESL PRONB	ESL - Pronunciation B	
ESL LANG1	ESL Language Skills Laboratory	
ESL LANG3	English for Special Uses	
ESL 70	Basic to Intermediate Writing and Reading	
BS LRN50	Learning Support Laboratory	

ESL - Advanced Level

Certificate of Competency

#38094

ESL students are placed within the sequence of advanced-level ESL courses according to their English abilities. Students progress through this sequence based on individual needs before transitioning into credit courses or employment. Supplemental courses including speaking, writing, reading, pronunciation, vocational language, and learning support courses will assist their progress through the sequence and may be taken along with ESL level courses as needed.

Courses are offered all year long, including winter and summer intersessions. Classes are offered days, evenings and weekends.

Program Learning Outcomes

Upon successful completion of this program, students placed within ESL Level 5 and ESL Level 6 will be able to successfully complete the sequence of advanced level courses and demonstrate their skill achievement in advanced-level English language proficiency by passing the department standardized comprehensive final examination.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
ESL LVL5	ESL - Level 5	
ESL LVL6	ESL - Level 6	

Recommended Electives

Course Prefix	Course Name	Units
ESL SPKC	ESL - Speaking C	
ESL WRTC	ESL - Writing C	
ESL READC	ESL - Reading C	
ESL PRONC	ESL - Pronunciation C	
ESL LANG1	ESL Language Skills Laboratory	
ESL LANG3	English for Special Uses	

ESL TOEFL TOEFL Preparation (Test of English as a Foreign Language)

ESL VHLTH English for Health Professionals

ESL 72 American English Pronunciation

ESL 80 Intermediate to Advanced Writing and Reading

BS LRN50 Learning Support Laboratory

Counseling Services:

The ESL Counseling Team offers academic, career, and personal/educational counseling to assist current and prospective students in developing their educational plans, coordinating their career goals, and navigating the American educational system. Students are encouraged to visit or call the office for appointments; walk-in appointments are also available. Some services include:

- Providing orientation and educational planning to noncredit students
- Defining values, skills, aptitudes, and abilities for the right career choice
- Exploring careers of interest and pathways leading to them
- Providing workshops to help transition into credit classes
- Researching license, degree, and transfer of units/credit
- Finding referrals to campus and community resources
- Access to computers and printers in the Career Guidance Center

For more information, call (909) 274-5715 or email at ESLCounseling@mtsac.edu.

Learning Resources:

The ESL Department offers a variety of learning opportunities outside of the traditional classroom in order to help support students with development of effective English communication and lifelong habits of learning. Some of these services include:

- ESL Library reading and writing material for all levels and available for check out
- Workshops on special topics such as learning styles and vocabulary development
- Language Learning Center open lab for independent practice
- Tutoring services in grammar and writing

Course Prefix	Course Name	Units
ESL 70	Basic to Intermediate Writing and Reading	
ESL 72	American English Pronunciation	
ESL 80	Intermediate to Advanced Writing and Reading	
ESL 90	Accelerated Writing for English Language Learners	
ESL FDN	ESL - Foundations	
ESL PLVL1	ESL - Pre-Level 1	
ESL LANG1	ESL Language Skills Laboratory	
ESL LANG2	VESL Language and Computer Skills Lab	
ESL LANG3	English for Special Uses	
ESL LVL1	ESL - Level 1	
ESL LVL2	ESL - Level 2	
ESL LVL3	ESL - Level 3	
ESL LVL4	ESL - Level 4	
ESL LVL5	ESL - Level 5	
ESL LVL6	ESL - Level 6	
ESL PRONA	ESL - Pronunciation A	

ESL PRONB	ESL - Pronunciation B
ESL PRONC	ESL - Pronunciation C
ESL READA	ESL - Reading A
ESL READB	ESL - Reading B
ESL READC	ESL - Reading C
ESL SPKP1	ESL - Speaking A for Beginners (Pre-1)
ESL SPKA	ESL - Speaking A
ESL SPKB	ESL - Speaking B
ESL SPKC	ESL - Speaking C
ESL VHLTH	English for Health Professionals
ESL VSPK	VESL Speaking
ESL VVRT	VESL Writing
ESL WRTP1	ESL - Writing A for Beginners (Pre-1)
ESL WRTA	ESL - Writing A
ESL WRTB	ESL - Writing B
ESL WRTC	ESL - Writing C
CITZ NAT	Citizenship for Naturalization
ESL TOEFL	TOEFL Preparation (Test of English as a Foreign Language)
BS CNSL5	Career and Life Planning for ESL
BS LRN50	Learning Support Laboratory
VOC CS11	Computer Keyboarding
VOC CS12	Intermediate Computer Keyboarding
VOC CSB15	Microcomputer Applications
VOC CS41	Office Management Skills

Language Learning Center

Mt. San Antonio College's Language Learning Center (LLC) provides faculty guided, as well as independent, learning opportunities for ESL, AMLA, Arabic, Chinese, French, German, Italian, Japanese, Spanish, and Sign Language. Located in the Learning Technology Center, Building 77, room 1005, the LLC serves both credit and noncredit students learning a language. Users of the LLC may register year-round. Offerings include:

- Interactive language software in all supported languages
- DVD's, videos, audio recordings
- Pronunciation software

For more information on the LLC, contact (909) 274-4580.

High School Equivalency GED

Adult Basic Education offers courses and two ways to prepare for a California HS Equivalency Certificate. On-campus preparation for the GED (General Education Development) or HiSET (High School Equivalency Testing) is available in the Adult Basic Education Lab. Students can prepare in the various subjects and learning plans are designed for students to earn the highest possible exam scores.

For more information on the program and how to enroll, please visit our website at:

High School Equivalency/GED Preparation (http://www.mtsac.edu/continuing/noncredit/abe/ged_prep.html)

GED/HSE Preparation

Certificate of Competency
#30778

Improve the academic skills needed for passing a High School Equivalency Exam (GED, HiSET, TASC) in the areas of math, reading, writing, science, and social studies.

Program Learning Outcomes

Upon successful completion of this certificate, students will be prepared to pass the High School Equivalency exams and successfully transition to credit or employment.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BS HSEMA	HSE Preparation: Mathematics	
Improve mathematical knowledge and skills in preparation for the Math section of a High School Equivalency Exam. Test areas include number operations, geometry, statistics, and algebra.		
BS HSERL	HSE Preparation: Reasoning through Language Arts	
Improve the organizational and grammatical knowledge and skills in preparation for the Language Arts and Writing section of a High School Equivalency Exam. Test areas include reading comprehension, argument analysis and text comparison, grammar mechanics, and extended response development.		
BS HSESC	HSE Preparation: Science	
Improve scientific knowledge and skills in preparation for the Science section of a High School Equivalency Exam. Test areas include life science, physical science, earth and space science.		
BS HSESS	HSE Preparation: Social Studies	
Improve historical knowledge in preparation for the social studies section of a High School Equivalency Exam. Test areas include United States history, world history, geography, government, and economics.		

HSE Mathematics

Certificate of Competency
#36871

This short-term program prepares students to successfully pass High School Equivalency (HSE) exams. Career development and academic counseling are also provided to increase employability, work skills and provide a pathway to community college courses. This program is designed to assist students in achieving the maximum score which allows for additional work opportunities and higher placement on college level placement exams. Students must pass both core courses to earn the HSE Math Certificate.

Program Learning Outcomes

School Equivalency Certificate for Math, students will be prepared to:

- Solve word problems using fractions, decimals, and percentages.
- Simplify and solve systems of equations and inequalities.
- Evaluate functions.
- Evaluate graphs to solve geometric problems.
- Compute mean, median, and mode.
- Apply properties of triangles and quadrilaterals.
- Calculate scale factors.
- Calculate area, perimeter, volume, and surface area of composite figures.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BS ABE02	Adult Basic Education	
BS HSEMA	HSE Preparation: Mathematics	

- Explain work, motion, and force.
- Compare and contrast animal and plant cells.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BS ABE02	Adult Basic Education	
BS HSESC	HSE Preparation: Science	

HSE Reading and Language Arts

Certificate of Competency
#36843

This short-term program prepares students to successfully pass High School Equivalency (HSE) exams. Career development and academic counseling are also provided to increase employability, work skills and provide a pathway to community college courses. This program is designed to assist students in achieving the maximum score which allows for additional work opportunities and higher placement on college level placement exams. Students must pass both core courses to earn the HSE Reading and Language Arts Certificate.

Program Learning Outcomes

School Equivalency Certificate for Math, students will be prepared to:

- Identify main idea and details in a reading sample.
- Summarize workplace documents and literature.
- Identify author's point of view, tone, and style.
- Compare and contrast texts in similar and different genres.
- Edit sample texts.
- Construct thesis and cite supporting evidence.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BS ABE02	Adult Basic Education	
BS HSERL	HSE Preparation: Reasoning through Language Arts	

HSE Science

Certificate of Competency
#36874

This short-term program prepares students to successfully pass High School Equivalency (HSE) exams. Career development and academic counseling are also provided to increase employability, work skills and provide a pathway to community college courses. This program is designed to assist students in achieving the maximum score which allows for additional work opportunities and higher placement on college level placement exams. Students must pass both core courses to earn the HSE Science Certificate.

Program Learning Outcomes

School Equivalency Certificate for Math, students will be prepared to:

- Identify skeletal, muscular, digestive, and respiratory systems.
- Summarize ecosystems.
- Identify chemical properties.
- Evaluate the genetic code.

HSE Social Studies

Certificate of Competency
#36873

This short-term program prepares students to successfully pass High School Equivalency (HSE) exams. Career development and academic counseling are also provided to increase employability, work skills and provide a pathway to community college courses. This program is designed to assist students in achieving the maximum score which allows for additional work opportunities and higher placement on college level placement exams. Students must pass both core courses to earn the HSE Social Studies Certificate.

Program Learning Outcomes

School Equivalency Certificate for Math, students will be prepared to:

- Identify how the U.S. government is structured.
- Identify the factors that led to the Constitutional Convention.
- Summarize the effects of the Civil War.
- Describe the events that led to the Great Depression.
- Describe how the events since World War II have shaped the United States foreign policy.
- Explain the new global culture and economy.
- Define economic terms.
- Explain how fiscal and monetary policies affect economies.
- Explain how people change the Earth's physical geography.
- Analyze maps to understand boundaries and borders.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BS ABE02	Adult Basic Education	
BS HSESS	HSE Preparation: Social Studies	

High School Programs

High School Diploma/Secondary Education

Adult students can earn credits toward completion of a **high school diploma** under the guidance of an instructor and support staff. Coursework is offered in small group instruction, computer aided instruction, and individual study. For more information on the requirements for the diploma, please visit: Adult High School Diploma (<http://www.mtsac.edu/continuing/noncredit/highschool/>)

Secondary Education Certificate (p. 416)

HS English Competency

The HS English Competency certificate is designed to demonstrate student achievement from basic to advanced skills in reading comprehension, literary analysis, writing mechanics, and oral presentations. Students will use a variety of genres and themes to expand their knowledge of the human experience within historical, social, and political contexts. The communication and analytical skills learned in the program will allow students to participate in and evaluation intellectual discussions as well as speak and write with an awareness of self, others, and context. Completion of this certificate will prepare students for college and work. This certificate is in alignment with UC A-G requirements and will provide the skills necessary for students to be prepared to take credit English courses. The program is created for the purpose of preparing students for college English courses by focusing on composition skills and critical thinking.

HS English Competency (p. 416)

High School Referral

High School Referral (HSR) is a self-paced, guided-study program designed to allow high school students the opportunity to retake classes to earn a higher grade and make up credits. Students must be currently enrolled in high school and have parent and counselor consent to participate. For more information on the HSR program, please visit: High School Referral (<https://www.mtsac.edu/highschoolreferral/>)

Course Prefix	Course Name	Units
BSHS ALG1	High School Algebra 1	
BSHS ALG2	High School Algebra 2	
BSHS ART1	High School Art and Creative Expression	
BSHS ART2	High School Art 2	
BSHS BIO	High School Biology	
BSHS CHEM	High School Chemistry	
BSHS CIV	High Schools Civics	
BSHS CPTC	High School Computer Technology	
BSHS EASC	High School Earth Science	
BSHS ECON	High School Economics	
BSHS ENG1	High School English 1	
BSHS ENG2	High School English 2	
BSHS ENG3	High School English 3	
BSHS ENG4	High School English 4	
BSHS GEOG	High School Geography	
BSHS GEOM	High School Geometry	
BSHS HLTH	High School Health	
BSHS INMA1	HS Integrated Math 1	
BSHS INMA2	HS Integrated Math 2	
BSHS INMA3	HS Integrated Math 3	
BSHS MUSC	High School Music Appreciation	
BSHS PHSC	High School Physical Science	
BSHS PLNG	High School Planning and Guidance	
BSHS PREA	High School Pre-Algebra	
BSHS PSY	High School Psychology	
BSHS READ	High School Reading	
BSHS SOC	High School Sociology	
BSHS SPN1	High School Spanish 1	
or BSHS SPNSHS Spanish for Native Speakers 1		
BSHS SPN2	High School Spanish 2	

or BSHS SPNSHigh School Spanish for Native Speakers 2

BSHS SSK	High School Study Skills
BSHS USH	High School U.S. History
BSHS WHS	High School World History
BSHS WREX	High School Expository Writing
BSHS WRIT1	Literature and Writing Fundamentals 1
BSHS WRIT2	Literature and Writing Fundamentals 2

HS English Competency

Certificate of Competency
#37544

This certificate provides English courses that demonstrate student achievement within English discipline, including communication and analytical skills needed for post-secondary education and careers. The courses provide students with the skills to develop written and spoken clarity focusing on constructing essays, applying rhetoric strategies, and research skills. Completion of English 3 and English 4 indicate competency of English 1 and English 2.

Program Learning Outcomes

- Construct an essay with all necessary components.
- Analyze a historically or culturally significant work of literature.
- Analyze grade-level appropriate material based on the author's position/belief.
- Write a research investigative report that conveys a well defined perspective and tightly-reasoned argument.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BSHS ENG1	High School English 1	
BSHS ENG2	High School English 2	
BSHS ENG3	High School English 3	
BSHS ENG4	High School English 4	

Recommended Elective

Course Prefix	Course Name	Units
BSHS WREX	High School Expository Writing	

Secondary Education/ High School Diploma

Certificate of Competency
#36743

The Secondary Education Certificate provides all courses needed to satisfy requirements for a high school diploma, which will increase future employment and higher educational opportunities. High school credits may be granted for previous equivalent courses taken at accredited institutions. Students will complete 160 high school credits with a minimum of 20 residency credits to be completed at Mt. San Antonio College.

For more detailed information regarding course and graduation requirements, please call (909) 274-4937.

Program Learning Outcomes

- Students will improve overall completion rates of certificates, courses, and transitions to work and college
- There will be an increase in the number of diplomas earned by Adult High School Diploma students.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BSHS BIO	High School Biology	
BSHS CHEM	High School Chemistry	
BSHS EASC	High School Earth Science	
BSHS PHSC	High School Physical Science	
BSHS CIV	High Schools Civics	
BSHS ECON	High School Economics	
BSHS GEOG	High School Geography	
BSHS PSY	High School Psychology	
BSHS SOC	High School Sociology	
BSHS USH	High School U.S. History	
BSHS WHS	High School World History	
BSHS ART1	High School Art and Creative Expression	
BSHS ART2	High School Art 2	
BSHS MUSC	High School Music Appreciation	
BSHS SPN1	High School Spanish 1	
	or BSHS SPNSHS Spanish for Native Speakers 1	
BSHS SPN2	High School Spanish 2	
	or BSHS SPNSHS Spanish for Native Speakers 2	
BSHS ENG1	High School English 1	
BSHS ENG2	High School English 2	
BSHS ENG3	High School English 3	
BSHS ENG4	High School English 4	
BSHS WREX	High School Expository Writing	
BSHS WRIT1	Literature and Writing Fundamentals 1	
BSHS WRIT2	Literature and Writing Fundamentals 2	
BSHS ALG1	High School Algebra 1	
BSHS ALG2	High School Algebra 2	
BSHS GEOM	High School Geometry	
BSHS PREA	High School Pre-Algebra	
BSHS INMA1	HS Integrated Math 1	
BSHS INMA2	HS Integrated Math 2	
BSHS INMA3	HS Integrated Math 3	
BSHS HLTH	High School Health	

Elective Courses

Course Prefix	Course Name	Units
BSHS CPTC	High School Computer Technology	
BSHS READ	High School Reading	
BSHS PLNG	High School Planning and Guidance	
BSHS SSK	High School Study Skills	

Short-Term Vocational

The School of Continuing Education offers courses and certificates in vocational areas including health careers, electronics, business, welding, and other high job growth careers. Some of these certificates, such as Certified Nursing Assistant (CNA) and Electronics Systems Technology (EST), are short-term by design to provide you with the skills and knowledge necessary to work in a particular field.

Additionally, many credit vocational classes offer a limited number of seats available to Continuing Education students for noncredit. Students may enroll in these classes in accordance with procedures outlined in the School of Continuing Education class schedule. Students will not receive college credit.

Select options in left navigation for information about individual programs. Vocational Programs Website (<http://www.mtsac.edu/continuinged/noncredit/vocational/>)

Registration

For Continuing Education (noncredit) courses and programs, admission and registration are completed using the online application at <http://www.mtsac.edu/noncreditapp>. Students may also register by coming to the School of Continuing Education office at building 40, room 101. For more information, please call (909) 274-5723.

Fees and Expenses

There is no tuition for noncredit vocational courses. Some courses, however, include a fee for materials provided to students. Books and supplies needed for a class are the responsibility of the student. All students who park on the Mt. SAC campus must have a valid parking permit. Student parking permits may be purchased at the Cashier's Office. One-day parking permits may be purchased at various parking lots on campus. See the campus map for details.

Counseling Services

The School of Continuing Education has counselors available to assist students interested in earning Certificates of Completion or general course information.

For more information or to schedule an appointment with a counselor, please call (909) 274-5723.

Fee-Based Certificate Programs

The School of Continuing Education also offers fee-based Certificate Programs. These include:

- CPR and First Aid
- Makeup Artistry
- Medical Insurance Billing
- Water Technology

Specific certificate content and more information can be found by visiting www.communityed.mtsac.edu or by calling (909) 274-4220.

How to Complete a Certificate

Certificates of Completion

The School of Continuing Education offers short-term vocational certificates of completion in a few areas. Generally, these certificates can be completed anywhere between six weeks and six months. These certificates prepare students to work in certain fields and also serve

as the first step in their career ladder to higher level positions requiring additional schooling.

How to Complete and Obtain a Certificate

In order for students to receive a Certificate of Completion, the student must complete the following:

- Register for the desired courses (and pay material fees if applicable)
- Satisfactorily complete coursework, papers, projects, and take all exams as outlined by each individual course syllabus.
- When all courses are completed, submit a request to the School of Continuing Education in Building 40, room 101.
- The office will verify that all requirements have been met and prepare the Certificate of Completion for the student to pick up.

Accounting - Bookkeeping

Certificate of Completion #24089

The Accounting - Bookkeeping Certificate provides basic accounting skills and knowledge, preparing the student for entry-level positions as an accounting clerk in areas such as bookkeeping, accounts receivable, accounts payable, inventory tracking and reporting, bank reconciliation, expense reporting, and account analysis.

Program Learning Outcomes

- Students will explain the concept of double-entry accounting within the categories of asset, liability, owner's equity, revenue and expense account.
- Students will use computerized accounting software to process accounting transactions.
- Students will analyze business transactions, and journalize and post transactions to ledger accounts.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Coursework

Course Prefix	Course Name	Units
VOC BA07 or VOC BA72	Principles of Accounting - Financial Bookkeeping - Accounting	
VOC BA75	QuickBooks for Accounting	
VOC BA76	Excel for Accounting	

Accounting - Computerized

Certificate of Completion #24246

The Accounting - Computerized Certificate provides basic accounting skills and knowledge combined with additional training in computer applications common to the accounting industry. This certificate program prepares the student for an entry-level position as an accounting clerk that requires computer skills in areas such as utilization of accounting software, accounts receivable, accounts payable, inventory tracking and reporting, bank reconciliation, expense reporting, and account analysis.

Program Learning Outcomes

- Students will process collections from customers and update accounts receivable.

- Students will prepare financial statements.
- Students will solve managerial accounting problems with Excel software.
- Students will develop the ability to relate material from each course completed to their current and future professional needs, even if these needs fall into a different discipline.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC BA07 or VOC BA72	Principles of Accounting - Financial Bookkeeping - Accounting	
VOC BA75	QuickBooks for Accounting	
VOC BA76	Excel for Accounting	
VOC CSB15	Microcomputer Applications	
Choose at least two (2) courses from the following:		
VOC CSB11	Computer Information Systems	
VOC CSB21	Microsoft Excel	
VOC CSB31	Microsoft Word	
VOC CSB51	Microsoft PowerPoint	
VOC CI11 & CI11L	Database Management - Microsoft Access and Database Management - Microsoft Access Laboratory	

Accounting - Payroll

Certificate of Completion #24074

The Accounting - Payroll Certificate provides basic accounting skills and knowledge combined with specialized training in payroll, preparing the student for entry-level clerical positions within the payroll segment of accounting. Common duties performed include payroll tax reporting, payroll accounting systems maintenance, and posting payroll transactions to journals and ledgers.

Program Learning Outcomes

Upon successful completion of this program, a student will:

- Identify payroll records required by the employer in preparation for filing tax forms for Social Security, federal and state income tax, state disability benefits, and federal and state unemployment.
- Calculate wages and withholding amounts in payroll problems.
- Assemble payroll record keeping requirements for employers under current state and federal laws.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Certificate Requirements

Column 1	Column 2
This certificate requires:	
Completion of the Accounting - Bookkeeping coursework	
PLUS	
Completion of the Accounting - Payroll coursework	

Required Coursework

Course Prefix	Course Name	Units
Accounting - Bookkeeping Coursework		
VOC BA07 or VOC BA72	Principles of Accounting - Financial Bookkeeping - Accounting	
VOC BA75	QuickBooks for Accounting	
VOC BA76	Excel for Accounting	

Course Prefix	Course Name	Units
Accounting - Payroll Coursework		
VOC BA70	Payroll and Tax Accounting	

General Accounting

Certificate of Completion
#38107

This short-term program is intended to prepare students to become bookkeepers, auditing clerks, and other introductory accountant positions to work in the accounting department of any business or organization. This program is specifically for noncredit students who are seeking training in the accounting field for immediate employment. Furthermore, this program will also provide foundational skills and training for students to enter into more advanced accounting programs. Students must pass both core courses to earn the General Accounting certificate.

Program Learning Outcomes

- Students will gain employment in an introductory bookkeeping and accounting position in the business department of any business organization.
- Students will demonstrate job readiness skills.
- Students will progress through the business and accounting career ladder by enrolling in further business and accounting courses or programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC BA11	Fundamentals of Accounting	
VOC BA68	Business Mathematics	

Payroll and Tax Accounting

Certificate of Completion
#38112

This short-term program is intended to prepare students to become payroll and timekeeping clerks as well as for introductory tax positions to work in the payroll and accounting department of any business or organization. This program is specifically for noncredit students who are seeking training in the accounting field for immediate employment. Furthermore, this program will also provide foundational skills and training for students to enter into more advanced accounting programs. Students must pass both core courses to earn the Payroll and Tax Accounting certificate.

Program Learning Outcomes

- Students will gain employment in an introductory payroll and/or tax accounting position in the business department of any business or organization.

- Students will demonstrate job readiness skills.
- Students will progress through the business and accounting career ladder by enrolling in further business and accounting courses or programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC BA70	Payroll and Tax Accounting	
BS ABE05	Career Development	

Administrative Assistant - Level 1

Certificate of Completion
#38111

The Level 1 Certificate prepares students for entry-level clerical positions where keyboarding and basic office skills are the primary functions.

Program Learning Outcomes

- Students will be prepared to enter into entry level administrative assistant and general office jobs.
- Students will be employed or seeking employment in the field for a related field.
- Students will demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CSB10	Office Skills	
VOC CSB15	Microcomputer Applications	
VOC CSB31	Microsoft Word	

Administrative Assistant - Level 2

Certificate of Completion
#24066

The Level 2 Certificate prepares students for clerical positions where, in addition to general office skills, written communication and advanced word processing skills are needed.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
Completion of the Administrative Assistant - Level 1 coursework as follows:		
VOC CSB10	Office Skills	
VOC CSB15	Microcomputer Applications	
VOC CSB31	Microsoft Word	
PLUS the level 2 coursework as follows:		
VOC B025	Business Communications	
VOC CSB21	Microsoft Excel	
VOC CSB51	Microsoft PowerPoint	

Appliance Repair

Certificate of Completion
#37443

Theory and practical training for job entry including large and small appliances. Troubleshooting appliances and electronic systems to the subsystem and component levels. Covers installation, troubleshooting, maintenance, and operation of a variety of small and large appliances. Prepares student for the National Appliance Service Technician Certification exam and the EOA (Section 608) certification test.

Program Learning Outcomes

- Students will be employed or actively seeking employment in the field or a related field.
- Students will demonstrate job readiness skills.
- Students will be prepared for the National Appliance Service Technician Certification exam.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EST62	Electronic Troubleshooting 1	
VOC FSF	Tool Use and Field Service Fundamentals	

Architectural Design Concentration - Level 1

Certificate of Completion
#37313

This multi-level certificate program prepares students to enter the field of architecture and related areas. The student is provided with an option of direct employment in the field or preparation for transfer to the professional school of architecture. The Level 1 certificate provides a broad overview of the fundamental skills essential to the field, suitable for entry-level employment as an office assistant.

Program Learning Outcomes

- Students will be prepared to enter into apprenticeship programs.
- Students will be employed or actively seeking employment in the field or a related field.
- Students will demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC AR101	Design 1 - Elements of Design	
VOC AR102	Design 2 - Architectural Design	
VOC AR121	CADD and Digital Design Media - Level 1	
VOC AR122	Architectural Presentations	

Architecture Foundational Skills

Certificate of Completion
#37314

This multi-level certificate program prepares students to enter the field of architecture and related areas. The student is provided with an option of direct employment in the field or preparation for transfer to a professional school of architecture. The Architecture Foundational Skills certificate provides a basic overview of the fundamental skills essential to the field, suitable for entry-level employment as an office assistant.

Program Learning Outcomes

- Students will be prepared to enter into apprenticeship programs.
- Students will be employed or actively seeking employment in the field or a related field.
- Students will demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC AR101	Design 1 - Elements of Design	
VOC AR121	CADD and Digital Design Media - Level 1	
VOC AR141	Design Drawing and Communication	

Business Management - Level 1

Certificate of Completion
#24108

The Business Management – Level 1 Certificate is designed to introduce the student to the role of management in business. Management is the efficient use of human and capital resources to accomplish organizational objectives. Students will be exposed to the terms, trends, organizational structure, and opportunities inherent in business management. Upon completion of the Business Management – Level 1 Certificate students may qualify for an entry-level management position in California’s diverse economy.

Program Learning Outcomes

- Students will list and explain the foundations upon which business is built and the economic challenges facing the United States.
- Students will apply management concepts and functions.
- Students will develop a working knowledge of marketing terminology

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC BM20	Principles of Business	
VOC BM61	Business Organization and Management	
VOC BS36	Principles of Marketing	

Business Management - Level 2

Certificate of Completion
#24110

This certificate builds upon the Level 1 Certificate to provide students with proven business tools that will enhance their management careers. Students will be exposed to projects and business simulations that will lead to measurable successes. Business presentations, business

planning, team building, conflict resolution, and computer use are core skills developed in this certificate.

Program Learning Outcomes

- Students will define organizational culture, socialization and mentoring.
 - Students will analyze social perception.
 - Students will explain theory and practical application of Equal Employment Opportunity current employment laws.
- Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Program Requirements

Column 1	Column 2
This certificate requires:	
Completion of the Business Management - Level 1 coursework	
PLUS	
Completion of the Business Management - Level 2 coursework	

Required Courses

Course Prefix	Course Name	Units
Business Management - Level 1 Coursework		
VOC BM20	Principles of Business	
VOC BM61	Business Organization and Management	
VOC BS36	Principles of Marketing	

Course Prefix	Course Name	Units
Business Management - Level 2 Coursework		
VOC BM60	Human Relations in Business	
VOC BM62	Human Resource Management	
VOC CSB15	Microcomputer Applications	

Business Management - Level 3

Certificate of Completion #24249

Upon completion of the Business Management – Level 3 Certificate, students will have built a foundation of management strategies and practices which will enable them to prosper in an ever-changing business environment. Students will have a strategic perspective of production, marketing, accounting, international business and human resources. Completion of the Business Management – Level 3 Certificate will lead to new opportunities and provide students with a solid foundation upon which to build a management career.

Program Learning Outcomes

- Students will describe the basic accounting system and how it is used to serve business needs.
- Students will define and outline the key principles of continuous quality management.
- Students will identify how governments influence trade.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Program Requirements

Column 1	Column 2
This certificate requires:	
Completion of the Business Management - Level 1 coursework	
PLUS	
Completion of the Business Management - Level 2 coursework	
PLUS	
Completion of the Business Management - Level 3 coursework	

Required Courses

Course Prefix	Course Name	Units
Business Management - Level 1 Coursework		
VOC BM20	Principles of Business	
VOC BM61	Business Organization and Management	
VOC BS36	Principles of Marketing	

Course Prefix	Course Name	Units
Business Management - Level 2 Coursework		
VOC BM60	Human Relations in Business	
VOC BM62	Human Resource Management	
VOC CSB15	Microcomputer Applications	

Course Prefix	Course Name	Units
Business Management - Level 3 Coursework		
VOC BA07	Principles of Accounting - Financial	
VOC BM10	Principles of Continuous Quality Improvement	
VOC BM51	Principles of International Business	

Computer and Networking Technology

Certificate of Completion #24059

This certificate is intended to prepare students to enter the computer and networking fields as service technicians with foundations in basic electricity and electronics, operating systems, computer service and troubleshooting, and preparation for the A+ certification examination.

Program Learning Outcomes

- Students will be employed or seeking employment in the field or a related field.
- Students will be technically competent.
- Students will employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CNT50	Personal Computer (PC) Servicing	
VOC CNT52	PC Operating Systems	
VOC CNT54	PC Troubleshooting	
VOC CNT60	A+ Certification Preparation	

VOC EL11	Technical Applications in Microcomputers or VOC CSB15 Microcomputer Applications
VOC EL50A	Electronic Circuits - Direct Current (DC)
VOC EL50B	Electronic Circuits (AC)
VOC EL56	Digital Electronics

Computer Networking Technology Fundamentals

Certificate of Completion #41601

This program covers the fundamentals of computer networking technology. These core courses provide the necessary skills for those seeking entry-level employment as computer service technicians without areas of specialization. General topics include personal computer servicing, troubleshooting, computer operating systems, and personal computer troubleshooting. This fundamentals certificate will prepare students with the requisite knowledge for subsequent Computer and Networking Technology certificates. The courses in the fundamentals certificate approach computer repair from a hardware-first perspective, as distinct from other programs with a software or applications emphasis. This focus reflects the department's core belief that a solid understanding of electronics reinforces the necessary knowledge and skills to troubleshoot and repair computing equipment.

Program Learning Outcomes

- Students will gain employment in an introductory level position in the computer networking technology sector.
- Students will demonstrate job readiness skills.
- Students will progress through the computer networking technology career ladder by enrolling in further computer networking technology courses or programs.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CNT50	Personal Computer (PC) Servicing	
VOC CNT52	PC Operating Systems	
VOC CNT54	PC Troubleshooting	

Computer Networking Technology Industry Certifications

Certificate of Completion #41622

This certificate covers the material necessary to successfully pass the CompTIA A+, Network+, Security+, and the Server+ professional certificates. These preparation courses provide the necessary information for those seeking to obtain professional industry CompTIA certificates. Topics include instruction and hands on material that supports the exam objectives as set forth by CompTIA. This Industry Certifications certificate will prepare students with the requisite

knowledge for subsequent computer networking technology certificates and degrees.

Program Learning Outcomes

- Program Completers will be able to read and analyze DC, AC and/or Digital schematics for voltage, current, impedance and power quantities, and compare them to measured values.
- Demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- Be able to build both combinational and sequential digital logic circuits based off of design and logic requirements.
- Use these results of both empirical and calculated unknown electrical parameters to assess or troubleshoot faults in circuit and system operation. 5. Communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CNT60	A+ Certification Preparation	
VOC CNT62	Network+ Certification Preparation	
VOC CNT64	Server+ Certification Preparation	
VOC CNT66	Security+ Certification Preparation	

Computer Systems Technology

Certificate of Completion #24284

The Computer Systems Technology curriculum encompasses advanced coursework in computer systems circuitry, including microcontrollers and microprocessors.

Program Learning Outcomes

- Students will be employed or actively seeking employment in the field or a related field.
- Students will be technically proficient.
- Students will employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).

Review Student Learning Outcomes (SLOs) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EL11	Technical Applications in Microcomputers	
VOC EL12	Computer Simulation and Troubleshooting	
VOC EL50A	Electronic Circuits - Direct Current (DC)	
VOC EL50B	Electronic Circuits (AC)	
VOC EL51	Semiconductor Devices and Circuits	
VOC EL56	Digital Electronics	
VOC EL61	Electronic Assembly and Fabrication	

VOC EL74	Microcontroller Systems
VOC TCH60	Customer Relations for the Technician

Electronic Assembly and Fabrication

Certificate of Completion
#24162

The Electronic Assembly and Fabrication Certificate is intended to prepare students to enter the electronics field as assembly and fabrication technicians. The program provides a series of courses to meet the needs of industry in assembly, soldering/de-soldering skills, and fabrication for both through-hole and surface mount devices (SMD). Included are skills for various types of cabling and connections. Electronic fundamentals (test instruments, basic electrical measurements, color-codes, schematic symbols, device outlines, etc.) are provided in the introductory courses. Complete surface mount technology (SMT) skills are taught with a culmination in the IPC7711/IPC7721 rework and repair of electronic assemblies certification. Recertification is required every two years. ELEC 63 is a prep course for the recertification.

Program Learning Outcomes

- Students will design, fabricate, and populate a through-hole circuit board.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EL10	Introduction to Mechatronics	
VOC EL50A	Electronic Circuits - Direct Current (DC)	
VOC EL50B	Electronic Circuits (AC)	
VOC EL61	Electronic Assembly and Fabrication	
VOC EL62	Advanced Surface Mount Assembly and Rework	

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Electronic Systems Technology - Cabling and Wiring

Certificate of Completion
#35909

The **Electronic Systems Technology Cabling and Wiring** skills certificate is a short-term vocational program within the field of electronics technology. This program, which has no prerequisites and minimal math analysis, provides job skills in the installation and testing of low-voltage copper, coaxial, structured cable, and fiber-optic systems. Such installations are found in public and private telephone and data-communications networks, in business and residential computer and security systems, and in the custom home-theater and home-automation industries.

Holders will have entry-level skills in fundamental electronics technology, use of general and specialized hand and power tools, familiarity with fabrication techniques, and ability to identify cabling and wiring standards for voice, video, and data. Also included is customer-relations training and application of skills in the installation, calibration, setup, maintenance, and troubleshooting of home theater, automation, and security systems. Completers will be prepared for employment with telephone companies, satellite/cable TV providers, low-voltage electrical

contractors, computer and network specialists, and home audio/video retailers. Typical job titles in these areas are data or cable technician, low-voltage wiring technician, home theater installer, consumer electronics service technician, and security system installer.

Program Learning Outcomes

- Students will demonstrate technical competence by constructing a complete wired telecommunications network using electronic test equipment and hand tools.
- Students will be employed or seeking employment in the field or a related field.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EST50	Electrical Fundamentals for Cable Installations	
VOC EST54	Cable and Wiring Standards	
VOC EST56	Home Theater, Home Integration & Home Security Systems	

Recommended Electives

Course Prefix	Course Name	Units
VOC EL11	Technical Applications in Microcomputers	

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Electronics and Computer Engineering Technology

Certificate of Completion
#24171

This certificate program prepares individuals either for initial employment or for enhancement of existing skills in the electronics field, or for transfer into B.S. programs in Electronics Technology or Industrial Technology. Students are exposed to core topics such as components and circuits as well as coursework in advanced areas including microcontrollers and interfacing, communications, and industrial electronic controls.

Program Learning Outcomes

- Students will show evidence of demonstrating higher-level thought processes by relating specific tasks to more general principles.
- Students will employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).
- Students will apply knowledge of electronic principles to the areas of communications, industrial electronics, and microcontrollers.
- Students will demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- Students will quantitatively determine unknown electrical parameters from given or measured values and use these results to assess or troubleshoot faults in circuit and system operation.
- Students will communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.
- Students will connect concepts learned in introductory courses to more general principles applicable in the employment context.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EL11	Technical Applications in Microcomputers	
VOC EL12	Computer Simulation and Troubleshooting	
VOC EL50A	Electronic Circuits - Direct Current (DC)	
VOC EL50B	Electronic Circuits (AC)	
VOC EL51	Semiconductor Devices and Circuits	
VOC EL53	Communications Systems	
VOC EL54A	Industrial Electronics	
VOC EL54B	Industrial Electronic Systems	
VOC EL55	Microwave Communications	
VOC EL56	Digital Electronics	
VOC EL61	Electronic Assembly and Fabrication	
VOC EL74	Microcontroller Systems	
VOC TCH60	Customer Relations for the Technician	

Recommended Electives

Course Prefix	Course Name	Units
VOC EL62	Advanced Surface Mount Assembly and Rework	
VOC EL76	FCC General Radiotelephone Operator License Preparation	

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Electronics Communications

Certificate of Completion
#24210

In addition to courses in electronics fundamentals, the Electronics Communications certificate program encompasses the study of both wire-based and wireless forms of analog and digital communications systems. Topics include amplitude and frequency modulation, multiplexing, antennas, transmission lines, and radio-wave propagation, as well as microwave systems, including radar and satellite operations.

Program Learning Outcomes

- Students will be technically competent.
- Students will be employed or seeking employment in the field or a related field.
- Students will employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EL11	Technical Applications in Microcomputers	
VOC EL12	Computer Simulation and Troubleshooting	
VOC EL50A	Electronic Circuits - Direct Current (DC)	
VOC EL50B	Electronic Circuits (AC)	
VOC EL51	Semiconductor Devices and Circuits	
VOC EL53	Communications Systems	
VOC EL55	Microwave Communications	
VOC EL56	Digital Electronics	

VOC EL61	Electronic Assembly and Fabrication
VOC TCH60	Customer Relations for the Technician

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Electronics Technology

Certificate of Completion
#24073

This one-year program covers the fundamentals of electronics technology. These core courses provide the necessary skills for those seeking entry-level employment as electronics technicians without areas of specialization. A course in customer-relations training is also included.

Program Learning Outcomes

- Students will be technically competent.
- Students will be employed or seeking employment in the field or a related field.
- Students will employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EL11	Technical Applications in Microcomputers	
VOC EL50A	Electronic Circuits - Direct Current (DC)	
VOC EL50B	Electronic Circuits (AC)	
VOC EL51	Semiconductor Devices and Circuits	
VOC EL56	Digital Electronics	
VOC EL61	Electronic Assembly and Fabrication	
VOC TCH60	Customer Relations for the Technician	

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Electronics Technology - Level 1

Certificate of Completion
#41569

This program covers the fundamentals of Electronics Technology. General topics include direct current electronics, alternating current electronics, and digital electronics. These introductory courses provide entrylevel skills for those seeking employment as electronics technicians. This Level 1 certificate will prepare students with the requisite knowledge for subsequent electronics certificates and degrees.

Program Learning Outcomes

- Program Completers will be able to read and analyze DC, AC and/or Digital schematics for voltage, current, impedance and power quantities, and compare them to measured values.
- Students will demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- Students will be able to build both combinational and sequential digital logic circuits based off of design and logic requirements.

- Students will use these results of both empirical and calculated unknown electrical parameters to assess or troubleshoot faults in circuit and system operation.
- Students will communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EL50A	Electronic Circuits - Direct Current (DC)	
VOC EL50B	Electronic Circuits (AC)	
VOC EL56	Digital Electronics	

Electronics Technology - Level 2

Certificate of Completion #41570

This program covers the fundamentals of Electronics Technology plus additional coursework in other areas of specialty. It is composed of the same coursework from the Electronics Technology - Level 1 certificate plus additional electives chosen from other electronics courses within the Electronics Department. This certificate allows students the flexibility to combine Electronics courses to meet individual goals in a specialty of their choosing. This Level 2 certificate will prepare students with the requisite knowledge for subsequent Electronics certificates and degrees.

Program Learning Outcomes

- Students will demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- Students will be able to demonstrate a connection between higher level coursework and that of the fundamental coursework in AC, DC and digital electronics.
- Students will communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.
- Students will apply knowledge of electronic principles to the areas of communications, industrial electronics, or microcontrollers.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EL50A	Electronic Circuits - Direct Current (DC)	
VOC EL50B	Electronic Circuits (AC)	
VOC EL56	Digital Electronics	

Recommended Electives

Course Prefix	Course Name	Units
Students may choose from any of the courses in List A or List B to fulfill the 4 courses of required electives		

List A:		
VOC EL11	Technical Applications in Microcomputers	
VOC EL12	Computer Simulation and Troubleshooting	
VOC EL51	Semiconductor Devices and Circuits	
VOC EL53	Communications Systems	
VOC EL54A	Industrial Electronics	
VOC EL54B	Industrial Electronic Systems	
VOC EL55	Microwave Communications	
VOC EL61	Electronic Assembly and Fabrication	
VOC EL74	Microcontroller Systems	
VOC TCH60	Customer Relations for the Technician	
List B:		
VOC EL10	Introduction to Mechatronics	
VOC EL62	Advanced Surface Mount Assembly and Rework	
VOC EL76	FCC General Radiotelephone Operator License Preparation	
VOC CNT56	Computer Networks	

Electronics: Industrial Systems

Certificate of Completion #24319

In addition to courses in electronics fundamentals, the Industrial Systems curriculum encompasses advanced coursework in industrial electronics, including electronic devices for industrial and motor controls. The curriculum culminates in the study of programmable logic controls (PLCs) using the Allen-Bradley series of PLCs running Windows ladder logic software.

Program Learning Outcomes

- Students will be technically competent.
- Students will be employed or seeking employment in the field or a related field.
- Students will employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).

Review Student Learning Outcomes (SLOs) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EL11	Technical Applications in Microcomputers	
VOC EL12	Computer Simulation and Troubleshooting	
VOC EL50A	Electronic Circuits - Direct Current (DC)	
VOC EL50B	Electronic Circuits (AC)	
VOC EL51	Semiconductor Devices and Circuits	
VOC EL54A	Industrial Electronics	
VOC EL54B	Industrial Electronic Systems	
VOC EL56	Digital Electronics	
VOC EL61	Electronic Assembly and Fabrication	
VOC TCH60	Customer Relations for the Technician	

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Emergency Medical Technician

Certificate of Completion
#38104

This short-term program is intended to prepare students to become Emergency Medical Technicians (EMTs) to work for an ambulance service or in related fire departments, hospitals, or other rescue services. This program is specifically for noncredit students who are seeking training in the public safety field for immediate employment. Furthermore, this program will also provide foundational skills and training for students to enter into more advanced public safety programs. Students must pass both core courses to earn the Emergency Medical Technician certificate.

Awards an Emergency Medical Technician (EMT) Course Completion Certificate needed to take National Registry Certifying Exam.

Program Learning Outcomes

- Students will be employed or seeking employment in the field for a related field.
- Students will pass the National Registry of EMT's (NREMT) exam.
- Students will gain employment as an Emergency Medical Technician.
- Students will demonstrate job readiness skills.
- Students will progress through the public safety career ladder by enrolling in public safety programs such as Paramedics.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC ET90A	Introduction to EMS System	
VOC EMT90	Emergency Medical Technician	

Recommended Elective

Course Prefix	Course Name	Units
BS RWCCR	Reading and Writing for College and Career Readiness	

Fashion Computer Aided Design

Certificate of Completion
#39646

The Fashion Computer Aided Design Certificate consists of apparel design courses that offer students a basic understanding of clothing construction, patternmaking, technical design, and patternmaking software. Students prepare for careers in apparel manufacturing, production, and technical design.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC FSH23	Patternmaking 2	
VOC FSH24	Fashion Patternmaking by Computer	
VOC FSH25	Fashion Digital Illustration and Design	

Required Electives

Select one of the following courses:

VOC FSH57	Fashion Retailing and Production Technologies
VOC FSH66	Visual Merchandising Display

Fashion Design - Level 1

Certificate of Completion
#38833

The Fashion Design - Level 1 Certificate consists of basic apparel design courses that prepare students for entry level work in the fields of apparel manufacturing, production, and technical design. Upon completion of the certificate, students will have a basic understanding of clothing construction and patternmaking. In addition, students will develop CAD skills for technical drawing and computerized patternmaking.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC FSH10	Clothing Construction 1	
VOC FSH12	Clothing Construction 2	
VOC FSH17	Textiles	
VOC FSH21	Patternmaking I	
VOC FSH24	Fashion Patternmaking by Computer	
VOC FSH25	Fashion Digital Illustration and Design	

Fashion Merchandising - Level 1

Certificate of Completion
#40255

The certificate in Fashion Merchandising – Level 1 offers students courses specializing in apparel retailing, advertising, textiles, and CAD technical drawing. The courses emphasize the business of fashion, wholesale merchandise planning, apparel technology, retailing, and fashion branding targeting specific markets. Upon completion of the certificate, students will be able to develop marketing strategies, create promotional campaigns, understand the buying process, and analyze retail businesses.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC FSH08	Introduction to Fashion	
VOC FSH17	Textiles	
VOC FSH25	Fashion Digital Illustration and Design	
VOC FSH59	Fashion Retailing	
VOC FSH62	Retail Buying and Merchandising	
VOC FSH63	Fashion Promotion	

Floral Design

Certificate of Completion
#24242

This sequence is offered in the evening only and can be completed in two years. Students completing all three courses will have skills and knowledge to seek jobs in floral design beyond entry-level positions, i.e., first-line supervision and/or management and Floral Designers.

Program Learning Outcomes

- Students completing the Floral Design Certificate will be prepared to be employed in the floral design industry.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC AGR25	Floral Design 1	
VOC AGR26	Floral Design 2	
VOC AGR27	Floral Design 3	

General Office Skills

Certificate of Completion #37444

An introduction to the various general office and administrative support jobs. Training and skill building in filing systems and procedures, proofreading, telephone techniques, faxing, emailing, electronic calendaring of events, appointments and meetings, memos, and business letters. Essential topics include word processing, spreadsheets, database management, and presentation software.

Program Learning Outcomes

- Students will be prepared to enter into entry level administrative assistant and general office jobs.
- Students will be employed or actively seeking employment in the field or a related field.
- Students will demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CSB15	Microcomputer Applications	
VOC CS41	Office Management Skills	
BS ABE05	Career Development	
or BS CNSL5	Career and Life Planning for ESL	

Health Careers

The School of Continuing Education offers courses and certificates in the health careers. Courses are tuition free. However, students are responsible for the purchase of materials.

Program	Certificates
Care Coordinator - Level 1 (p. 427)	Certificate of Completion
Care Coordinator - Level 2 (p. 427)	Certificate of Completion
Certified Nursing Assistant (CNA) (p. 428)	Certificate of Completion
College Readiness for Healthcare Programs (p. 428)	Certificate of Competency
Contact Tracer (p. 428)	Certificate of Completion
Medical Assistant (p. 428)	Certificate of Completion
Occupational Therapy Aide (p. 429)	Certificate of Completion
Personal Care Aide (p. 429)	Certificate of Completion
Pharmacy Technician (p. 429)	Certificate of Completion
Physical Therapy Aide (p. 430)	Certificate of Completion

Sports Medicine (p. 430)

Certificate of Completion

Surgical Technician (p. 430)

Certificate of Completion

Care Coordinator - Level 1

Certificate of Completion #38083

Care Coordinator – Level 1 is a short-term program intended to prepare students to work in a health care facility or in the related home health care field. This program is specifically for noncredit students who are seeking training in the health field for immediate employment. Furthermore, this program will also provide foundational skills and training for students to enter into more advanced health training programs. Students must pass both core courses to earn the Care Coordinator – Level 1 certificate.

Program Learning Outcomes

- Students will gain employment as a Care Coordinator in a hospital, medical office or a care facility.
- Students will demonstrate job readiness skills.
- Students will progress through the health career ladder by enrolling in further allied health career programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CC1	Care Coordinator 1	
VOC CC2	Care Coordinator 2	

Recommended Elective

Course Prefix	Course Name	Units
VOC HTH06	Health Careers Employability Skills	

Care Coordinator - Level 2

Certificate of Completion #38106

Care Coordinator – Level 2 is a short-term program intended to prepare students to work in a health care facility or in the related home health care field. Students will learn about comprehensive care coordination from pre-admission to post-discharge, the challenges of respiratory illnesses, cardiovascular conditions, and orthopedic surgeries, and the impact on readmission. This program is specifically for noncredit students who are seeking training in the health field for immediate employment. Furthermore, this program will also provide foundational skills and training for students to enter into more advanced health training programs. Students must pass both core courses to earn the Care Coordinator – Level 2 certificate.

Program Learning Outcomes

- Students will gain employment as a Care Coordinator - Level 2 in a hospital, medical office or a care facility.
- Students will demonstrate job readiness skills.
- Students will progress through the health career ladder by enrolling in further allied health career programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CC3	Care Coordinator 3	
VOC HTH06	Health Careers Employability Skills	

Certified Nursing Assistant (CNA)

Certificate of Completion
#36872

This short-term program is intended to prepare students to become Certified Nursing Assistants to work in a health care facility or in the related home health care field. This program is specifically for noncredit students who are seeking training in the health field for immediate employment. Furthermore, this program will also provide foundational skills and training for students to enter into more advanced health training programs. Students must pass both core courses to earn the Certified Nursing Assistant certificate.

Program Learning Outcomes

- Students will be employed or seeking employment in the field for a related field.
- Students will pass the National Nurse Aide Assessment Program exam.
- Students will gain employment as a Certified Nursing Assistant in a home setting or a care facility.
- Students will demonstrate job readiness skills.
- Students will progress through the health career ladder by enrolling in further allied health career programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC HTH01	Certified Nursing Assistant	
VOC HTH05	Health Careers Skills Lab (HCRC)	

Recommended Electives

Course Prefix	Course Name	Units
VOC HTH04	Acute Certified Nursing Assistant (CNA)	
VOC HHA	Home Health Aide	

College Readiness for Healthcare Programs

Certificate of Competency
#38783

This is a short-term program to prepare students in noncredit programs and adult schools to successfully transition into healthcare college credit courses. Career development and academic counseling are also provided to increase employability, work skills, and provide a pathway to community college healthcare courses.

Program Learning Outcomes

- Students will achieve sufficient score on occupational and college program entry level tests.

- Students will be prepared to transition to college or career programs.
- Students will demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
BS ABE02	Adult Basic Education	
PLUS Choose one (1) course from the following:		
BS HCM1	Transitional Math for Health Careers 1	
VOC HEP	Healthcare Exam Preparation	

Recommended Electives

Course Prefix	Course Name	Units
BS ABE01	Career Information and Guidance	
BS ABE05	Career Development	

Contact Tracer

Certificate of Completion
#40254

This short-term program is intended to prepare students to become a contact tracer in the community health setting. The career development course increases employability and work skills. This program is specifically for noncredit students who are seeking training in the community health setting for immediate entry-level employment. Furthermore, this program will also provide foundational community health skills and training for students to enter into more advanced community health career programs. Students must pass both courses to earn the Contact Tracer certificate.

Program Learning Outcomes

- Students will gain employment as a contact tracer in the community.
- Students will demonstrate job readiness skills.
- Students will progress through the community and health career ladder by enrolling in further community and health career programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CT	Contact Tracer	
BS ABE05	Career Development	

Medical Assistant

Certificate of Completion
#38108

This certificate prepares students for entry-level positions within administrative or clinical career paths. Students will learn about the medical assistant scope of practice, tasks, and responsibilities, basic pharmacology for medical assistants, and medical front office operations. Topics also include a basic overview of major body systems and physiological processes, examinations and therapeutic modalities, laboratory procedures, and an overview of qualifications, training, and career opportunities for medical assistants.

Program Learning Outcomes

- Students will be prepared to enter into entry-level medical assistant jobs.
- Students will demonstrate job readiness skills.
- Students will progress through the health career ladder by enrolling in further health career programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC MAST	Medical Assistant	
VOC HTH06	Health Careers Employability Skills	

Recommended Electives

Course Prefix	Course Name	Units
VOC HTH12	Medical Terminology	
VOC ANA50	Basic Anatomy and Physiology	
VOC HTH05	Health Careers Skills Lab (HCRC)	

Occupational Therapy Aide

Certificate of Completion #38096

This short-term program is intended to provide students with the skills and knowledge to start a career as an Occupational Therapy Aide. This program will teach students how to assist patients with a variety of injuries under the supervision of an Occupational Therapist. Occupational Therapy Aides also have the responsibilities for completing non-technical duties such as preparing treatment areas, ordering devices and supplies, and transporting patients under the direction of the Occupational Therapist. Occupational Therapy Aides may be employed in hospitals, nursing care facilities, sports rehabilitation centers, and other healthcare facilities. This program is specifically for noncredit students who are seeking training in the health field for immediate employment. Furthermore, this program will also provide foundational skills and training for students to enter into more advanced health training programs. Students must pass both core courses to earn the Occupational Therapy Aide certificate.

Program Learning Outcomes

- Students will gain employment as an Occupational Therapy Aide in a hospital, medical office or a care facility.
- Students will demonstrate job readiness skills.
- Students will progress through the health career ladder by enrolling in further allied health career programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC OTA	Occupational Therapy Aide	
VOC HTH12	Medical Terminology	

Recommended Elective

Course Prefix	Course Name	Units
VOC HTH06	Health Careers Employability Skills	

Personal Care Aide

Certificate of Completion #33703

This short-term program is intended to prepare students to become personal care aides in the home or in a health care facility. The choice of a career development course or health careers employability skills course are also provided to increase employability and work skills. This program is specifically for noncredit students who are seeking training in the health field for immediate entry-level employment. Furthermore, this program will also provide foundational health skills and training for students to enter into more advanced health career programs. Students must pass both core courses to earn the Personal Care Aide certificate.

Program Learning Outcomes

- Students will be proficient in personal care tasks.
- Students will be employed or seeking employment in the field or a related field.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC PCA	Personal Care Aide	
BS ABE05	Career Development	
or VOC HTH06	Health Careers Employability Skills	

Pharmacy Technician

Certificate of Completion #41168

This short-term program is intended to prepare students to become a pharmacy technician in the hospital, retail pharmacy, and pharmaceutical development setting. This program is specifically for noncredit students who are seeking training in the pharmacy technology setting for immediate entry-level employment. Furthermore, this program will also provide preparation for state certification exams, licensing, and foundational pharmacy technology skills and training for students to enter into more advanced pharmacy technology programs. Students must pass all courses to earn the Pharmacy Technician certificate.

Program Learning Outcomes

- Students will gain employment in an introductory position in the pharmacy technology sector.
- Students will demonstrate job readiness skills.
- Students will progress through the pharmacy technology career ladder by enrolling in further pharmacy technology courses or programs

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC PTEC1	Pharmacy Technician 1	
VOC PTEC2	Pharmacy Technician 2	
VOC PTEC3	Pharmacy Technician 3	

Recommended Electives

Course Prefix	Course Name	Units
BS HCM1	Transitional Math for Health Careers 1	

Physical Therapy Aide

Certificate of Completion
#36041

The School of Continuing Education's Physical Therapy Aide Certificate program will provide students with the skills and knowledge to start a career as a Physical Therapy Aide. The program will teach students how to assist patients with a variety of injuries under the supervision of a Physical Therapist. Physical Therapy Aides also have the responsibilities for completing non-technical duties such as preparing treatment areas, ordering devices and supplies, and transporting patients under the direction of the physical therapist. Physical Therapy Aides may be employed in hospitals, nursing care facilities, sports rehabilitation centers, and other healthcare facilities. Students must pass both courses in order to receive their Physical Therapy Aide certificate.

Program Learning Outcomes

- Students will identify and discuss modalities and procedures related to orthopedic disorders.
- Students will demonstrate the basic components of rehabilitation.
- Students will interpret medical terms for a broad range of body systems and medical conditions.
- Students will construct sentences using medical terms used in diagnosing medical conditions.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC HTH12	Medical Terminology	
VOC PT81	Physical Therapy Aide	

Sports Medicine

Certificate of Completion
#38095

This short-term program is intended to provide students with the skills and knowledge to start a career in Sports Medicine. This program will teach students how to assist patients with a variety of injuries under the supervision of an Athletic or Fitness Trainer. These positions also have the responsibilities for completing nontechnical duties such as preparing treatment areas, ordering devices and supplies, and transporting patients under the direction of the trainer. Those working in the field of sports medicine may be employed on sports teams, in physical therapist offices, sports rehabilitation centers, and other healthcare facilities. This program is specifically for noncredit students who are seeking training in the health field for immediate employment. Furthermore, this program will also provide foundational skills and training for students to enter into more advanced athletic and health training programs. Students must pass both core courses to earn the Sports Medicine certificate.

Program Learning Outcomes

- Students will gain employment in the field of Sports Medicine in an athletic team, physical therapist office, medical office or a care facility.
- Students will demonstrate job readiness skills.
- Students will progress through the health career ladder by enrolling in further allied health career programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC SPMD	Sports Medicine	
VOC HTH12	Medical Terminology	

Surgical Technician

Certificate of Completion
#38102

This certificate prepares students for entry-level positions within the surgical technology field. Students will learn about the scope of practice, tasks, and responsibilities of the surgical technician, universal safety precautions and personal protective equipment, and the classifications, uses, storing, preparation, handling, and distributing of surgical instruments and supplies. Topics also include learning about the operating room environment, asepsis and sterile technique, biomedical and chemical hazards, and surgical technology career research and development.

Program Learning Outcomes

- Students will be prepared to enter into entry-level medical surgical technician jobs.
- Students will demonstrate job readiness skills.
- Students will progress through the health career ladder by enrolling in further health career programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC STECH	Surgical Technician	
VOC HTH06	Health Careers Employability Skills	

Health Careers Resource Center (HCRC)

The mission of the Health Careers Resource Center is to support all healthcare students with their educational goals by providing a positive learning environment and by reinforcing the acquisition of psychomotor skills. The HCRC actively supports equal opportunity, open access, and high academic standards.

The HCRC provides a state-of-the-art learning lab environment for Mt. SAC credit and non-credit health careers students to assist in:

- developing new health related skills and knowledge
- updating prior or current activities
- participating in simulated clinical activities

HCRC available services include:

- RN assistance in clinical skills practice and performance evaluation
- Medical and hospital equipment, supplies, manikins, simulators, training aids for hands-on demonstrations
- Health Skills Performance Update/Evaluation
- Clinical simulations for Med-Surg, Psych, OB, Peds, Perioperative, Critical Care
- METI/CAE Adult, Child, and Infant Human Patient Simulators and Birthing Simulator

HCRC Registration and Check-In

Registration is open to Mt. SAC students enrolled in credit or non-credit health careers programs. You may register by visiting the HCRC for a registration card and course registration number. Then submit registration card to the Continuing Education Division in Building 40, Room 101. Once you are registered, you must present a current Mt. SAC Student ID card and sign in on each visit in order to check in and use the facilities.

Health Program Application

Students interested in the Psychiatric Technician, Radiologic Technology, or Respiratory Therapy credit programs may inquire about these at the HCRC.

Horse Ranch Management

Certificate of Completion
#24340

The Horse Ranch Management certificate focuses on equine production, management, and nutrition. The curriculum combines a combination of technical knowledge and practical skills utilizing a hands-on approach to instruction. Upon completion, students will have basic skills for entry-level employment opportunities in the equine industry.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC ASC02	Animal Nutrition	
VOC ASC16	Horse Production and Management	
VOC ASC18	Horse Ranch Management	

Hospitality

Certificate of Completion
#38103

This certificate prepares students for entry-level positions within hospitality and tourism. Students will learn about the history, development, and inter-relatedness of segments of the industry. Topics also include the organizational structure and functions of various segments that comprise hospitality and tourism, the principles of management, service, and business operations, and an introduction to various hospitality and tourism related jobs.

Program Learning Outcomes

- Students will be prepared to enter into entry-level hospitality and related jobs.

- Students will be employed or seeking employment in the field or a related field.
- Students demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC HOSP	Hospitality	
BS ABE05	Career Development	

Human Resource Management

Certificate of Completion
#24320

This introductory certificate exposes students to the business world and the role of human resources. Students become familiar with various approaches to business organization and the strategic nature of human resources. This certificate may aid in the student's search for an entry-level job in the business world.

Program Learning Outcomes

- Students will list and explain the foundations upon which business is built and the economic challenges facing the United States.
- Students will apply management concepts and functions.
- Students will explain theory and practical application of Equal Employment Opportunity current employment laws.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC BM20	Principles of Business	
VOC BM61	Business Organization and Management	
VOC BM62	Human Resource Management	

Interior Design

Certificate of Completion
#31012

The primary purpose of this certificate is to prepare students with a broad overview and solid foundation in the area of interior design and related fields. This certificate may lead to new opportunities and provide students with the groundwork upon which to build a career.

Program Learning Outcomes

- Students will successfully use critical thinking in the utilization of materials in a space.
- Students will accurately specify materials based on use.
- Students will successfully demonstrate craftsmanship skills in the presentation of materials.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Certificate Requirements

Course Prefix	Course Name	Units
VOC ID10	Introduction to Interior Design	
VOC ID10L	Introduction to Interior Design Laboratory	
VOC ID12	Materials and Products for Interior Design	
VOC ID14	History of Furniture and Decorative Arts	

International Business – Level 1

Certificate of Completion #24107

This specialized business certificate is intended to prepare the student to work in the unique and dynamic environment of international business. The program also prepares the student as a business management generalist for companies conducting international trade. This program will afford career opportunities for entry-level employment in international sales and marketing.

Program Learning Outcomes

- Students will identify how governments influence trade.
- Students will list and explain the foundations upon which business is built and the economic challenges facing the United States.
- Students will develop a working knowledge of marketing terminology.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC BM20	Principles of Business	
VOC BM51	Principles of International Business	
VOC BS36	Principles of Marketing	

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International Business – Level 2

Certificate of Completion #24431

In the International Business – Level 2 Certificate, the student will learn methods and approaches to managing the complexities of doing business in an international environment. Students acquire both theoretical knowledge and practical skills related to managing and marketing within the global arena. Students active in the workforce will acquire new skills that are highly desirable in a fast-paced dynamic global environment, with an emphasis on the small business perspective.

Program Learning Outcomes

- Students will apply management concepts and functions.
- Students will describe business planning for small business.
- Students will discuss the legal forms of business ownership

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Program Requirements

Column 1	Column 2
This certificate requires:	
Completion of the International Business - Level 1 coursework	
PLUS	
Completion of the International Business - Level 2 coursework	

Required Courses:

Course Prefix	Course Name	Units
International Business - Level 1 Coursework		
VOC BM20	Principles of Business	
VOC BM51	Principles of International Business	
VOC BS36	Principles of Marketing	

Course Prefix	Course Name	Units
International Business - Level 2 Coursework		
VOC BM61	Business Organization and Management	
VOC BM66	Small Business Management	

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Livestock Production Management

Certificate of Completion #24057

This certificate is designed to give students basic skills in livestock production management for employment opportunities on farms, ranches and agriculture sales and services.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC ASC14	Swine Production	
VOC ASC17	Sheep Production	
VOC ASC30	Beef Production	
VOC ASC34	Livestock Judging and Selection	
VOC ASC97	Artificial Insemination of Livestock	

Logistics Analyst

Certificate of Completion #42212

This short-term program trains students for a career as a Logistics Analyst in the high wage high growth logistics industry. This program will cover topics involving a data driven logistics operation, analyzing physical and informational assets, operations forecasting, creating value by reducing inefficiencies and safety OSHA regulations. Students who pass the two courses will earn their Logistics Analyst Certificate.

Program Learning Outcomes

- Students will be prepared to enter into entry-level logistics jobs.
- Students will demonstrate job readiness skills.
- Students will progress through the logistics career ladder by enrolling in further logistics programs.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC LGAN	Logistics Analyst	
VOC HSW	Health and Safety for Workplace	
BS ABE05	Career Development	
VOC CPBE2	Basic Excel 2	

Logistics Operation Specialist

Certificate of Completion #42213

This short-term program trains students for a career as a Logistics Operations Specialist in a high wage high growth logistics industry. This program will include distribution center operations, inventory control, transportation management, supplier vendors, customer relationships, and safety OSHA regulations. Students who pass the two courses will earn their Logistics Operations Specialist Certificate.

Program Learning Outcomes

- Students will be prepared to enter into entry-level logistics jobs.
- Students will demonstrate job readiness skills.
- Students will progress through the logistics career ladder by enrolling in further logistics programs.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC LOS	Logistics Operations Specialist	
VOC HSW	Health and Safety for Workplace	

Logistics Technician

Certificate of Completion #42214

This short-term program trains students for a career as a Logistics Technician in the high wage high growth logistics industry. This program will include topics in designing, enhancing, troubleshooting systems that help streamline logistics operations and safety OSHA regulations. Students who pass the two courses will earn their Logistics Technician Certificate.

Program Learning Outcomes

- Students will be prepared to enter into entry-level logistics jobs.
- Students will demonstrate job readiness skills.
- Students will progress through the logistics career ladder by enrolling in further logistics programs.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC LTEC	Logistics Technician	
VOC HSW	Health and Safety for Workplace	
BS ABE05	Career Development	

Manufacturing and Electrical Systems

Certificate of Completion #37445

Theory and practical training for job entry into manufacturing such as electrical assembly technicians and fabricators. Troubleshooting electrical systems and basic assembly systems. Covers troubleshooting, theory of electrical systems, quality control, building electrical harnesses, blueprint reading, and operation of a variety of tools. Prepare for the workplace with introduction to business and job readiness skills.

Program Learning Outcomes

- Students will be employed or actively seeking employment in the field or a related field.
- Students will demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC MFTH	Manufacturing Theory and Blueprint Reading	
VOC MFPP	Manufacturing and Production Principles	
VOC MFES	Manufacturing and Electrical Systems	
BS ABE05	Career Development	

MasterCAM

Certificate of Completion #24212

This certificate provides a strong background in MasterCAM 2-D and 3-D, and SolidWorks software packages along with the necessary machine shop theory and practice to input sound functional data into the CAM system.

Program Learning Outcomes

- Students will be employed or seeking employment in the field or a related field.
- Students will be technically competent.
- Students will demonstrate the ability to create a toolpath for an industry representative part from a 2D print using CAM software.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC MF11	Manufacturing Processes 1	
VOC MF38	MasterCAM 1	
VOC MF38B	Advanced MasterCAM	
VOC MF85	Manual CNC Operations	

Medical Secretary

Certificate of Completion
#37446

An introduction to medical secretary and medical records jobs. Training and skill building in filing systems and procedures, proofreading, telephone techniques, faxing, emailing, electronic calendaring of events, appointments and meetings, memos, and business letters.

Program Learning Outcomes

- Students will be prepared to enter into medical secretary and medical record jobs.
- Students will be employed or actively seeking employment in the field or a related field.
- Students will demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CSB15	Microcomputer Applications	
VOC CS41	Office Management Skills	
VOC MR01	Medical Records	
BS ABE05	Career Development	

Nursery Management

Certificate of Completion
#24209

This certificate is designed to give students basic skills in production and marketing of plants and dry goods in the wholesale and retail nursery industry.

Program Learning Outcomes

- Students will demonstrate professional conduct.
- Students will be technically proficient.
- Students will demonstrate professional conduct in the industry.
- Students will give a professional quality oral presentation.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC AGR01	Horticultural Science	
VOC AGR02	Plant Propagation/Greenhouse Management	
VOC AGR29	Ornamental Plants - Herbaceous	
VOC AGR32	Landscaping and Nursery Management	
VOC AGR50	Soil Science and Management	
VOC AGR64	Irrigation - Drip and Low Volume	

Pet Science

Certificate of Completion
#24172

The Pet Science Certificate focuses on the proper care and management of various pets. This includes: breed identification and characteristics,

grooming, showing, nutrition, practical care, behavior, breeding, and housing. Consideration will be given to the economic influence of the pet industry.

Program Learning Outcomes

- Students will demonstrate knowledge of the various species of pets, pet management systems, and the different industry opportunities associated with the respective species.
- Students will understand the scientific principles of animal production in relation to genetics, reproduction, nutrition, physiology, and environment.
- Students will demonstrate competency in the areas of animal health, disease, welfare and handling and understand how these factors influence animal stress and welfare.
- Students will demonstrate knowledge of the economic influence of the pet industry in today's society.
- Students will be competent with the use of technology and have abilities in the areas of critical thinking and decision-making. In addition, they must have strong oral and written communication skills, and a sense of the importance of responsibility and work ethic.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC ASC70	Pet Shop Management	
VOC ASC71	Canine Management	
VOC ASC72	Feline Management	
VOC ASC73	Tropical and Coldwater Fish Management	
VOC ASC74	Reptile Management	
VOC ASC76	Aviculture - Cage and Aviary Birds	

Photography - Level 1

Certificate of Completion
#24245

This multi-level certificate program is designed to prepare students for employment in the field of photography. The Photography - Level 1 offers the core skills necessary for employment as an entry-level Photography Assistant.

Program Learning Outcomes

- Students will gain employment in the field of photography as a photography assistant or entry-level photographer.
- Students will demonstrate job readiness skills.
- Students will progress through the agriculture career ladder by enrolling in further photography courses or programs.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC PH009	Digital Image Editing for Photographers	
VOC PH010	Basic Digital and Film Photography	
VOC PH11A	Intermediate Photography	
VOC PH11B	Digital Capture Workflow	

VOC PH014	Commercial Lighting
VOC PH020	Color Photography
Choose one from the following:	
VOC PH012	Photographic Alternatives
VOC PH016	Fashion and Editorial Portrait Photography
VOC PH018	Portraiture and Wedding Photography

Retail Management – Level 1

Certificate of Completion #24418

This introductory certificate exposes students to the business world and the role of retail distribution. Students become familiar with careers in retail management, as well as the latest trends in this fast changing field. This certificate may aid the student's search for an entry-level job in retail management.

Program Learning Outcomes

- Students will compose an appropriate, effective letter presenting good news, bad news, sales, or persuasive content.
- Students will use informative and sales letters to convey information and influence people favorably.
- Students will develop and deliver a 3-5 minute presentation on a business related topic.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC B025	Business Communications	
VOC BS50	Retail Store Management and Merchandising	
VOC CSB15	Microcomputer Applications	

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Retail Management – Level 2

Certificate of Completion #24359

This intermediate certificate builds upon the Level 1 Certificate to expose students to the various functions of managers in retail positions. Fundamentals of business organization, retail marketing and staffing provide the student a solid foundation from which to build a career in retail management.

Program Learning Outcomes

- Students will apply management concepts and functions.
- Students will explain theory and practical application of Equal Employment Opportunity current employment laws.
- Students will develop a working knowledge of marketing terminology.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Program Requirements

Column 1	Column 2
This certificate requires:	
Completion of the Retail Management - Level 1 coursework	
PLUS	
Completion of the Retail Management - Level 2 coursework	

Required Courses

Course Prefix	Course Name	Units
Retail Management - Level 1 Coursework		
VOC B025	Business Communications	
VOC BS50	Retail Store Management and Merchandising	
VOC CSB15	Microcomputer Applications	

Course Prefix	Course Name	Units
Retail Management - Level 2 Coursework		
VOC BA11	Fundamentals of Accounting	
VOC BM61	Business Organization and Management	
VOC BM62	Human Resource Management	
VOC BS36	Principles of Marketing	

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Retail Management – Level 3

Certificate of Completion #24383

Students completing the advanced Level 3 Certificate will increase knowledge and practical experience in business communication, leadership and financial controls. Successful completion of this certificate prepares students to handle the increasing diversity and complexity of modern retail management.

Program Learning Outcomes

- Students will describe the basic accounting system and how it is used to serve business needs.
- Students will define organizational culture, socialization and mentoring.
- Students will apply communication skills in simulated business situations such as conferences and business groups.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Program Requirements

Column 1	Column 2
This certificate requires:	
Completion of the Retail Management - Level 1 coursework	
PLUS	
PLUS Completion of the Retail Management - Level 2 coursework	
PLUS	
Completion of the Retail Management - Level 3 coursework	

Required Courses

Course Prefix	Course Name	Units

Retail Management - Level 1 Coursework

VOC B025	Business Communications	
VOC BS50	Retail Store Management and Merchandising	
VOC CSB15	Microcomputer Applications	

Course Prefix	Course Name	Units

Retail Management - Level 2 Coursework

VOC BA11	Fundamentals of Accounting	
VOC BM61	Business Organization and Management	
VOC BM62	Human Resource Management	
VOC BS36	Principles of Marketing	

Course Prefix	Course Name	Units

Retail Management - Level 3 Coursework

VOC BA07	Principles of Accounting - Financial	
VOC BM60	Human Relations in Business	
VOC B026	Oral Communications for Business	

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Small Business Management – Level 1

Certificate of Completion #24035

Small business has been described as the engine of change within the economy. The Small Business Management – Level 1 Certificate exposes students to the fundamentals of managing and planning a small business. Upon completion students may qualify for an entry-level management position in a small business. Entrepreneurs may use this certificate as a means to plan and develop new business ventures.

Program Learning Outcomes

- Students will list and explain the foundations upon which business is built and the economic challenges facing the United States.
- Students will develop a working knowledge of marketing terminology.
- Students will describe business planning for small business.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC BM20	Principles of Business	
VOC BM66	Small Business Management	
VOC BS36	Principles of Marketing	

Small Business Management – Level 2

Certificate of Completion #24034

The Small Business Management – Level 2 Certificate provides students with practical small business tools. It focuses on issues such as motivation, teamwork and leadership skills that lead to enhanced

productivity through the development of people. Completion of this certificate will lead to new career opportunities for those currently employed in the small business arena.

Program Learning Outcomes

- Students will define organizational culture, socialization and mentoring.
- Student will apply management concepts and functions.
- Students will explain theory and practical application of Equal Employment Opportunity current employment laws.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Program Requirements

Column 1	Column 2
Qualification for this certificate requires:	
Completion of Small Business Management - Level 1 coursework	
PLUS	
Completion of Small Business Management - Level 2 coursework	

Required Courses

Course Prefix	Course Name	Units
Small Business Management - Level 1 Coursework		
VOC BM20	Principles of Business	
VOC BM66	Small Business Management	
VOC BS36	Principles of Marketing	

Course Prefix	Course Name	Units
Small Business Management - Level 2 Coursework		
VOC BM60	Human Relations in Business	
VOC BM61	Business Organization and Management	
VOC BM62	Human Resource Management	

Small Business Management – Level 3

Certificate of Completion #24235

Upon completion of the Small Business Management – Level 3 certificate, students will have built a foundation of management strategies and practices which will enable them to prosper in an ever-changing small business environment. Computer skills applicable to small business will be developed. Students will have a strategic perspective across all small business functions. Students will acquire the skills and abilities necessary to build a successful business career.

Program Learning Outcomes

- Students will describe the basic accounting system and how it is used to serve business needs.
- Students will define and outline the key principles of continuous quality management.
- Students will contrast quality management theory and previous management thought.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Certificate Requirements

Column 1	Column 2
Qualification for this certificate requires:	
Completion of Small Business Management - Level 1 coursework	
PLUS	
Completion of Small Business Management - Level 2 coursework	
PLUS	
Completion of Small Business Management - Level 3 coursework	

Required Courses:

Course Prefix	Course Name	Units
Small Business Management - Level 1 Coursework		
VOC BM20	Principles of Business	
VOC BM66	Small Business Management	
VOC BS36	Principles of Marketing	

Course Prefix	Course Name	Units
Small Business Management - Level 2 Coursework		
VOC BM60	Human Relations in Business	
VOC BM61	Business Organization and Management	
VOC BM62	Human Resource Management	

Course Prefix	Course Name	Units
Small Business Management - Level 3 Coursework		
VOC BA07	Principles of Accounting - Financial	
VOC BM10	Principles of Continuous Quality Improvement	
VOC CSB15	Microcomputer Applications	

Solar Panel

Certificate of Completion #38105

This short-term program is intended to provide students with the skills and knowledge to start a career in solar panel technology. Essential topics related to solar power and energy are covered including fundamental solar panel and electrical components. Students will gain an understanding of an overview of solar panel manufacturing, installation and maintenance, as preparation for entrance into apprenticeship programs and the construction industry.

Program Learning Outcomes

- Students will be prepared to enter into Solar Panel manufacturing/ installation jobs.
- Students will be employed or seeking employment in the field or a related field.
- Students will demonstrate job readiness skills.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC SPT	Solar Panel Technology	
VOC FSF	Tool Use and Field Service Fundamentals	

Tutor Training

Certificate of Completion G8150

Tutor Training certificate emphasizes tutoring strategies, learning styles, problem-solving, and best practices for working with a diverse student population.

Program Learning Outcomes

The goal of the Tutor Training Certificate is to prepare tutors to work effectively with a diverse group of learners. Tutoring strategies, learning styles, problem solving, and best practices for working with a diverse student population will be emphasized. Upon completion of the Tutor Training Certificate, students will be able to demonstrate the following:

- Identify tutor's and tutee's responsibilities.
- Identify adult learning theories and tutoring strategies.
- Develop various skills to promote active, independent learning.
- Develop and establish a protocol for tutoring sessions.
- Compare and contrast tutoring styles and techniques.
- Identify problematic areas for the tutor.
- Explore tutor's role in varied settings such as one-on-one or in groups.
- Identify and address tutor's personal biases to promote an equitable learning environment based on understanding, acceptance, and respect.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC TR10A	Introduction to Tutoring	
Choose one of the following courses:		
VOC TR10B	Tutoring in the English Language	
VOC TR10C	Tutoring - Supplemental Instructor	
VOC TR10D	Tutoring in Mathematics	
VOC TR10R	Tutoring in Reading	

Trades Pre-Apprenticeships

Certificate of Completion #37599

An introduction to the various building and construction trades. Overview and history of the trades and unions, and preparation for entrance into the apprenticeship programs and construction industry. Essential topics related to various building and construction trades. These include construction health and safety, basic components of a blueprint, green construction, and financial literacy.

Program Learning Outcomes

- Students will be prepared to enter into apprenticeship programs.
- Students will be employed or actively seeking employment in the field or a related field.
- Students will demonstrate job readiness skills.

- Students will complete the OSHA 10-Hour Construction Outreach DOL course.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC TRAD1	Introduction to Construction Trades 1	
VOC TRAD2	Introduction to Construction Trades 2	
BS MCCR	Math for College and Career Readiness	

Recommended Elective

Course Prefix	Course Name	Units
VOC FSF	Tool Use and Field Service Fundamentals	

Vocational Re-Entry

Basic Computer Presentation and Publication

Certificate of Completion
#36560

The certificate in Basic Computer Presentation and Publication is customized to meet the needs of the entry level adult student or professional, who is seeking to acquire presentation and publication computer skills needed in today's computerized office environment.

Program Learning Outcomes

- Students will present a professional quality PowerPoint using a variety of tools.
- Students will be technically proficient in PowerPoint.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC BCPP1	PowerPoint Basics 1	
VOC BCPP2	PowerPoint Basics 2	
VOC BCDP	Basic Computing - Desktop Publishing	

Vocational Re-Entry

Basic Excel Applications

Certificate of Completion
#36278

This certificate in Basic Excel Applications is customized to meet the needs of the entry level adult student or professional, who is seeking to acquire Microsoft Excel computer skills used in today's emerging computerized office environment.

Program Learning Outcomes

- Students will format a basic Excel spreadsheet in order to work with and analyze data.
- Students will be technically competent in Microsoft Excel.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CPBE1	Basic Excel - Level 1	
VOC CPBE2	Basic Excel 2	
VOC CPBE3	Basic Excel 3	

Vocational Re-Entry

Microenterprise

Certificate of Completion
#38725

This certificate is designed to prepare students to start and manage a home-based business for self-employment or obtain a job in the field of business management. Students will gain knowledge and skills in the essentials of starting a small business, requirements of local/state/federal organizations, and best practices in hiring as well as in sales and marketing strategies.

Program Learning Outcomes

- Students will be prepared to start and manage a home-based business for self-employment or obtain a job in the field of business management.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC HBB1	Starting a Home-Based Business	
VOC HBB2	Managing and Growing Your Home-Based Business	
VOC MIT	Mobile Information Technology for the Beginner	

Recommended Electives

Course Prefix	Course Name	Units
VOC ESD02	Production of Boutique Crafts for Retail Sales	
VOC ESD03	Lettering Styles and Advertising Calligraphy	
VOC ESD07	Handcrafted Needlework for Retail Sales	
VOC ESD08	Jewelry Production and Design for Retail Sales	
VOC ESD10	Beginning Decorative Art Production for Retail Sales	
VOC ESD11	Intermediate Decorative Art Production for Retail Sales	
VOC ESD15	Jewelry and Lapidary Production Design	
VOC AGR-G	Home Gardening	

Vocational Re-Entry

Office Computer Applications - Level 1

Certificate of Completion
#36375

This certificate is designed to prepare students for entry-level office support employment. Completion of the certificate provides students with basic skills for a computerized office environment.

Program Learning Outcomes

- Students will apply basic computing skills to create, format, and edit professional documents.

- Students will have a solid foundation of computer components and their functions as well as understanding the fundamentals of a Microsoft environment.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CPBC1	Basic Computing - Level 1	
Note: Any higher level course may be substituted for VOC CPBC1.		
VOC CPBC2	Basic Computing - Level 2	

Required Electives

Course Prefix	Course Name	Units
Choose one from the following:		
VOC CPNET	Internet Research - an Introduction	
VOC CPDI	Digital Photography for the Beginner	

Vocational Re-Entry Office Computer Applications - Level 2

Certificate of Completion
#36834

This certificate in Office Computer Applications - Level 2 prepares students with an array of office computer skills for a computerized office environment.

Program Learning Outcomes

- Students will be proficient in office computer software used in the office workplace.
- Students will be prepared for entry-level office support employment.

Additional Notations

Certificate Requirements: Completion of Office Computer Applications - Level 1 Certificate

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC CPBC3	Basic Computing - Level 3	
VOC CPMC	Creative Computing	

Vocational Re-Entry Sewing and Tailoring

Certificate of Completion
#36803

This certificate in Sewing and Tailoring is customized to meet the needs of the entry level adult student or professional, who is seeking to acquire specific skills used in today's emerging fashion industry for tailors, dressmakers or custom sewers to master each phase of the apparel process to produce made-to-measure garments. Jobs such as alterations sewer, alterations tailor, bridal gown fitter, coat cutter, coat maker, couture dressmaker, dress fitter, fur tailor, garment fitter, and suit maker.

Program Learning Outcomes

- Students will construct and present professional looking tailored garments.

- Students will be prepared for entry-level sewing and tailoring employment.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC ST1	Sewing and Tailoring 1	
VOC ST2	Sewing and Tailoring 2	
VOC ESD09	Sewing and Design	

Welding Basics

Certificate of Completion
#37598

Theory and practical training for entry into welding jobs. Introduction into history of welding, welding terminology, basic welding techniques, measurement, and safety. Covers oxyfuel, shielded metal arc, gas metal arc welding, and proper use of welding equipment. Prepare for the next level certificate.

Program Learning Outcomes

- Students will be employed or seeking employment in the area of study or a related area.
- Students will demonstrate job readiness skills.
- Students will be prepared for the next level certificate in the field.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC WLD01	Welding Basics	
BS ABE05	Career Development	

Welding Technologies

Certificate of Completion
#24373

This certificate is designed to prepare students for employment, and 1) leads to occupations in manufacturing and repair; and 2) helps prepare the student for positions in supervision.

Program Learning Outcomes

- Students will be employed or seeking employment in the area of study or a related area.
- Students will be technically competent.
- Students will correctly answer two designated questions on welding process id.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC WL40	Introduction to Welding	
VOC WL70A	Beginning Arc Welding ¹	
VOC WL70B	Intermediate Arc Welding	

¹ Note: Any higher level welding course may be substituted for VOC WL70A.

Recommended Electives

The Welding faculty recommends that students complement their studies with selected elective courses chosen from the list below. Students should meet with a professor of Welding to help you determine which of those electives would best suit your career plans.

Course Prefix	Course Name	Units
VOC WL60	Print Reading and Computations for Welders	
VOC WL70C	Certification for Welders	

Automotive Welding, Cutting, & Modification

Certificate of Completion

#24406

Prepares students for entry-level employment as a licensed welder with additional skills development and theory in automotive welding, cutting and modification. Coursework prepares students for industry licensing with emphasis on competencies required for certification in structural steel welding and specialty skills in automotive welding.

Program Learning Outcomes

- Students will be employed or seeking employment in the field or a related field.
- Students will be technically competent.
- Students will perform the required practical projects used in GMAW welding and cutting.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC WL40	Introduction to Welding	
VOC WL50	Oxyacetylene Welding	
VOC WL51	Basic Electric Arc Welding	
VOC WL53A	Welding Metallurgy	
VOC WL60	Print Reading and Computations for Welders	
VOC WL70A	Beginning Arc Welding	
VOC WL70B	Intermediate Arc Welding	
VOC WL70C	Certification for Welders	
VOC WL80	Construction Fabrication and Welding	
VOC WL81	Pipe and Tube Welding	
VOC WL91	Automotive Welding, Cutting and Modification	

Gas, Tungsten Arc, Welding

Certificate of Completion

#24380

Prepares students for entry-level employment as a licensed welder with additional skills development and theory in gas tungsten ARC welding. Coursework prepares students for industry licensing with emphasis on competencies required for certification in aluminum, CRES, mild steel and selected exotic metals with specialty skills in gas tungsten ARC welding.

Program Learning Outcomes

- Students will be employed or seeking employment in the field or a related field.
- Students will be technically competent.

- Students will solve problems as related to preparing materials prior to welding.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC WL40	Introduction to Welding	
VOC WL50	Oxyacetylene Welding	
VOC WL51	Basic Electric Arc Welding	
VOC WL53A	Welding Metallurgy	
VOC WL60	Print Reading and Computations for Welders	
VOC WL70A	Beginning Arc Welding	
VOC WL70B	Intermediate Arc Welding	
VOC WL70C	Certification for Welders	
VOC WL80	Construction Fabrication and Welding	
VOC WL81	Pipe and Tube Welding	
VOC WL90A	Gas Tungsten Arc Welding	

Licensed Welder

Certificate of Completion

#24223

This certificate is designed to prepare students for entry-level employment in the broad field of welding, including manufacturing, construction, fabrication and repair. Through theoretical and hands-on skills coursework, students prepare for industry licensing with an understanding of current guidelines and standards. Particular emphasis is placed on those competencies required for certification in structural steel welding. Course sequences can be modified to reflect industry experience or other individual needs.

Program Learning Outcomes

- Students will be employed or seeking employment in the field or a related field.
- Students will be technically competent.
- Students will identify print views, lines and dimensioning methods.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC WL40	Introduction to Welding	
VOC WL50	Oxyacetylene Welding	
VOC WL51	Basic Electric Arc Welding	
VOC WL53A	Welding Metallurgy	
VOC WL60	Print Reading and Computations for Welders	
VOC WL70A	Beginning Arc Welding	
VOC WL70B	Intermediate Arc Welding	
VOC WL70C	Certification for Welders	
VOC WL80	Construction Fabrication and Welding	
VOC WL81	Pipe and Tube Welding	

Semiautomatic Arc, Welding

Certificate of Completion

#24379

Prepares students for entry-level employment as a licensed welder with additional skills development and theory in semiautomatic ARC welding. Coursework prepares students for industry licensing with emphasis on competencies required for certification in structural steel welding and specialty skills in semiautomatic ARC welding.

Program Learning Outcomes

- Students will be employed or seeking employment in the area of study or a related area.
- Students will be technically competent.
- Students will demonstrate safe operation of welding equipment.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC WL40	Introduction to Welding	
VOC WL50	Oxyacetylene Welding	
VOC WL51	Basic Electric Arc Welding	
VOC WL53A	Welding Metallurgy	
VOC WL60	Print Reading and Computations for Welders	
VOC WL70A	Beginning Arc Welding	
VOC WL70B	Intermediate Arc Welding	
VOC WL70C	Certification for Welders	
VOC WL80	Construction Fabrication and Welding	
VOC WL81	Pipe and Tube Welding	
VOC WL90B	Semiautomatic Arc Welding Process	

Adult and Continuing Education Courses

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Access (ACCS)

ACCS ESL25 Language Development for Deaf Students in ASL and English

0 Units

Lab: 108

Language development to improve written English and American Sign Language (ASL) communication for Deaf or hard of hearing students who use sign language.

ACCS IBSID Introduction to Banking for Students with Intellectual Disabilities

0 Units

Lecture: 12-56

Basic banking skills for students with intellectual disabilities including writing and depositing checks and balancing accounts.

ACCS ILCS Independent Living Skills - Consumer Skills

0 Units

Lecture: 12-56

Basic consumer skills for students with intellectual disabilities to improve independent living.

ACCS ILHFS Independent Living Skills - Health and Fitness Skills

0 Units

Lecture: 12-56

Healthy living for people with intellectual disabilities, including diet, nutrition, disease prevention, and application of physical fitness principles for health.

ACCS ILMS Independent Living Skills - Money Skills

0 Units

Lecture: 12-56

Basic money skills necessary for performing accurate money exchange. Including currency identification, values of currency, and basic currency counting.

ACCS ILPLS Independent Living Skills - Practical Living Skills

0 Units

Lecture: 12-56

Practical living skills to successfully integrate into the community setting.

ACCS ILSRR Independent Living Skills - Romantic Relationships

0 Units

Lecture: 12-56

Overview of adult relationships including friendships, romantic, and intimate relationships.

ACCS ILSPC Independent Living Skills - Personal Care

0 Units

Lecture: 12-56

Daily living skills in personal care.

ACCS ILSBB Independent Living Skills - Basic Budgeting and Money Management

0 Units

Lecture: 12-56

Build independent living skills through personal basic money management and budgeting.

ACCS ILSHS Independent Living Skills - Human Sexuality

0 Units

Lecture: 12-56

A comprehensive overview of human sexuality for students with intellectual disabilities. Current appropriate information on health, safety, attitudes, behaviors, personal values, and relationships.

ACCS ILSSS Independent Living Skills - Safety Skills

0 Units

Lecture: 12-56

Personal safety for students with intellectual disabilities, designed to improve personal safety in the home and community.

ACCS LRND1 Communication Intervention

0 Units

Lab: 1-16

Designed for students with acquired brain injury. Specialized instruction to improve speech (articulator movement and motor planning), language (expressive and receptive), and cognition (attention, memory, and reasoning) needed to achieve academic and vocational goals. Note: Students must make an appointment with the instructor, have acquired the injury after the age of 12, and have completed any services through the public school system in order to be eligible to register in this class.

ACCS LRND2 High Tech Center: Assistive Technology and Academic Strategies

0 Units

Lab: 1-350

Technology and academic strategies to assist students in accessing information and completing credit class assignments. Students should be registered with ACCESS and enrolled in at least 3 academic units.

ACCS LRND3 Acquired Brain Injury Intervention

0 Units

Lab: 1-64

Designed for students who have been accepted into the Acquired Brain Injury Program at Mt. SAC. Specialized instruction and the use of computer software to improve cognitive skills (attention, memory, reasoning, etc.) needed for academic and vocational goals. Note: Students must see a brain injury specialist in Access, have acquired their injury after the age of 12, and have finished with any services through the public school system in order to be eligible to register in this class.

ACCS MBS Independent Living Skills - Memory Building Skills

0 Units

Lecture: 12-56

Memory building skills for students with developmental disabilities.

Basic Skills (BS)

BS ABE01 Career Information and Guidance

0 Units

Lecture: 1-90

Information on noncredit and credit enrollment procedures, college placement, assessment, and diagnostic test administration, test score interpretation and course eligibility, career assessment, exploration, and goal setting.

BS ABE02 Adult Basic Education**0 Units**

Lecture: 1-288

Improve basic skills of adult learners. Content includes basic reading comprehension, language, and mathematics.

BS ABE05 Career Development**0 Units**

Lecture: 4-90

Career preparation, assessment, and interest inventory. Exploration of career fields and employment opportunities. Resume writing, cover letter, interview skills, and employment portfolio. Internet for use in career exploration.

BS ASVB1 ASVAB Preparation 1**0 Units**

Lecture: 1-150

General knowledge in five of the ten areas of the Armed Services Vocational Aptitude Battery (ASVAB) Exam for general science, word knowledge, paragraph comprehension, arithmetic reasoning, and math knowledge and test preparation skills.

BS ASVB2 ASVAB Preparation 2**0 Units**

Lecture: 1-150

Higher level concepts in math reasoning, science skills, and vocabulary found on the Armed Services Vocational Aptitude Battery (ASVAB).

BS BIO50 Biology Basic Skills**0 Units**

Lecture: 9

Basic skills needed for students to succeed in biological science classes. Topics include a contrast of the academic demands of science to non-science disciplines, preparation for biological laboratory experiences as well as lectures, development of personal study plan to manage the large volume of information, interpretation of biological graphs and diagrams, introduction to common Latin and Greek words to build vocabulary, use of memorization techniques, application of test-taking strategies for biological exams, especially lab practica, and analysis of test results. These techniques and strategies will be discussed using biological concepts and vocabularies as examples. Recommended to be taken concurrently with any biological science class.

BS CNSL4 Orientation for Noncredit Programs**0 Units**

Lecture: 1-40

Orientation for noncredit programs including requirements, guidelines, eligibility, student success strategies, progress policies, appropriate student conduct, and educational planning for noncredit programs.

BS CNSL5 Career and Life Planning for ESL**0 Units**

Lecture: 4-56

Career and life planning through self-exploration of student personality, interests, and values. Research occupational careers, labor markets, and educational requirements for different jobs. Goal-setting, decision-making, and cohesive teamwork. Job search skills using internet and other resources. Survey campus and community programs, degrees, and resources using the college catalog. Explore opportunities after ESL.

BS EPCS English Preparation for College Success**0 Units**

Lecture: 4-75

Develops expository and argumentative essay and research paper formatting. Emphasizes critical reading of academic material for college coursework.

BS HCM1 Transitional Math for Health Careers 1**0 Units**

Lecture: 4-288

Contextualized basic math to prepare for successful transition to health career programs including numeracy, fractions, decimals, unit conversion, ratios, and proportions to apply to dimensional analysis.

BS HSEMA HSE Preparation: Mathematics**0 Units**

Lecture: 1-288

Improve mathematical knowledge and skills in preparation for the math section of High School Equivalency (HSE) exams (GED and HiSET). Test areas include number operations, algebra, statistics, and geometry.

BS HSERL HSE Preparation: Reasoning through Language Arts**0 Units**

Lecture: 1-288

Reading comprehension and writing skills in preparation for the Language Arts section of High School Equivalency (HSE) exams (GED and HiSET). Test areas include reading comprehension, argument analysis and text comparison, grammar mechanics, and extended response development.

BS HSESC HSE Preparation: Science**0 Units**

Lecture: 1-288

Improve scientific knowledge in preparation for the science section of High School Equivalency (HSE) exams (GED, and HiSET). Test areas include life science, physical science, and earth and space science.

BS HSESS HSE Preparation: Social Studies**0 Units**

Lecture: 1-288

Social studies knowledge in preparation for sections of the High School Equivalency (HSE) exams (GED and HiSET). Exam areas include United States (U.S.) history, world history, geography, government, and economics.

BS LRN01 Short-Term Review**0 Units**

Lecture: 1-80

Review of reading comprehension, writing and language skills, number operations, algebra, and geometry.

BS LRN03 Math Skills Review**0 Units**

Lab: 1-288

Increase basic math knowledge and reduce math anxiety. Topics include fractions, decimals, ratios, proportions, percentages and the application of these skills in life and work situations.

BS LRN06 Personal Computer Applications**0 Units**

Lecture: 4-288

Current word-processing, spreadsheet, presentation, cloud computing, productivity, and collaboration software; personal and work online communication management, internet safety and digital footprint awareness, keyboarding, and basic computer skills improvement.

BS LRN50 Learning Support Laboratory**0 Units**

Lab: 1-320

Learning and workplace skills are enhanced by computer use and instruction for students enrolled in or seeking enrollment in a college instructional program.

BS LRN76 Improving Reading Comprehension**0 Units**

Lab: 1-320

Prepares students for reading informational materials. Emphasis on reading comprehension, vocabulary, and how to read a textbook.

BS LRN81 Improving Writing**0 Units**

Lecture: 54

Develop as a writer through practice and reflection. Improve writing process and product through prewriting, writing, editing, and revising. Develop writing strategies and confidence in a community of writers.

BS MCCR Math for College and Career Readiness**0 Units**

Lecture: 4-140

Contextualized math course to prepare students for successful transition to college, apprenticeships, and employment. Topics include numeracy, fractions, decimals, unit conversion, ratios, proportions, algebra, measurement, and statistics.

BS MPS Math Preparation for Statistics Success**0 Units**

Lecture: 4-75

Review of arithmetic and algebraic skills that are required to be successful in college statistics. Topics include the numerical operators including addition, subtraction, multiplication, and division as well as square roots, exponents, factorials, and sums. Conversion between fractions, decimals, and percent as it relates to probabilities and statistics. Work with graphs of linear equations and their slopes and finding distance between two points. Graphing, solving, and interpreting linear equations and inequalities. Evaluate algebraic expressions using order of operations. Graph and interpret lines, their slope, and find distance between two points. Introduction into basic vocabulary and concepts of statistics. Emphasis on critical reading and thinking skills as they pertain to college statistics.

BS MPSTM Math Preparation for BSTEM Success**0 Units**

Lecture: 4-75

Review of algebraic skills to be successful in BSTEM (Business, Science, Technology, Engineering, and Mathematics) courses. Topics of review include fundamental operations on algebraic expressions and functions; simplify polynomial and rational expressions; apply properties of exponents and evaluate exponential expressions and functions; and solve linear systems of equations with elimination, substitution, and matrix row operations.

BS MTH01 Developmental Mathematics Concepts and Applications**0 Units**

Lab: 1-320

Hands-on activities and practical applications of algebraic principles: elementary geometry, signed numbers, ratio and proportion, factoring, pre-algebra, linear and quadratic equations, complex numbers, graphing, functions, sequences, linear and non-linear inequalities and systems, progressions, and sigma notation.

BS RWCCR Reading and Writing for College and Career Readiness**0 Units**

Lecture: 1-80

Contextualized reading and writing course to prepare students for successful transition to apprenticeships, college, and career. Skimming and scanning, annotation, reading for main idea, reading strategies, sentence structure, summarizing versus responding, paragraph structure, paragraph types, reading charts and graphs, and vocabulary.

BS STD80 Foundations for Academic Success**0 Units**

Lecture: 54

College success course emphasizing academic achievement that promotes learning through self-awareness, time management, listening, note-taking, oral and written communication, test-taking, memorization and the use of campus resources using a brain-based perspective.

BS TR01 All Subject Tutoring**0 Units**

Lab: 1-320

Assistance in writing, reading, mathematics, and study skills through tutoring and computer-based learning. Tutorial assistance in other subject areas may be available.

Citizenship (CITZ)

CITZ NAT Citizenship for Naturalization**0 Units**

Lecture: 4-48

Preparation for the United States Citizenship Interview. Focused English as a Second Language (ESL) instruction in United States history, government, and institutions. Listening and speaking skills in English necessary to pass the naturalization interview and literacy skills necessary to pass the written portion of the naturalization test.

Disabled Students (DSPS)

DSPS ELL01 Lifelong Learning for the Special Needs Population

0 Units

Lab: 70-315

Educational activities for special needs students emphasizing physical, cognitive, social, and emotional skill development.

DSPS ESL26 Language Enhancement for Deaf Students in ASL and ESL

0 Units

Lab: 108

Language enhancement for Deaf or hard-of-hearing students. Intermediate skills in written ESL and ASL.

DSPS IAEP Interacting with Emergency Personnel and Authorities

0 Units

Lecture: 64

Prepares students with disabilities to interact with emergency personnel including law enforcement. Overview of the criminal justice system and reporting victimization.

English as a Second Language (ESL)

ESL CULTR ESL - American Culture Through Media for English Language Learners

0 Units

Lecture: 4-72

Speaking, listening, reading, and vocabulary using the context of the study of American culture as presented through various American media. Critical thinking, cultural awareness, and communication skills.

ESL FDN ESL - Foundations

0 Units

Lecture: 14-280

Foundation level English skills for students with low literacy levels in English or native language. Fundamental skills in letter recognition and production, numbers, pronunciation, and vocabulary acquisition through the practice of listening, speaking, reading, and writing skills.

ESL LANG1 ESL Language Skills Laboratory

0 Units

Lab: 1-320

Language skills including listening, speaking, reading, writing, pronunciation, vocabulary, and grammar using various computer software programs. Designed for English as a Second Language (ESL) students awaiting admission into the ESL program and those already enrolled.

ESL LANG2 VESL Language and Computer Skills Lab

0 Units

Lab: 1-200

English language and computer skills for Vocational English as a Second Language (VESL) students. Focus on listening, speaking, reading, writing, pronunciation, vocabulary, and various computer software programs.

ESL LANG3 English for Special Uses

0 Units

Lecture: 4-56

Speaking, listening, reading, vocabulary, and study skills related to career education and academic purposes. Critical thinking, cultural awareness, and autonomous learning strategies.

ESL LVL1 ESL - Level 1

0 Units

Lecture: 14-320

Beginning-low English vocabulary and basic grammar. Includes listening, speaking, reading, and writing skills practice on topics of personal interests, career, and life experiences.

ESL LVL2 ESL - Level 2

0 Units

Lecture: 14-320

Beginning-high English vocabulary and grammar. Includes listening, speaking, reading, and writing practice.

ESL LVL3 ESL - Level 3

0 Units

Lecture: 14-320

Intermediate-low English communication and grammar. Includes listening, speaking, reading, and writing skills. Activities include team projects, presentations, and exams in preparation for academic and career success as well as civic participation.

ESL LVL4 ESL - Level 4

0 Units

Lecture: 14-320

Intermediate-high English communication and grammar through practice of listening, speaking, reading, and writing skills. Activities include team projects, presentations, and exams in preparation for academic and career success as well as civic participation.

ESL LVL5 ESL - Level 5

0 Units

Lecture: 14-320

Advanced-low English communication and study skills for transition into college-level and career and technical education (CTE) courses. Activities include teamwork, projects, presentations, and exams to ensure academic and career success, civic participation, and strategies for lifelong learning.

ESL LVL6 ESL - Level 6

0 Units

Lecture: 14-320

Advanced English communication and study skills for transition into college-level and career and technical education (CTE) courses. Activities include teamwork, projects, presentations, and exams to ensure academic and career success, civic participation, and strategies for lifelong learning.

ESL PLVL1 ESL - Pre-Level 1

0 Units

Lecture: 14-280

Literacy-level English skills. Basic skills in vocabulary and grammar through practice of listening, speaking, reading, and writing skills.

ESL PRONA ESL - Pronunciation A**0 Units**

Lecture: 4-72

Beginning level American English pronunciation for English Language Learners. Beginning recognition of and practice of vowel letters and correlation to vowel sounds, syllables and syllable stress, consonant letters and correlation to consonant sounds, and intonation in yes/no and information questions.

ESL PRONB ESL - Pronunciation B**0 Units**

Lecture: 4-72

Intermediate level American English pronunciation for English Language Learners. Focus on the sound system in vocabulary, syllable stress in polysyllabic words and phrases, intonation patterns for questions and statements, connected speech, and exposure to and acceptance of varieties of spoken English.

ESL PRONC ESL - Pronunciation C**0 Units**

Lecture: 4-72

Advanced level American English pronunciation for English Language Learners. High-level practice of stress, intonation, and speech sounds with a focus on improving articulation, including American English phonetic awareness and phonemic articulation.

ESL PRONP ESL - Pronunciation A for Beginners (Pre-1)**0 Units**

(May be taken three times for credit)

Lecture: 4-72

Literacy-level American English pronunciation for English Language Learners. Beginning recognition and practice of vowel and consonant sounds, correlation of letters to sounds, syllables, syllable stress, and intonation in yes/no questions.

ESL READA ESL - Reading A**0 Units**

Lecture: 4-72

Beginning level reading skills for academic and workplace success. Pre-reading, skimming, main ideas, details, and vocabulary building.

ESL READB ESL - Reading B**0 Units**

Lecture: 4-72

Intermediate level reading skills for academic and workplace success. Pre-reading, skimming, main ideas, details, conclusions, vocabulary building, and summarizing.

ESL READC ESL - Reading C**0 Units**

Lecture: 4-72

Advanced reading skills for academic and workplace success. Pre-reading, skimming, main ideas, details, conclusions, vocabulary building, summarizing, and critical thinking.

ESL READP ESL - Reading A for Beginners (Pre-1)**0 Units**

Lecture: 4-72

Literacy-level reading skills for academic and workplace success. Pre-reading, skimming, main ideas, and vocabulary building.

ESL SPKA ESL - Speaking A**0 Units**

Lecture: 4-72

Beginning level English listening and speaking skills. Focus on vocabulary development, simple conversations, short presentations, and pronunciation.

ESL SPKB ESL - Speaking B**0 Units**

Lecture: 4-72

Intermediate level English oral proficiency in areas of pronunciation, listening comprehension, and speaking. Speaking with clarity and fluency while presenting ideas and opinions. Ability to actively listen and engage in familiar conversation topics.

ESL SPKC ESL - Speaking C**0 Units**

Lecture: 4-72

Advanced level English listening and speaking strategies for academic preparation, workplace advancement, and civic participation. Focus is on fluency, vocabulary, and appropriate social register.

ESL SPKFD ESL - Speaking Foundations**0 Units**

Lecture: 4-72

Foundation level English listening comprehension and speaking skills. Activities include alphabet practice, repetition exercises, listening and responding to basic commands, and pronunciation practice.

ESL SPKP1 ESL - Speaking A for Beginners (Pre-1)**0 Units**

Lecture: 4-72

Literacy level English listening comprehension and speaking skills. Activities include repetition exercises, listening and responding to simple conversations, retelling stories, and pronunciation practice.

ESL TOEFL TOEFL Preparation (Test of English as a Foreign Language)**0 Units**

Lecture: 4-72

Advanced reading, listening, speaking, and writing skills in preparation for standardized tests, such as Test of English as a Foreign Language (TOEFL).

ESL VHLTH English for Health Professionals**0 Units**

Lecture: 4-56

Advanced speaking, writing, vocabulary, and study skills related to careers in healthcare. Critical thinking, cultural awareness, teamwork, and autonomous learning strategies.

ESL VSPK VESL Speaking**0 Units**

Lecture: 4-56

Advanced level oral communication skills to prepare non-native English speakers for transition to college and workforce. Focus on fluency, accuracy, vocabulary, and appropriate speech register.

ESL VWRT VESL Writing**0 Units**

Lecture: 4-56

Advanced level written communication skills to prepare non-native English speakers for transition to college and workforce. Focus on preparation for academic writing, workplace writing skills, and development of editing strategies

ESL WRTA ESL - Writing A**0 Units**

Lecture: 4-72

Beginning level reading and writing skills using familiar topics and American customs. Focus is on combining sentences and learning vocabulary.

ESL WRTB ESL - Writing B**0 Units**

Lecture: 4-72

Intermediate level reading and writing using a variety of reading materials and writing topics. Focus is on paragraph structure, editing strategies, and vocabulary in context.

ESL WRTC ESL - Writing C**0 Units**

Lecture: 4-72

Advanced level reading and writing proficiency using a range of genres. Process writing to facilitate academic preparation and workplace advancement. Focus on interpretation of authentic material and development of editing strategies.

ESL WRTFD ESL - Writing Foundations**0 Units**

Lecture: 4-72

Reading and writing skills that introduce learners to the foundations of English literacy. Material is based on personal life and familiar topics.

ESL W RTP1 ESL - Writing A for Beginners (Pre-1)**0 Units**

Lecture: 4-72

Reading and writing skills that establish foundation for English literacy. Material is based on personal life, familiar topics, and American customs. Focus is on vocabulary, introduction to reading passages, and accuracy in sentence-level writing.

ESL 21S ESL Accent Reduction**0 Units**

Lecture: 36

Pronunciation for non-native speakers with emphasis on analysis of individual strengths and weaknesses. Focus on improving articulation, stress, intonation patterns, and listening.

ESL 70 Basic to Intermediate Writing and Reading**0 Units**

Lecture: 90

Basic to intermediate level accelerated writing and reading for non-native speakers with an emphasis on preparation for academic writing, critical thinking, and vocabulary development.

ESL 72 American English Pronunciation**0 Units**

Lecture: 36

Pronunciation for English language learners with emphasis on analysis of individual strengths and weaknesses. Focus on improving articulation, stress, intonation patterns, and listening.

ESL 80 Intermediate to Advanced Writing and Reading**0 Units**

Lecture: 90

Intermediate to advanced accelerated writing and reading for non-native speakers with an emphasis on preparation for academic writing, critical thinking, and vocabulary development.

ESL 90 Accelerated Writing for English Language Learners**0 Units**

Lecture: 90

Introduce advanced English Language Learners to academic reading, writing, and communicating in a thematic context while nurturing metacognitive and critical thinking skills for engaging in college-level course work. Students complete substantial writing assignments based on readings in different genres, utilize synthesized information from on a variety of class sources and library research, and establish authorship and voice in academic English.

High School Basic Skills (BSHS)

BSHS ALG1 High School Algebra 1**0 Units**

Lecture: 15-150

Key components of first year high school algebra. Use of symbolic reasoning and calculations with symbols as applied to solving, graphing equations, functions and inequalities. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS ALG2 High School Algebra 2**0 Units**

Lecture: 15-150

Components of second year algebra. Expands on basic algebra and geometry concepts, including solutions of quadratic equations and functions, equations and inequalities, fractional exponents and exponential functions, polynomials, real numbers, rational and irrational expressions, logarithmic functions, computations, permutations and probabilities, statistics, series and sequences, the complex number system, and trigonometric functions. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS ART1 High School Art and Creative Expression**0 Units**

Lecture: 15-150

Artistic perception, creative expression, historical and cultural context of art, aesthetic valuing, art forms, relationships, applications, and original productions through design and drawing using a variety of media, careers in art and design. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS ART2 High School Art 2**0 Units**

Lecture: 15-150

Artistic perception, creative expression, and aesthetic valuing. Historical and cultural context of the visual arts. Original productions in more complex art designs and drawings using a variety of media. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS BIO High School Biology**0 Units**

Lecture: 15-150

Basic life science. Includes diversity of life from a microscopic to a macroscopic scale, relationship between structure and function, chemistry in life processes, cells as the basis of all life, interdependence in nature, information and heredity, evolutionary theories, and homeostasis. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS CHEM High School Chemistry**0 Units**

Lecture: 15-150

Nature of matter and its transformations, chemical bonds and stoichiometry, properties of gases, acids and bases, and organic and inorganic compounds. Chemical systems such as solutions, reactions, and nuclear processes. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS CIV High Schools Civics**0 Units**

Lecture: 15-150

Growth of democracy, federalism, separation of powers, checks and balances, civil liberties, civil rights, civic participation and comparative government. Assessment of global perspectives, constitutional interpretations, political processes, public policy, free enterprise and cultural pluralism. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS CPTC High School Computer Technology**0 Units**

Lecture: 15-150

Fundamental computer concepts, keyboarding skills, digital citizenship, word processing, spreadsheets, and presentation software. Application of technology in the educational and workplace settings. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS EASC High School Earth Science**0 Units**

Lecture: 15-150

Fundamentals of earth and space science, Earth's place in the universe, Earth's systems, and Earth and human activity. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS ECON High School Economics**0 Units**

Lecture: 15-150

General economic principles and practices including: scarcity and choice, opportunity and trade-offs, economic systems, institutions and incentives, markets and prices, supply and demand, competition, income distribution, monetary policy, international economics, and government roles. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS ENG1 High School English 1**0 Units**

Lecture: 15-150

Foundations and analysis of literature using a variety of genres and themes. Writing, editing, and critical thinking skills including vocabulary, concept development, grammar, and writing mechanics. Contributes to the progress of a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS ENG2 High School English 2**0 Units**

Lecture: 15-150

Advanced foundations of literature using a variety of genres and themes. Improves skills in reading comprehension, literary analysis, mechanics of writing, and oral presentations. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS ENG3 High School English 3**0 Units**

Lecture: 15-150

American literature using an American historical approach. Includes social, political, and intellectual trends connected with the following time periods: Pre-Colonial Era, the American Revolution, the New England Renaissance, Slavery and the Civil War, the Frontier Era, the Harlem Renaissance, and the Modern Era. Development of writing and critical thinking skills. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS ENG4 High School English 4**0 Units**

Lecture: 15-150

British literature using the historical approach. Includes social, political, and intellectual trends connected with the following time periods: Anglo-Saxon, Medieval, English Renaissance, Renaissance drama, the early 17th century, the Restoration and the 18th century, the Romantic Era, the Victorian Age, and contemporary British poetry and prose. Development of writing, critical thinking, and the use of literary tools. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS GEOG High School Geography**0 Units**

(May be taken three times for credit)

Lecture: 15-150

Patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Spatial concepts and landscape analysis to examine human social organization and its environmental consequences, and the inter-relationship of natural processes and systems. Methods and tools geographers use. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS GEOM High School Geometry**0 Units**

Lecture: 15-150

Geometric applications and connections. Definitions, constructions, theorems, proofs, area, volume, and geometric relationships. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS HLTH High School Health**0 Units**

Lecture: 15-150

Health issues, healthy choices and behavior, social and mental health, and how health issues impact the community and environment. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits may be earned in 15-hour modules.

BSHS INMA1 HS Integrated Math 1**0 Units**

Lecture: 15-150

Algebraic, geometric, and statistical applications and connections. Equations, inequalities, and functions. Definitions, constructions, theorems, proofs, similarity, transforming and congruence of geometric figures. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS INMA2 HS Integrated Math 2**0 Units**

Lecture: 15-150

Algebraic, geometric, and statistical applications and connections. Triangles, quadrilaterals, similarity, trigonometry, circles, surface area, and volume. Polynomials, functions, quadratic equations, probability, sequences and series. Supports progress towards a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS INMA3 HS Integrated Math 3**0 Units**

Lecture: 15-150

Algebraic, geometric, and statistical applications and connections. Equation, inequalities, functions, quadratics, and polynomials. Rational and radical expressions, logarithms, trigonometry, sequences and series, circles, and probability. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS MUSC High School Music Appreciation**0 Units**

Lecture: 15-150

Analysis of music through history, instruments and genre. Includes vocabulary, compositions, musical elements, and musical works. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS PHSC High School Physical Science**0 Units**

Lecture: 15-150

Introductory overview of chemistry and physical science. Basics of the periodic table, matter, and atoms. Newtonian physics including motion, momentum, and forces. Machines, energy, waves, light, electricity, and magnetism. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS PLNG High School Planning and Guidance**0 Units**

Lecture: 15-150

Guidance and planning: career self-assessment, college and career exploration, online resources, and career development. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS PREA High School Pre-Algebra**0 Units**

(May be taken three times for credit)

Lecture: 15-150

Arithmetic operations through pre-algebra. Supports progress in completing a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS PSY High School Psychology**0 Units**

Lecture: 15-150

Methods, facts, and theories of the behavior and processes of human beings. Theories and characteristics of the history of psychology, research and statistics, child and adult development, sensations, perceptions, cognition, stress, learning, memory, motivation, behavior, personality, abnormal behavior, individuality versus group identity and behavior, and therapy. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS READ High School Reading**0 Units**

Lecture: 15-150

Basic reading including comprehension and vocabulary strategies using a variety of narrative and expository texts. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS SOC High School Sociology**0 Units**

Lecture: 15-150

Theories, characteristics, and implications of culture, socialization, society, groups, deviations and control, social stratification, race, gender, age, family, education, politics, religion, sports, and change. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS SPN1 High School Spanish 1**0 Units**

Lecture: 15-150

First year course in Spanish language. Communication about self and immediate environment using simple sentences and phrases and verb forms. Includes writing and speaking. Cultural connections to geography and customs of Spanish-speaking countries. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS SPN2 High School Spanish 2**0 Units**

Lecture: 15-150

Second year Spanish course. Culture, listening, speaking, reading, and writing. Emphasis on skills needed to communicate in a variety of modes with increased complexity and proficiency. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS SPNS1 HS Spanish for Native Speakers 1**0 Units**

Lecture: 15-150

First-year Spanish language for native speakers: reading, listening, writing and speaking skills, grammar, literature, and history of the Hispanic culture. Course will be taught primarily in Spanish. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS SPNS2 High School Spanish for Native Speakers 2**0 Units**

Lecture: 15-150

Second year Spanish language for native speakers. Improvement in reading, listening, writing, and speaking skills of native Spanish speakers. Literature and history of the Hispanic culture. Course will be taught primarily in Spanish. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS SSK High School Study Skills**0 Units**

Lecture: 15-150

Study and employment skills for college and career readiness. Approaches to organization skills, learning tools, and career path development. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS USH High School U.S. History**0 Units**

Lecture: 15-150

History, politics, economics, religion, and culture in United States history from its beginning to contemporary times. Significant events and people that comprise American history. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS WHS High School World History**0 Units**

Lecture: 15-150

World history from prehistory to the modern era. Major turning points that shaped the modern world, focusing on the late 18th century through the present, including causes and courses of the two world wars. Rise of democratic ideas and the historical roots of current world issues pertaining to international relations, historical, geographic, political, economic, and cultural contexts. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS WREX High School Expository Writing**0 Units**

Lecture: 15-150

Developing essay writing including introductory paragraphs, body paragraphs and concluding paragraphs in expository, descriptive, narrative and argumentative essays. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS WRIT1 Literature and Writing Fundamentals 1**0 Units**

Lecture: 15-150

Reading comprehension and analysis skills across genres including fiction, nonfiction, various genres of literature (novels, short stories, plays, poetry), and informational texts. Writing skills including paragraph writing, thesis development, and editing. Supports progress towards a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules per credit.

BSHS WRIT2 Literature and Writing Fundamentals 2**0 Units**

Lecture: 15-150

Literary analysis skills across genres including fiction, nonfiction, various genres of literature (novels, short stories, plays, poetry), and informational texts. Essay writing skills for academic essays, research papers, and workplace documents. Supports progress towards a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules per credit.

Older Adult (OAD)

OAD BHTH1 Brain Health 1**0 Units**

Lecture: 18-96

Critical thinking and cognitive skills through understanding key structures and functions of the brain. Particular focus on auditory processing.

OAD BHTH2 Brain Health 2**0 Units**

Lecture: 18-96

Designed to improve age-related cognitive decline through preventative measures in order to strengthen and improve brain function. Particular focus on visual processing.

OAD ELL04 Lifelong Learning for Older Adults**0 Units**

Lab: 12-144

Improve or maintain mental fitness of older adults through educational activities promoting critical thinking and cognitive skills.

OAD ELL05 Lifelong Learning through Current World Events**0 Units**

Lab: 8-54

Cognitive fitness for older adults with emphasis on local, national, and global issues.

OAD FNA03 Oil Painting**0 Units**

Lab: 12-54

Principles of drawing, design, color, and composition for oil painting emphasizing creative skill development for the older adult population.

OAD FNA04 Watercolor Painting**0 Units**

Lab: 12-54

Principles of watercolor painting for the older adult population. Emphasis will be on creative expression to develop primary skills for watercolor as they relate to composition and technique.

OAD FNA32 Drawing-Beginning Through Advanced**0 Units**

Lab: 12-54

Perceptual and technical skills of drawing. Includes dry and fluid media for the older adult population. Focus on single objects, still life, and landscape.

OAD HTH02 Healthy Cooking/Older Adults**0 Units**

Lab: 12-54

Healthy meals for older adults, including microwave use, cuisine for singles or doubles, and meals to cook once and eat twice. Includes dietary guidelines and food safety.

OAD MOX01 Healthy Aging**0 Units**

Lab: 8-80

Healthy aging, including diet, nutrition, disease prevention, and application of physical fitness principles to maintain health while aging.

OAD MOX02 Healthy Aging - Principles of Slow Movement**0 Units**

Lab: 8-80

Healthy aging, including diet, nutrition, disease prevention, and application of Tai Chi principles to maintain health while aging for the older adult population.

OAD MOX04 Healthy Aging - Principles of Posture and Flexibility**0 Units**

Lab: 8-80

Healthy aging, including diet, nutrition, disease prevention, and application of Yoga principles to maintaining health while aging for the older adult population.

OAD MOX06 Healthy Aging - Principles of Aquatic Resistance**0 Units**

Lab: 8-80

Healthy aging, including diet, nutrition, disease prevention, and application of aquatic resistance principles to maintaining health while aging for the older adult population.

OAD MOX09 Mobility through Exercise - Strength Training**0 Units**

Lecture: 1-48

Resistance training for isolation of targeted muscle groups to increase strength, range of motion, flexibility, and increase bone density using toner bands. Designed to challenge all major muscles. Students are encouraged to participate at their own level. In addition, low stretching and breathing techniques will be taught.

OAD MOX11 Healthy Aging: Fall Prevention, Balance and Mobility**0 Units**

Lab: 8-80

Risks and fears associated with falling for older adults. Includes setting realistic goals, minimizing environmental risks, and balance exercises.

Parenting (PAED)

PAED CCP Common Core for Parents**0 Units**

Lecture: 4-80

Assist parents and guardians to improve knowledge and strategies for supporting children's academic success in applications of Common Core Standards. Improve integrated English Language Arts and mathematical skills as they relate to Common Core Standards. Reading literature, informational texts, writing, speaking, and listening. Operations and algebraic thinking, number and operations in base ten, number and operations in fractions, measurement and data, and geometry, as solved using Common Core's 8 mathematical practice standards.

Vocational (VOC)

VOC ADJ01 The Administrative Justice System**0 Units**

(May be taken for Pass/No Pass only)

Lecture: 54

History and philosophy of the justice system, subsystems, roles, relationships and theories of crime causation and correction.

VOC ADJ02 Principles and Procedures of the Justice System**0 Units**

(May be taken for Pass/No Pass only)

Lecture: 54

Due process in criminal proceedings from pre-arrest through trial and appeal using statutory law and legal precedent.

VOC AGG01 Food Production, Land use & Politics-a Global Perspective
0 Units

Lecture: 54

Surveys the world's food producing systems in terms of economic, political and cultural forces. Emphasizes ethical, sustainable food producing agriculture.

VOC AGR-G Home Gardening
0 Units

Lecture: 54

Organic and traditional gardening, plants, and fruit orchards. Includes design, propagation methods, pruning, fertilizing, and pest control.

VOC AGR01 Horticultural Science
0 Units

Lecture: 54

Horticulture skills and techniques for use in gardening, nursery, and landscape applications. Emphasis on propagation, cultural practices, and the study of plant relationships, structure, growth and development. Off-campus meetings required.

VOC AGR02 Plant Propagation/Greenhouse Management
0 Units

Lecture: 36 Lab: 54

Plant propagation and production practices with emphasis on florists' plants, woody ornamentals, and fruits. Commercial techniques include seed propagation, cuttings, grafting and budding, layering, fern sporing, and division. Stresses greenhouses and other environmental structures for plant propagation and production.

VOC AGR05 Park Facilities
0 Units

Lecture: 54

Management and operation of different types of park facilities. Includes the management of sports fields, recreation centers, campgrounds, aquatic facilities, and golf courses.

VOC AGR13 Landscape Design
0 Units

Lecture: 36 Lab: 54

Landscape design for residential and small commercial sites including the design process, drafting, graphics, site evaluation, landscaping materials, and plant usage. Field trips and off-campus assignments are required.

VOC AGR15 Interior Landscaping
0 Units

Lecture: 54

Design, installation, and maintenance practices used in interior landscaping. Includes identification, culture, and care of plants suitable for interior use.

VOC AGR24 Integrated Pest Management
0 Units

Lecture: 36 Lab: 54

Common agricultural pests in Southern California and physical, biological, and chemical pest control principles and practices, including integrated pest management (IPM). Stresses use, safety, equipment, laws, and regulations of pesticides. Field trips are required.

VOC AGR25 Floral Design 1
0 Units

Lecture: 24 Lab: 44

Principles of floral design: form, style, and composition. Includes designing of floral arrangements, wreaths, sprays, baskets, bouquets, wedding flowers, and corsages.

VOC AGR26 Floral Design 2
0 Units

Lecture: 24 Lab: 44

Contemporary floral design theory emphasizing creativity, self-expression, and professional design situations.

VOC AGR27 Floral Design 3
0 Units

Lecture: 24 Lab: 44

Advanced principles of floral design and florist operations management. Includes designs and operations related to holidays, parties, weddings, and sympathy.

VOC AGR29 Ornamental Plants - Herbaceous
0 Units

Lecture: 36 Lab: 54

Identification, growth habits, culture, and ornamental use of landscape annuals, biennials, perennials, ferns, indoor plants, groundcovers, and vines adapted to climates of California. Plants emphasized will come from the California Association of Nurseries and Garden Centers (CANGC) and California Landscape Contractors Association (CLCA) certification test plant lists. Off campus meetings required.

VOC AGR30 Ornamental Plants - Trees and Woody Shrubs
0 Units

Lecture: 36 Lab: 54

Identification, growth habits, culture, and ornamental use of landscape trees and shrubs adapted to climates of California. Plants emphasized will come from the California Association of Nurseries and Garden Centers (CANGC) and California Landscape Contractors Association (CLCA) certification test plant lists. Off campus meetings required.

VOC AGR32 Landscaping and Nursery Management
0 Units

Lecture: 36 Lab: 54

Operation and management of wholesale and retail nurseries. Includes site location and layout of areas, greenhouse management, soil mixes, proper use of fertilizers, insecticides, fungicides, herbicides, growth regulators, irrigation, mechanization, financing, personnel management, retail displays, advertising, customer relationships, federal, state, and local laws and regulations. Field trips are required.

VOC AGR39 Turf Grass Production and Management
0 Units

Lecture: 36 Lab: 54

Introduction to cultivation, maintenance, and management of turfgrasses utilized for athletic fields, golf courses, parks, cemeteries, and commercial and residential lawns. Identification, installation, cultural requirements, and maintenance practices are emphasized. Field trips required.

VOC AGR40 Sports Turf Management**0 Units**

Lecture: 36 Lab: 54

Prepares students to work in the sports turf industry. Emphasizes turf cultural techniques used in sports turf management. Includes turf surfaces used on baseball, football, soccer, tennis, golf courses, driving ranges, and other sports fields in both professional and amateur sports. Field trips required.

VOC AGR50 Soil Science and Management**0 Units**

Lecture: 36 Lab: 54

Principles of soil management, including management of air, water, nutrients, organic matter. Study of soil including physical, chemical, and biological properties, classification, derivation, use, function, and management including erosion, moisture, retention, structure, cultivation, organic matter, and microbiology as they pertain to optimized plant, growth. Laboratory topics include soil type, classification, soil reaction, soil fertility, and physical properties of soil. Laboratory required. Field trips are required.

VOC AGR51 Tractor and Landscape Equipment Operations**0 Units**

Lecture: 36 Lab: 54

Selection, operation, repair, and maintenance of power equipment used in the agriculture and landscape industry. Includes two- and four-wheel drive tractors, skip loaders, skid steer loaders, backhoes, lawnmowers, edgers, weed eaters, blower vacuums, rototillers, chainsaws, spraying equipment, and all-terrain vehicles. Laboratory includes use of this equipment.

VOC AGR52 Hydraulics**0 Units**

Lecture: 36 Lab: 54

Operation, maintenance, and repair of hydraulic systems used on agriculture and industrial equipment.

VOC AGR53 Small Engine Repair 1**0 Units**

Lecture: 36 Lab: 54

Principles and repair of small engines used in landscape, industrial and agricultural applications. Includes repair of lawnmowers, chainsaws, 2-cycle engines, 4-cycle engines, spraying equipment, all-terrain vehicles, and other related gas-powered equipment.

VOC AGR55 Diesel Engine Repair**0 Units**

Lecture: 36 Lab: 54

Repair and maintenance of diesel engines used to power industrial, landscape and agricultural equipment. Includes hands-on experience maintaining, servicing, and repairing diesel engines.

VOC AGR56 Engine Diagnostics**0 Units**

Lecture: 36 Lab: 54

Analysis and evaluation of tractor engine power failures with hands-on experience in the proper diagnostic procedures of power equipment. Includes service, maintenance and repair of tractor electrical systems: electrical wiring, voltage regulators, generators, alternators, switches, gauges, batteries, and test equipment. Field trips are required.

VOC AGR57 Power Train Repair**0 Units**

Lecture: 36 Lab: 54

Service, maintenance, and repair of power trains. Includes hands-on experience with clutches, transmissions, differentials, power take-off units, and final drives used to transmit power on tractors and other outdoor power equipment. Field trips are required.

VOC AGR62 Irrigation Principles and Design**0 Units**

Lecture: 36 Lab: 54

Principles of irrigation, design techniques, sprinkler system components, and hydraulic principles used in nursery management, interior design, residential, and commercial landscapes. Special emphasis is given to water conservation. Field trips are required.

VOC AGR63 Irrigation Systems Management**0 Units**

Lecture: 36 Lab: 54

Systematic approach to water conservation in landscapes. Soil-plant-water relationships, evapotranspiration, irrigation schedules, salinity and drainage, and irrigation efficiency. Water measurement, soil moisture measurement, irrigation systems, and practical constraints affecting scheduling. California water supply issues. Irrigation efficiency testing will be incorporated to demonstrate proper methods of water audits and system evaluation. Field trips are required.

VOC AGR64 Irrigation - Drip and Low Volume**0 Units**

Lecture: 36 Lab: 54

Conservation of water in landscapes by utilization of drip and low-flow irrigation practices. Design, installation techniques, operation, and maintenance of drip and low-flow irrigation systems, including determination of irrigation requirements, selection of emitters and low-flow devices, and uniformity of water distribution. Includes hands-on experience in design and installation techniques. Field trips are required.

VOC AGR71 Construction Fundamentals**0 Units**

Lecture: 36 Lab: 54

Construction techniques and tools used in landscaping with construction projects that include surveying techniques, utilities (gas, water, and electricity), woodworking, and masonry.

VOC AGR72 Landscape Hardscape Applications**0 Units**

Lecture: 36 Lab: 54

Landscape construction pertaining to hardscape featured in the landscape. Estimation and installation of fences, walks, planters, patios, lighting, barbecues, gazebos, decks, ponds, spas, fountains, and pools. Students will gain hands-on experience in the laboratory activities.

VOC AGR73 Landscaping Laws, Contracting, and Estimating**0 Units**

Lecture: 54

Landscape laws, contracting and estimating as they pertain to landscape construction. Information covered will be helpful for the Landscape Contractor's (C-27 classification) licensing exam administered by the State of California. Off campus assignments required.

VOC AGR75 Urban Arboriculture**0 Units**

Lecture: 36 Lab: 54

Care and management of ornamental trees. Includes pruning techniques, fruit tree care, bracing, cabling, and pest control. Safe practices in the use of equipment including the use of ropes, chippers, boom trucks, chain saws, and identification and evaluation of common trees. Prepares students for the tree worker and arborist certification (ISA) exams.

VOC ANA50 Basic Anatomy and Physiology**0 Units**

Lecture: 60-180

Introduction to human anatomy and physiology by systems with brief descriptions of biochemistry, cell biology, and molecular biology. Upon completion, students will understand normal functions and be able to recognize pathologies.

VOC AR101 Design 1 - Elements of Design**0 Units**

Lecture: 54 Lab: 54

Design and design process including conceptualization, visualization, form making, presentation, expression, and site analysis of physical, contextual, and cultural aspects of design and the urban environment. Portfolio will be produced. Field trips are required.

VOC AR102 Design 2 - Architectural Design**0 Units**

Lecture: 54 Lab: 54

Second level architectural design studio with a focus on site analysis, design conceptualization, form making, program development and presentation. Emphasis is on critical thinking and problem solving integrated with the artistic design process. Investigations will stress symbolic expression, aesthetics, craftsmanship, technical skills, vocabulary and physical object making through the design of multi-family residential, institutional and cultural buildings. Field trips are required.

VOC AR121 CADD and Digital Design Media - Level 1**0 Units**

Lecture: 54 Lab: 54

CADD (Computer Aided Design and Drafting) Level 1 and computer application in architecture, engineering and related fields, including spreadsheet, CAD, and presentation application. Field trips required.

VOC AR122 Architectural Presentations**0 Units**

Lecture: 54 Lab: 54

Analysis and preparation of architectural presentation projects, including schematic and final design, architectural models, oral presentation techniques, board layouts using hand-drawn and computer-aided techniques, and development of project portfolio. Field trips required.

VOC AR141 Design Drawing and Communication**0 Units**

Lecture: 54 Lab: 54

Architectural drawing techniques including graphic standards, scales, orthographic, paraline, and perspective projections. Field trips required.

VOC AR147 Architectural CAD and BIM**0 Units**

Lecture: 36 Lab: 71

3-D Computer Aided Design and Drafting (CAD) and Building Information Modeling (BIM) for architectural design and design development. Portfolio of 3-D building models and extracted 2-D drawings will be produced. Field trips required.

VOC AR222 Advanced Digital Design, Illustration and Animation**0 Units**

Lecture: 36 Lab: 71

Architectural Computer Aided Design (CAD), 3-Dimensional (3-D) illustration, rendering and animation. Virtual walk-through and fly-through videos of interior and exterior 3-D models with photo-realistic materials and lighting will be produced.

VOC AR247 Architectural CAD Working Drawings**0 Units**

Lecture: 36 Lab: 71

Architectural Computer Aided Design (CAD) for design development and working drawings. Portfolio of working drawings using Building Information Modeling (BIM) and CAD applications of integrated 3-D and 2-D BIM/CAD models will be produced. Field trips required.

VOC ASC01 Animal Science**0 Units**

Lecture: 54

A scientific approach to the livestock industry encompassing aspects of animal anatomy, physiology, nutrition, genetics, and epidemiology. Emphasis on the origin, characteristics, adaptations, and contributions of livestock to the modern agriculture industry. Field trips may be required.

VOC ASC02 Animal Nutrition**0 Units**

Lecture: 54

Composition of feeds and their utilization by domestic animals including digestive physiology, animal assessment, feed appraisal and compiling of rations.

VOC ASC12 Exotic Animal Management**0 Units**

Lecture: 54

Care and management of exotic and alternative livestock species with emphasis on identification, health maintenance, handling techniques, nutrition, and reproduction. Includes analysis of industry trends and principal marketing uses of exotic animals.

VOC ASC14 Swine Production**0 Units**

Lecture: 36 Lab: 54

Study of the principles and practices in the purebred and commercial pork production industries; emphasis on the importance of breeds, breeding principles, selection, nutrition, environmental management, health, marketing and recordkeeping to ensure scientifically-based management decisions and consumer product acceptance.

VOC ASC16 Horse Production and Management**0 Units**

Lecture: 54 Lab: 54

Selection, utilization, and management of the light horse. Emphasis is on evaluation, health care, and handling skills.

VOC ASC17 Sheep Production**0 Units**

Lecture: 36 Lab: 54

Survey of the sheep and goat industries; management of commercial, purebred and small farm flocks; selecting, feeding, breeding, and basic care of small ruminants plus marketing of sheep, goats and their products. Laboratory and field trips required.

VOC ASC18 Horse Ranch Management**0 Units**

Lecture: 54 Lab: 54

Skills and procedures used in the management of an equine business. Includes business plans and record keeping, staff and financial management, horse care and training, and farm design for a variety of horse operations.

VOC ASC19 Horse Hoof Care**0 Units**

Lecture: 18 Lab: 54

Proper horse hoof care; shoeing, trimming, and disease recognition and control.

VOC ASC20 Horse Behavior and Training**0 Units**

Lecture: 18 Lab: 54

Breaking and starting horses of all ages. Concentrates on halter training of foals, ground work on yearlings, and green-breaking two-year-olds and up. Includes lunging techniques, driving, and breaking to a saddle. Training in collection, turning, backing, leads, and trailer loading.

VOC ASC30 Beef Production**0 Units**

Lecture: 36 Lab: 54

Purebred and commercial beef cattle production; emphasis on the importance of breeds, breeding principles, selection, nutrition, environmental management, health, marketing, and recordkeeping to ensure scientifically based management decisions and consumer product acceptance as applied to beef cattle. Laboratory required. Field trips required.

VOC ASC34 Livestock Judging and Selection**0 Units**

Lecture: 18 Lab: 54

Study of form and appearance of farm animals as related to their function. Includes judging of breeding and terminal livestock as well as carcass evaluation. May require field trip.

VOC ASC51 Animal Handling and Restraint**0 Units**

Lecture: 36 Lab: 54

Methods of proper handling for large and small animals including chemical and physical techniques of restraint. Field trips required.

VOC ASC70 Pet Shop Management**0 Units**

Lecture: 54

Pet shop operations and the economic aspects of the pet industry. Organization and operation of pet shops, animal care practices, and sound business management practices.

VOC ASC71 Canine Management**0 Units**

Lecture: 54

Selection, feeding, housing, breeding and management of dogs, including commercial aspects of the dog as a domestic pet. Laboratory work will include practical experience in the handling and training of dogs. May include field trips.

VOC ASC72 Feline Management**0 Units**

Lecture: 54

Care and management of cats including breed identification and characteristics, grooming, showing, nutrition, practical care, behavior, breeding, and housing.

VOC ASC73 Tropical and Coldwater Fish Management**0 Units**

Lecture: 36

Care and keeping of marine and freshwater aquarium fishes, plants, and invertebrates. Guidance on setting up aquariums, choosing compatible species, feeding, health care, breeding, and raising fish.

VOC ASC74 Reptile Management**0 Units**

Lecture: 36

Care and maintenance of reptiles and amphibians, including snakes, lizards, turtles, tortoises, newts, salamanders and frogs. Identification and characteristics of reptiles commonly kept as pets. Housing, feeding, health maintenance, breeding and raising of reptiles.

VOC ASC76 Aviculture - Cage and Aviary Birds**0 Units**

Lecture: 54

Cage and aviary birds marketed in the wholesale and retail pet trade. Identification, nutrition, breeding, disease prevention and control, and aviary construction. Psittacines, soft bills, finches, game birds, poultry, and ornamental waterfowl.

VOC ASC94 Animal Breeding**0 Units**

Lecture: 54

The science of animal breeding including fundamentals of inheritance, reproduction, and breeding systems for domestic animals. Artificial insemination, embryo manipulation, and current topics in reproductive biotechnology will also be included.

VOC ASC96 Animal Sanitation and Disease Control**0 Units**

Lecture: 54

Prevention and control of infectious diseases affecting domestic animals including basic disease concepts, transmission of infectious diseases, principles of sanitation, and fundamentals of immunology.

VOC ASC97 Artificial Insemination of Livestock**0 Units**

Lecture: 36 Lab: 54

Theory and application of artificial insemination of domestic animals, including semen evaluation and processing, heat synchronization, and pregnancy diagnosis.

VOC BA07 Principles of Accounting - Financial**0 Units**

Lecture: 90

Financial accounting required of Business Administration and Accounting majors. Defines financial accounting and its relevance to business decision-makers, accounting concepts and techniques, analysis and recording of financial transactions, and preparation, analysis and interpretation of financial statements focusing on application of generally accepted accounting practices. Includes asset, liability, and equity valuation, revenue and expense recognition, cash flow, internal controls, ethics, and financial statement analysis. General Ledger Accounting Software program is integrated throughout and used to complete various homework assignments.

VOC BA11 Fundamentals of Accounting**0 Units**

Lecture: 54

Accounting vocabulary and theory, equations to solve word problems, simple and compound interest, present value, consumer and business credit, mortgages, financial statements and ratios, inventory, depreciation, business taxes, and investments.

VOC BA68 Business Mathematics**0 Units**

Lecture: 54

Addition, subtraction, multiplication, division, decimals, percentages, fractions, signed numbers, equations, and problem solving.

VOC BA70 Payroll and Tax Accounting**0 Units**

Lecture: 54

On-the-job payroll accounting. Surveys the various tax procedures required by the employer and employee in filing the correct forms for Social Security, federal, and state income taxes and their reconciliation. Laws related to Worker's Compensation, State Disability Benefit Laws, and Fair Employment Practices are discussed.

VOC BA71 Personal Financial Planning**0 Units**

Lecture: 54

Integrative approach to personal finance focusing on practical financial decision making as well as the social, psychological, and physiological contexts in which those decisions are made. Students will examine their relationships with money, set personal goals, and develop a plan to meet those goals. Topics include consumerism, debt, healthcare, investing, retirement, long-term care, disability, death, and taxes.

VOC BA72 Bookkeeping - Accounting**0 Units**

Lecture: 90

Bookkeeping and accounting principles including the accounting cycle for service and merchandising companies, cash management, payroll, and special journals. Computerized simulations and completion of an accounting project for a company.

VOC BA75 QuickBooks for Accounting**0 Units**

Lecture: 54

Accounting concepts utilizing QuickBooks, a general-ledger software program. Hands-on use of a microcomputer to process accounting transactions, prepare statements and reports, and complete accounting cycle tasks.

VOC BA76 Excel for Accounting**0 Units**

Lecture: 54

Analysis of financial data and preparation of managerial accounting reports using Excel software. The development of comprehensive analysis models using Microsoft Excel formulas, pivot tables, and pivot charts to summarize complex managerial accounting data into information for decision making. Includes manufacturing and consolidation worksheets, financial statement analysis, and statement of cash flows. The ability to demonstrate the use of presentation methods like Microsoft PowerPoint to effectively communicate analysis of managerial accounting information.

VOC BCDP Basic Computing - Desktop Publishing**0 Units**

Lecture: 12-56

Basic desktop publishing to create and produce professional-looking publications.

VOC BCPP1 PowerPoint Basics 1**0 Units**

Lecture: 12-56

Basic use of PowerPoint to create slide presentations.

VOC BCPP2 PowerPoint Basics 2**0 Units**

Lecture: 12-56

Create PowerPoint presentations using text and object animation, video, audio, and hyperlinks.

VOC BM10 Principles of Continuous Quality Improvement**0 Units**

Lecture: 54

History and evolution of thought in Continuous Quality Improvement (CQI), including the theories and methods of Deming, Juran, and Crosby. Practical application of Quality management processes and tools are presented for the continuous improvement of (organizational quality. Relevant case studies are included.

VOC BM20 Principles of Business**0 Units**

Lecture: 54

Business and its functions, background, development, organization, and opportunities. Business terms, current trends, methods, contemporary and future problems, and current business practices are covered.

VOC BM51 Principles of International Business**0 Units**

Lecture: 54

International business environment with a global perspective. Introduces global viewpoints across the full spectrum of business functions, including, but not limited to: accounting, finance, human resources, management, operations, production, purchasing, and strategic planning.

VOC BM52 Principles of Exporting and Importing**0 Units**

Lecture: 54

Practical information needed to participate in activities related to the exporting and importing of goods and services. Includes vocabulary, acronyms, trends, regulations, regional agreements, documentation, and challenges related to the exporting and importing of goods and services.

VOC BM60 Human Relations in Business**0 Units**

Lecture: 54

Inter-disciplinary study of how people work and relate at the individual, group, and organizational level. Topics include motivation, team work, leadership skill, and how to handle organizational change.

VOC BM61 Business Organization and Management**0 Units**

Lecture: 54

Functions of management, management concepts, planning, organizing, staffing, and controlling. Theories of management, lines of authority, functions of departments, and the importance of policies, procedures, and controls.

VOC BM62 Human Resource Management**0 Units**

Lecture: 54

Direction of people including guidance, control, supervisory problems, training, job analysis, interviewing, testing, rating, and other functions involving human resources. Designed to improve the overall understanding of the relationship between the individual and the business organization.

VOC BM66 Small Business Management**0 Units**

Lecture: 54

Organizing, starting, and operating a small business enterprise. Emphasis on entrepreneurial applications in a small business environment.

VOC BM85 Special Issues in Business**0 Units**

Lecture: 36

Provide business majors with a forum to gain knowledge, develop techniques, problem solve and implement solutions in an actual business situation to add to the creation of a career portfolio.

VOC B005 Business English**0 Units**

Lecture: 54

Skills and techniques of English, as applied to business situations, with emphasis on effective document structure.

VOC B025 Business Communications**0 Units**

Lecture: 54

Written communications, including letters and memos, for a variety of situations in the business environment. Includes writing of good news, bad news, sales, claims, and persuasive correspondence; letters and resumes appropriate to job seeking and application; and practicing oral skills as applied to job interviews and business reports.

VOC B026 Oral Communications for Business**0 Units**

Lecture: 54

Oral communication used in business situations such as training sessions, presentations, professional discussion, and telephone interactions.

VOC BS35 Professional Selling**0 Units**

Lecture: 54

Principles of selling and the role of a salesperson in the marketing process. Includes characteristics and skills necessary for a successful salesperson, techniques for prospecting and/or qualifying buyers, buyer behavior, and critical steps in the selling process. Students develop and offer a sales presentation for a selected product, service, or concept.

VOC BS36 Principles of Marketing**0 Units**

Lecture: 54

Organization and function of system of distributing goods and services from the point of production to the consumer. Preparation of a marketing plan using product, distribution, promotional, and pricing strategies.

VOC BS50 Retail Store Management and Merchandising**0 Units**

Lecture: 54

Principles and practices used in the management and merchandising of retail stores. Includes critical buying function, merchandising, promotional techniques, site selection, layout, staffing, market positioning, and customer service.

VOC BS85 Special Issues in Marketing**0 Units**

Lecture: 36

Provides marketing majors with a forum to gain knowledge, develop techniques, problem-solve and implement an actual business marketing plan. Special emphasis will be placed on the particular project of the actual business used as the class project.

VOC CC1 Care Coordinator 1**0 Units**

Lecture: 30-60 Lab: 20-30

Communication, culture, diversity, the healthcare system, resources, and wellness to provide timely access to quality healthcare through all phases of the healthcare continuum.

VOC CC2 Care Coordinator 2**0 Units**

Lecture: 30-60 Lab: 20-30

Determine needs of patients, identify resources, and create an appropriate discharge plan to prevent readmission. Includes technology, community resources, support delivery, and personal and professional development.

VOC CC3 Care Coordinator 3**0 Units**

Lecture: 12-60 Lab: 10-20

Patient care coordination from pre-admission to post-discharge.

VOC CD Child Development**0 Units**

Lecture: 50

Survey of child development, addressing knowledge and skills in the development of children from prenatal to school age development. Introduction to theories, stages, best practices, and career paths. The course does not fulfill Title 22 requirements for employment or educational requirement for the CA Child Development Matrix.

VOC CI11 Database Management - Microsoft Access**0 Units**

Lecture: 54

Design, creation, and management of relational databases using Microsoft Access. Basic database design, creation of tables, queries, forms, reports, and macros. Creation of custom graphical user interface and introduction to Visual Basic for Applications (VBA) code.

VOC CI11L Database Management - Microsoft Access Laboratory**0 Units**

Lab: 27

Laboratory for VOC CI11 - Database Management - Microsoft Access. Exercises focusing on design and development of a business database using Microsoft Access software, including creation of tables and relationships between tables, queries, forms, reports, macros, and an introduction to Visual Basics for Applications (VBA) programming language to make a fully-functioning, user-friendly Access database.

VOC CNT50 Personal Computer (PC) Servicing**0 Units**

Lecture: 54 Lab: 54

Personal computer (PC) and peripheral servicing techniques, preventative maintenance, hardware configurations, software configurations, software diagnostics, and the use of test equipment.

VOC CNT52 PC Operating Systems**0 Units**

Lecture: 54 Lab: 54

Current operating systems required for A+ and Network+ Certification and general computer servicing. Includes: identification of major components, installation, configuration, upgrading, and troubleshooting.

VOC CNT54 PC Troubleshooting**0 Units**

Lecture: 54 Lab: 54

Personal computer (PC) servicing. Includes isolating, identifying, and repairing specific problems in the computer environment at the hardware level. Prepares students for the A+ Certification Exam.

VOC CNT56 Computer Networks**0 Units**

Lecture: 54 Lab: 54

Standards, terminology, design, implementation, and troubleshooting techniques as they relate to both local and wide area networks. Emphasis on hardware and software components, network architecture, and data transmission methods. Of special interest to computer and network technicians and those seeking certification in A+, Network+, or other certifications.

VOC CNT58 Server Systems**0 Units**

Lecture: 54

Server systems, both physical and virtual. Server installation, configuration, and management. Includes hardware and software components, virtual server configurations, troubleshooting techniques using flow charts and diagnostic tools, and disaster recovery concepts. Emphasis on hardware components. Covers the core material needed for the Server+ Certification. Software content in this course is covered only to the extent that is required for hardware troubleshooting, repair and implementation per CompTIA.

VOC CNT60 A+ Certification Preparation**0 Units**

Lecture: 36

Prepares the student and qualified computer technician for the A+ certification examination. All aspects of the A+ Essentials and A+ Practical Application test modules will be stressed through both lecture review and test simulation software.

VOC CNT62 Network+ Certification Preparation**0 Units**

Lecture: 36

Prepares the student or A+ certified technician for the Network+ (Net+) certification examination. Includes Open System Interconnection (OSI) model, Transmission Control Protocol/Internet Protocol (TCP/IP), and implementing, installing, maintaining, and supporting networks.

VOC CNT64 Server+ Certification Preparation**0 Units**

Lecture: 36

Prepares the computer/network service technician for the CompTIA Server+ certification examination.

VOC CNT66 Security+ Certification Preparation**0 Units**

Lecture: 36

Prepares the computer/network service technician for the CompTIA sponsored Security+ Certification examination. Security information is covered only as it pertains to enabling the service technician to troubleshoot a computer system that may have a security problem.

VOC CPBC1 Basic Computing - Level 1**0 Units**

Lecture: 54

Introduction to the personal computer, including terminology and basic computer operations in a Windows environment.

VOC CPBC2 Basic Computing - Level 2**0 Units**

Lecture: 54

Create documents in applications such as Microsoft Word; includes basic computer maintenance and problem-solving techniques.

VOC CPBC3 Basic Computing - Level 3**0 Units**

Lecture: 54

Software application skills including creative projects which introduce computer graphics.

VOC CPBE1 Basic Excel - Level 1**0 Units**

Lecture: 12-56

Introduction to Excel, including terminology, and working with data in a spreadsheet application.

VOC CPBE2 Basic Excel 2**0 Units**

Lecture: 12-56

Basic functions in Excel including formulas, sorting, filtering data, and formatting tables.

VOC CPBE3 Basic Excel 3**0 Units**

Lecture: 12-56

Basic Excel including storing, manipulating and analyzing data in spreadsheets, and displaying data graphically using charts.

VOC CPCC Creative Computing**0 Units**

Lecture: 54

Creative skills in utilizing graphic designs for projects such as business cards, letterhead, labels, flyers, posters, greeting cards, and computer-generated fabric designs.

VOC CPDI Digital Photography for the Beginner**0 Units**

Lecture: 54

Digital camera operations, image management, composition, and use of graphics software.

VOC CPNET Internet Research - an Introduction**0 Units**

Lecture: 54

Fundamental Internet functions including terminology, email, search engines and research tools.

VOC CRIMJ CRIMINAL JUSTICE**0 Units**

Lecture: 75-180

History, structure, and functions of the American criminal justice system; law enforcement, courts, and corrections agencies. Examine the interrelationship across agency processes and their impact on contemporary issues in society.

VOC CS11 Computer Keyboarding**0 Units**

Lecture: 40-112

Develops alpha and numeric keyboarding skills on a personal computer at a straight-copy rate of 25- to 40-gross words a minute with a predetermined error limit. Includes keyboarding of letters, tables, and reports.

VOC CS12 Intermediate Computer Keyboarding**0 Units**

Lecture: 40-112

Develops computer keyboarding speed and accuracy with a proficiency standard upon completion of 35- to 55-gross words a minute with a predetermined error limit. Uses word processing software to format letters, memos, reports, tables, and other related business documents.

VOC CS41 Office Management Skills**0 Units**

Lecture: 40-80

Training and skill building in filing systems and procedures, proofreading, telephone techniques, faxing, emailing, electronic calendaring of events, appointments, meetings, memos, and business letters.

VOC CSB10 Office Skills**0 Units**

Lecture: 54

Skills necessary to work in an office setting including: alpha and numeric keyboarding, email etiquette and standards, electronic calendaring, ten-key, composing, formatting and storing business documents, and telephone techniques.

VOC CSB11 Computer Information Systems**0 Units**

Lecture: 54 Lab: 27

Overview of computer information systems including computer hardware, software, networking, programming, databases, Internet, security, systems analysis, ethics, and problem solving using business applications.

VOC CSB15 Microcomputer Applications**0 Units**

Lecture: 54 Lab: 27

Windows operating system (OS) and applications, simple business examples using up-to-date browser, word processing, spreadsheet, database management and presentation software, and integration of software applications.

VOC CSB16 Macintosh Applications**0 Units**

Lecture: 27 Lab: 27

Macintosh operating system and related tools; creating files using office applications; storing and sharing files using iCloud.

VOC CSB21 Microsoft Excel**0 Units**

Lecture: 54

Spreadsheet concepts using Microsoft Excel including formatting, formulas and functions, charts, linked worksheets, pivot tables, macros, and Visual Basic for Applications (VBA) code.

VOC CSB31 Microsoft Word**0 Units**

Lecture: 54

Word processing with Microsoft Word and its editing, formatting, and language tools to create, edit, and format business and publication documents. Includes creating flyers, newsletters, and other publication documents using advanced formatting techniques and tools.

VOC CSB51 Microsoft PowerPoint**0 Units**

Lecture: 54

Using PowerPoint to plan, design, and produce effective presentations. Includes creating charts, diagrams, and storyboards; developing appropriate text content; and adding sound, animation, and movies.

VOC CSB61 Desktop Publishing Software**0 Units**

Lecture: 54

Formerly VOC CP60 Using desktop publishing software to integrate text and various graphic objects, design, edit and produce a variety of high-quality business publications.

VOC CSW15 Web Site Development**0 Units**

Lecture: 54 Lab: 27

Use of professional visual Web-authoring application to plan, develop, implement publish and maintain Web sites.

VOC CT Contact Tracer**0 Units**

Lecture: 60-90

Process and mechanics of contact tracing. Topics include public health, communication, cultural sensitivity, resources, communicable diseases, collection of data, and courses of action.

VOC ECOM E-Commerce Specialist**0 Units**

Lecture: 1-50 Lab: 1-50

Specialization in designing online e-commerce stores. Topics include: online store platforms, target audience, ad campaigns, content marketing, website optimization, digital marketing strategy, and cultural market research.

VOC ED Careers in Education**0 Units**

Lecture: 60-180

Explore career opportunities in education and the necessary training, education, and certifications needed to gain employment in this sector. Examine the personal, professional, and technical skills suitable in an education setting.

VOC EDT16 Basic CAD and Computer Applications**0 Units**

Lecture: 54 Lab: 54

Basic CD (Computer Aided Design and Drafting) and computer application in engineering and related fields (including basic word processing, spreadsheet, CAD and presentation applications).

VOC EDT18 Engineering CAD Applications**0 Units**

Lecture: 54 Lab: 54

Intermediate CAD for engineering, explores the 2-D and 3-D environments, 3-D parametric solid modeling.

VOC EL10 Introduction to Mechatronics**0 Units**

Lecture: 18 Lab: 54

A combination of conventional electronic technology with mechanical and computer technology. Special emphasis is on robotics. Hands-on activities include the building of a robot.

VOC EL11 Technical Applications in Microcomputers**0 Units**

Lecture: 36 Lab: 54

Personal computer (PC) applications used in electronics technology. Includes word processing, spreadsheets, database, computer presentation methods, and internet research specifically designed for electronics technology.

VOC EL12 Computer Simulation and Troubleshooting**0 Units**

Lecture: 18 Lab: 54

Troubleshooting of electronic hardware, including use of computer-based tools for simulation and troubleshooting of analog and digital circuits. National Instruments Multisim software will be used for circuit analysis, value substitution, and fault diagnostics.

VOC EL50A Electronic Circuits - Direct Current (DC)**0 Units**

Lecture: 54 Lab: 54

Direct Current (DC) electrical circuits and their applications. Covers DC sources, analysis, test equipment, measurements, and troubleshooting of resistive devices and other basic components. Includes Ohm's Law, Kirchhoff's law, and network theorems. (Students seeking a survey course in electronics should take VOC EL10, Introduction to Mechatronics, rather than VOC EL50A or 50B.)

VOC EL50B Electronic Circuits (AC)**0 Units**

Lecture: 54 Lab: 54

Alternating Current (AC) electrical circuits and their applications. Covers AC sources, analysis (using complex numbers), test equipment, measurements, and troubleshooting of basic circuits with capacitors, inductors, and resistors. Includes impedance, resonance, filters, and decibels.

VOC EL51 Semiconductor Devices and Circuits**0 Units**

Lecture: 54 Lab: 54

Solid-state devices and circuits, including bipolar-junction and field-effect transistors, rectifier diodes, operational amplifiers, and thyristors. Analog circuits studied include discrete and integrated circuit amplifiers, voltage regulators, oscillators and timers. Emphasizes configurations, classes, load lines, characteristic curves, gain, troubleshooting, measurements, and frequency response.

VOC EL53 Communications Systems**0 Units**

Lecture: 54 Lab: 54

Analog and digital communications systems. Emphasizes analog and digital modulation principles, multiplexing, protocols, and telecommunications circuits and systems.

VOC EL54A Industrial Electronics**0 Units**

Lecture: 54 Lab: 54

Industrial electronic components and basic control circuits. Includes time delay controls, thyristor controls, relays, optoelectronic (opto) devices, direct current (DC) and alternating current (AC) motor control, transducers, silicon controlled rectifier (SCR) and unijunction transistor (UJT) devices.

VOC EL54B Industrial Electronic Systems**0 Units**

Lecture: 36 Lab: 54

Systems application of industrial electronics including industrial production and processes, automation, and programmable and motor controllers. Emphasis is on programmable logic controllers (PLCs).

VOC EL55 Microwave Communications**0 Units**

Lecture: 54 Lab: 54

Microwave components and circuits. Stresses transmission lines, Smith Charts, impedance matching, antenna characteristics, wave propagation, frequency analysis, and measurement techniques.

VOC EL56 Digital Electronics**0 Units**

Combinational and sequential logic circuits emphasizing number systems, binary math, basic gates, Boolean algebra, Karnaugh maps, flip-flops, counters, and registers. Stresses design and troubleshooting techniques.

VOC EL61 Electronic Assembly and Fabrication**0 Units**

Lecture: 36 Lab: 54

Manufacturing and fabrication processes associated with the electronics industry. Printed circuit board (PCB) design from conception to completion. Emphasizes electrical schematics, bill of material (BOM), component selection, layout design, manufacturability, assembly, soldering, de-soldering, and surface-mount technology.

VOC EL62 Advanced Surface Mount Assembly and Rework**0 Units**

Lecture: 18 Lab: 54

Advanced course in assembly and repair (soldering) on surface mount assemblies (SMT). Material is similar in content to the Institute for Printed Circuits (IPC) surface mount assembly and rework certification.

VOC EL74 Microcontroller Systems**0 Units**

Lecture: 54 Lab: 54

Microcontroller systems and programming methods; programmable logic devices (PLDs); serial communications; conversion of signals from analog to digital formats and the converse. Industry applications, interfacing, and troubleshooting.

VOC EL76 FCC General Radiotelephone Operator License Preparation**0 Units**

Lecture: 18 Lab: 54

Prepares qualified electronics and aviation technicians for the Federal Communications Commission (FCC) commercial General Radiotelephone Operator License (GROL).

VOC EL81 Lab Studies in Electronics**0 Units**

Lab: 54

Extended laboratory experience supplementary to those available in the regular program. Allows the student to pursue more advanced and complex laboratory projects and experiments.

VOC EMT90 Emergency Medical Technician**0 Units**

Lecture: 100-160 Lab: 45-60

Approved by the Los Angeles (LA) County Emergency Medical Services (EMS) Agency. Develops the ability to recognize the signs and symptoms of various illnesses and injuries. Teaches proper procedures of pre-hospital emergency care per local and national standards. Awards an Emergency Medical Technician (EMT) Course Completion Certificate needed to take National Registry Certifying Exam. Necessary for many jobs in emergency care and is a prerequisite for entry into a paramedic program and most fire department jobs.

VOC ESD02 Production of Boutique Crafts for Retail Sales**0 Units**

Lab: 54

Design and production of boutique crafts. Includes marketing, pricing, cost analysis, and use of emerging technology.

VOC ESD03 Lettering Styles and Advertising Calligraphy**0 Units**

Lab: 54

Styles of calligraphy as they are used in art, media, and advertising. Includes size, placement, styles, and emerging technology.

VOC ESD07 Handcrafted Needlework for Retail Sales**0 Units**

Lab: 54

Needlework technique including knitting, crocheting, embroidery, needlepoint for plastic canvas, and emerging technology to construct finished products for sale.

VOC ESD08 Jewelry Production and Design for Retail Sales**0 Units**

Lecture: 12-56

Design and construct wire-worked jewelry using beads and stones with various methods of wire wrapping, coiling, hammering, and emerging technology.

VOC ESD09 Sewing and Design**0 Units**

Lab: 54

Basic sewing techniques for basic tailoring, pattern reading, cutting, and style design to construct professional looking garments.

VOC ESD10 Beginning Decorative Art Production for Retail Sales**0 Units**

Lab: 54

Introduction to decorative painting and associated mediums. Includes painting on a variety of surfaces using tole art brush strokes used in folk art, stenciling, and other design applications and emerging technology.

VOC ESD11 Intermediate Decorative Art Production for Retail Sales**0 Units**

Lab: 54

Intermediate tole art brush strokes on a variety of surfaces using acrylic paints, associated mediums, and emerging technology to create finished products.

VOC ESD15 Jewelry and Lapidary Production Design**0 Units**

Lecture: 12-56

Jewelry making, stone cutting, polishing, and lapidary work, using emerging technology.

VOC EST50 Electrical Fundamentals for Cable Installations**0 Units**

Lecture: 40-120 Lab: 20-60

Electrical fundamentals for cable and wire installations and other low voltage systems. Includes direct current (DC) and alternating current (AC), solid-state devices, digital and microprocessor devices, and their application to cable installations.

VOC EST51 Electrical & Tool Fundamentals**0 Units**

Lecture: 54 Lab: 54

Electrical and tool(hand and power) fundamentals for low voltage systems used in residential, and commercial security, networks, and audio/video systems. Topics include tool fundamentals, DC/AC sources and components, solid-state devices, digital devices, and their application to low voltage systems.

VOC EST52 Fabrication Techniques for Cable Installations**0 Units**

Lecture: 40-75 Lab: 20-40

Fabrication techniques used in the installation of home theater, computer networks, home automation, and other low voltage system applications. Emphasis on hand and power tools, construction methods, and materials as they apply to cable and wire installations. Prepares students for the California (CA) State Contractors C-7 low voltage systems license.

VOC EST53 Residential/Office System Installations**0 Units**

Lecture: 54 Lab: 54

Residential/office systems and their installations. Emphasis on security, audio/video systems, wiring and cable standards and the installation techniques required for such systems.

VOC EST54 Cable and Wiring Standards**0 Units**

Lecture: 40-120 Lab: 20-60

Cable and wire standards of video, voice, and data wiring for home theater, computer networks, home automation, telecommunications, and other low voltage system installations. Emphasis on copper wire, coax, fiber optic, and structured cables.

VOC EST56 Home Theater, Home Integration & Home Security Systems**0 Units**

Lecture: 40-75 Lab: 20-40

Home theater, home integration, home management Power Line Carriers (PLCs), security hardware and programming, and the installation and servicing of such systems.

VOC EST61 Electronic Circuits/Systems Troubleshooting**0 Units**

Lecture: 54 Lab: 54

Troubleshooting basic electronic circuits and systems to component level. Circuits include power supplies, amplifiers, audio circuits, and video systems.

VOC EST62 Electronic Troubleshooting 1**0 Units**

Lecture: 30-60 Lab: 30-60

Troubleshooting appliances and electronic systems to the subsystem and component levels. Covers installation, troubleshooting, maintenance, and operation of a variety of small and large appliances.

VOC EST64 Electronic Troubleshooting 2**0 Units**

Lecture: 54 Lab: 54

Troubleshooting advanced electronic video circuits and systems to component level. Includes HDTV (plasma, LCF, DLP).

VOC ET90A Introduction to EMS System**0 Units**

Lecture: 15-25 Lab: 22-30

Prerequisite for VOC EMT 90. Introduces concepts of the Emergency Medical Services (EMS) System, roles, and responsibilities. Basic concepts of patient assessment and scene management taught. Stresses collaboration with other scene team members.

VOC FAB General Fabrication**0 Units**

Lab: 4-180

Project support course for students completing fabrication projects. Digital fabrication including 3D printing, laser cutting, and Computer Numerical Controlled (CNC) vinyl and fabric production. Conventional fabrication techniques including wood working, machining, sheet metal, welding and plasma cutting.

VOC FDB1 Financial and Database Management 1**0 Units**

Lecture: 4-288

Short-term introduction to small business and database software to introduce elementary computer literacy. Data entry in small business accounting management software. Create customers, vendors, and basic transactions. Design simple databases and explore database objects including simple forms, reports, and queries.

VOC FDB2 Financial and Database Management 2**0 Units**

Lecture: 4-288

Further instruction in basic computer literacy for small business and database software. Process sales tax, refunds, discounts, and credits using small business accounting software. Create classes and basic estimates. Modify reports, queries, and forms.

VOC FSF Tool Use and Field Service Fundamentals**0 Units**

Lecture: 2-50 Lab: 2-50

Introductory course in tool use and material fabrication as applied to field-serviceable equipment. Covers elementary aspects of installation and maintenance with emphasis on safety and proper use of hand and power tools, fasteners, and other hardware.

VOC FSH08 Introduction to Fashion**0 Units**

Lecture: 54

Fashion industry as a whole, including raw materials, manufacturing, retailing, technology, world economics, globalization, and careers. Includes apparel design, manufacturing, retail merchandising, sales, promotion, textile production, and career opportunities.

VOC FSH09 History of Fashion**0 Units**

Lecture: 54

Survey of Western costume and fashion from antiquity to contemporary times. Emphasis is placed on style as it relates to social, economic, and political forces, and the relationship of historic styles to current fashion.

VOC FSH10 Clothing Construction 1**0 Units**

Lecture: 36 Lab: 54

Essentials of industry standard apparel construction techniques using a variety of machines and equipment. Students will be given instruction in single needle machine operation, industrial overlock operation, and garment assembly.

VOC FSH12 Clothing Construction 2**0 Units**

Lecture: 36 Lab: 54

Advanced industry construction techniques using overlock and single needle machines.

VOC FSH15 Aesthetic Design in Fashion**0 Units**

Lecture: 54

Design principles and influences in apparel selection and fashion design. Projects applying design elements and principles using computer-aided design (CAD) software.

VOC FSH16 Corset Construction**0 Units**

Lecture: 36 Lab: 54

History of the corset, types of corset fabrics, trims and methods of embellishment. Essentials of standard apparel corset construction techniques using a variety of tools and equipment. Skills learned can be applied to historical or contemporary corsets.

VOC FSH17 Textiles**0 Units**

Lecture: 54

Introductory study of the physical and chemical properties of textiles. Textile fiber production, classification, properties, and identification. Textiles coloration and finishing processes. Relationship of fiber characteristics, coloration, and finishing processes to fabric properties, performance, legislation, and care.

VOC FSH21 Patternmaking I**0 Units**

Lecture: 18 Lab: 108

Flat patternmaking techniques to create garment designs using industry standards, dart transfer, and seam manipulation. First and production patterns will be created, constructed, and fitted.

VOC FSH22 Fashion Design by Draping**0 Units**

Lecture: 36 Lab: 54

Three dimensional dress design through draping fabrics directly to a dress form to create original designs and patterns to interpret fashion illustrations and technical flats.

VOC FSH23 Patternmaking 2**0 Units**

Lecture: 36 Lab: 54

Intermediate pattern drafting and flat patternmaking with an introduction to technical packages. Students apply patternmaking theories to create ready-to-wear sportswear designs for misses and women's wear.

VOC FSH24 Fashion Patternmaking by Computer**0 Units**

Lecture: 36 Lab: 54

Industrial fashion patternmaking and grading using Gerber computer-aided design (CAD) technology. Exploration of drawing techniques, pattern development, flat pattern manipulation, and the sizing and grading of patterns.

VOC FSH25 Fashion Digital Illustration and Design**0 Units**

Lecture: 36 Lab: 54

Technical fashion drawing techniques using Adobe Illustrator and Photoshop. Includes drawing production flats, colorization, and digital fashion figures using a computer as a drafting tool. Exploration of popular computer techniques and apparel industry design methods.

VOC FSH57 Fashion Retailing and Production Technologies**0 Units**

Lecture: 54-54

Apparel wholesale to retail concepts and technologies used in fashion merchandising environment systems. The emphasis is on practical knowledge and use of software in the fashion industry.

VOC FSH59 Fashion Retailing**0 Units**

Lecture: 54

Overview of fashion retailing, on site environments, online fashion stores, management and multi-channel retailers. Principles focus on the fashion segment of the retailing industry and the merchandising of fashion products.

VOC FSH62 Retail Buying and Merchandising**0 Units**

Lecture: 72

Principles and practices used in retail buying and merchandising environment. This course emphasizes the buyer's role in merchandising management, quantitative retail formulas, costing calculations, pricing strategies, and managing profit. Students will apply concepts learned using Microsoft Excel.

VOC FSH63 Fashion Promotion**0 Units**

Lecture: 54

Principles and techniques of integrated marketing communications for apparel wholesale and retail products. Emphasis focuses on principles of integrated marketing and communication strategy, market and consumer research, branding, and the comprehensive nature of promotion in the fashion merchandising environment and emphasizes the changing nature of promotion in a global marketplace.

VOC FSH66 Visual Merchandising Display**0 Units**

Lecture: 36 Lab: 54

Design principles, color theory, space, and lighting in relation to visual merchandising display areas and interior design of stores using various applications of computer graphics programs.

VOC FSVCS Food Services**0 Units**

Lecture: 60-180

Principles of food preparation, service procedures and sanitation, and safety practices in the food service industry. Study the application of food costing, recipes and menu planning, and professional dining service practices in various types of food operation businesses. Examine employment skills and knowledge suitable for careers in this industry.

VOC GOG10 Introduction to Geographic Information Systems (GIS)**0 Units**

Lecture: 54

An introduction to the fundamentals of a geographic information system (GIS), including history of automated mapping; introduction to cartographic principles; overview of software, such as ArcView; hardware; application of GIS technology in environmental sciences, government, business, terminology, data and spatial analysis.

VOC HBB1 Starting a Home-Based Business**0 Units**

Lecture: 24

Starting a home-based business to become self-employed. Includes basic marketing, finance and management skills.

VOC HBB2 Managing and Growing Your Home-Based Business**0 Units**

Lecture: 24

Managing day-to-day business activities to increase revenue and profitability to grow a home-based business.

VOC HEP Healthcare Exam Preparation**0 Units**

Lecture: 4-75

General health sciences, affixes and medical terminology, statistical graphing and charting, technical writing, grammar, reading comprehension, listening and communicating skills, and test-taking strategies for entrance into healthcare programs and exams.

VOC HHA Home Health Aide**0 Units**

Lecture: 10-30 Lab: 10-30

Preparation for certification as Home Health Aide by the State of California. Includes Federal and State regulations, client needs, quality of care, and clinical hours.

VOC HOSP Hospitality**0 Units**

Lecture: 60-180

Organizational structure and functions of the various segments that comprise the hospitality industry. Examination of principles of management, service, and business operations. Study of history, development, and interrelatedness of segments in the industry, along with careers in hospitality.

VOC HSW Health and Safety for Workplace**0 Units**

Lecture: 1-80

Contextualized health and safety course for various workplace environments. Focuses on safe work practices in offices, industry, and construction as well as how to identify and prevent or correct problems associated with occupational safety and health. Designed to assist the student with the implementation of safe and healthy practices at work.

VOC HTH01 Certified Nursing Assistant**0 Units**

Lecture: 65-105 Lab: 85-125

This course prepares students to function as a nursing assistant in a variety of health care settings under the supervision of a licensed nurse. Students will be prepared to take the California Nurse Aide certification examination upon completion.

VOC HTH04 Acute Certified Nursing Assistant (CNA)**0 Units**

Lecture: 48-75 Lab: 80-120

Preparation of CNA to provide basic personal care to patients in acute care facilities and hospitals.

VOC HTH05 Health Careers Skills Lab (HCRC)**0 Units**

Lab: 1-320

Health occupational training and experience using instructional equipment and simulators for health occupation competencies.

VOC HTH06 Health Careers Employability Skills**0 Units**

Lecture: 10-60

Provides training to ensure the delivery of high quality care meeting the industry expectations. This course covers communication competency, workplace ethics and professionalism, team building and collaboration, effective problem solving, embracing diversity, and demonstrating compassion.

VOC HTH12 Medical Terminology**0 Units**

Lecture: 40-60

Medical terminology used in various allied health fields.

VOC ID10 Introduction to Interior Design**0 Units**

Lecture: 36

Interior design and the planning of total interior environments that meet individual, functional, and environmental needs. Field trips may be required.

VOC ID10L Introduction to Interior Design Laboratory**0 Units**

Lab: 54

Application of the interior design practice and the planning of total interior environments that meet individual, functional, and environmental needs. Field trips may be required.

VOC ID12 Materials and Products for Interior Design**0 Units**

Lecture: 36 Lab: 54

Analysis, application, and evaluation of products and materials used in interior design. Field trips required.

VOC ID14 History of Furniture and Decorative Arts**0 Units**

Lecture: 54

Historic development of structure, interior spaces, furniture, and decorative arts throughout the world. Interior architecture is illustrated in this overview of design heritage from antiquity to present. Emphasis is placed on style development as it relates to social, economical, and political influences as well as the use of materials and technology. Field trips may be required.

VOC ITECH Information Technology**0 Units**

Lecture: 54-80

Information Technology core aspects focusing on applications, processes, and their impact on society, businesses, and individuals. Career opportunities that utilize IT skills and participate in activities that integrate teamwork and communication skills that will enhance employability.

VOC LGAN Logistics Analyst**0 Units**

Lecture: 1-50 Lab: 1-50

Specialization in creating value for logistics operations through creating, mining, and the analyzing of data. Topics include: a data driven logistics operation, evaluating, and analyzing a company's physical and informational assets, operations forecasting, and creating company value that reduce inefficiencies and consume profits.

VOC LOS Logistics Operations Specialist**0 Units**

Lecture: 1-50 Lab: 1-50

Specialization in logistics and distribution center operations. Topics include: inventory control, transportation management, supplier vendors, customer relationships.

VOC LS Land Surveying**0 Units**

Lecture: 30-60 Lab: 30-60

A practical course in land surveying with a review of mathematics. Hands-on experience with surveying instruments such as measuring wheel, surveyor's tapes, automatic and digital levels, optical theodolites, and electronic total station. No materials needed.

VOC LTEC Logistics Technician**0 Units**

Lecture: 1-50 Lab: 1-50

Specialization in designing and enhancing systems that help streamline logistics operations. Topics include: implementing and troubleshooting Warehouse Management Systems, CRM's (Customer Relations Management) Systems, RF (Radio Frequency) scanners, data reports and operation automation technology.

VOC LWFR Law Enforcement**0 Units**

Lecture: 60-180

Policing in America including its historical evolution, social issues in law enforcement, and practices in law and public safety. Policing agencies at the local, state, and federal levels.

VOC MAST Medical Assistant**0 Units**

Lecture: 60-180

Scope of practice, tasks, and responsibilities of the Medical Assistant; theory and foundational skills in medical assisting. Study essential competencies that provide a central body of knowledge for movement into administrative or clinical career paths.

VOC MCCR Math for College and Career Readiness**0 Units**

Lecture: 4-140

Contextualized math course to prepare students for successful transition to college, apprenticeships, and employment. Topics include numeracy, fractions, decimals, unit conversion, ratios, proportions, algebra, measurement, and statistics.

VOC MDCS Medical Core Studies**0 Units**

Lecture: 60-180

Study of health and disease, human body systems, medical terminology and vocabulary, and healthcare systems and processes. Focus on anatomy, physiology, pathology of the various systems, and career opportunities in healthcare.

VOC MF10 Mathematics & Blueprint**0 Units**

Lecture: 54

Applications of mathematical principles, including fractions, decimals, ratio and proportion, geometry and trigonometry to manufacturing problems and their solutions. Reading and interpreting part drawings, assembly drawings and sketches used in the manufacturing industry.

VOC MF11 Manufacturing Processes 1**0 Units**

Lecture: 18 Lab: 54

Manual and computerized manufacturing, manual lathes and mills, tool nomenclature and Computerized Numerical Control (CNC) operations. Operation of CNC machines.

VOC MF110 Introduction to CAD**0 Units**

Lecture: 54 Lab: 54

Basic Computer Aided Design (CAD) and computer applications (AutoCAD and SolidWorks) in engineering and related fields, including basic word processing, spreadsheet, CAD, and presentation applications. Production card and digital calipers required.

VOC MF12 Manufacturing Processes 2**0 Units**

Lecture: 18 Lab: 54

The study of manufacturing equipment and manufacturing processes. Theory and practice in milling operations, tooling setup, metallurgy, heat treatment, precision grinding and basic tool design.

VOC MF130 Manufacturing Processes and Materials**0 Units**

Lecture: 36 Lab: 54

Common manufacturing processes used to cut, bend, form, mold, and cast common metal and plastic alloys. Investigates material properties, structural concepts, and joining methods. Includes survey of advanced manufacturing technologies.

VOC MF140 Print Reading and Shop Practice**0 Units**

Lecture: 36 Lab: 54

Print reading, layout, tools, and methods used in fabrication and manufacturing industries. Print reading fundamentals and mastery of tool and process selection, safety; proficiency in basic machine operation skills.

VOC MF150 Manual Machining 1**0 Units**

Lecture: 36 Lab: 54

Conventional mill and lathe safety and machining practices, tool nomenclature, lathe and mill operation, application and tooling. Application to Computer Numerical Control (CNC) machines. Production cards and calipers required.

VOC MF155 Manual Machining 2**0 Units**

Lecture: 18 Lab: 54

Intermediate application of conventional mill and lathe safety and machining practices, tool nomenclature, lathe and mill operation, application and tooling. Production cards; safety glasses, hearing protection, and calipers required.

VOC MF160 Introduction to Mechanical Principles**0 Units**

Lecture: 36 Lab: 54

Use of mechanical demonstration kits, computer aided design (CAD) and other media to survey mechanical devices, concepts, and principles common to manufactured products and manufacturing processes. Analysis, discussion, and problem solving related to mechanical design scenarios and supported by CAD. Emphasis on mechanical literacy. Production cards and calipers required. Field trips may be required.

VOC MF180 Introduction to MasterCAM**0 Units**

Lecture: 36 Lab: 54

Use MasterCAM X software to create wire-frame part geometry, add tool paths, and create computer numerical control (CNC) code for CNC mills and CNC lathes. Overview of tooling and tooling nomenclature.

VOC MF250 Introduction to CNC Programming**0 Units**

Lecture: 18 Lab: 108

Theory and practice of manually developing Computer Numerical Control (CNC) programs. Writing and editing program code for CNC mills and lathes. Methods of transmitting data to CNC machines and operation of CNC mills and lathes.

VOC MF260 CNC Operation**0 Units**

Lecture: 18 Lab: 108

Operation of computer numerical control (CNC) machines and their applications in manufacturing. Students will learn to analyze and interpret industry prints to determine datums, orient work to the machines, set up, and apply work holding solutions and basic tooling and machining strategies common in the industry. Students will be involved in producing and machining industry representative parts.

VOC MF38 MasterCAM 1**0 Units**

Lecture: 18 Lab: 54

Use MasterCAM software to create wire-frame part geometry, add tool paths and create CNC code for CNC mills and CNC lathes.

VOC MF38B Advanced MasterCAM**0 Units**

Lecture: 18 Lab: 54

Use MasterCAM software to create wire-frame 3D/multi-axis part geometry, add tool paths, and create CNC code for CNC mills and CNC lathes.

VOC MF38C MasterCAM Solids**0 Units**

Lecture: 18 Lab: 54

Using MasterCAM software to design wire drawings, translate to solids drawings, and generate code from a solids creation to meet industrial standards.

VOC MF85 Manual CNC Operations**0 Units**

Lecture: 18 Lab: 54

Theory and practice in manually developing CNC programs. Methods of transmitting data to CNC machines and physical set-up and operations of CNC equipment.

VOC MFES Manufacturing and Electrical Systems**0 Units**

Lecture: 25-50 Lab: 25-50

A basic understanding of electrical systems; troubleshooting electrical circuits; understanding and identifying what quality is; use of tools for inspection; and diagnostics investigation.

VOC MFPP Manufacturing and Production Principles**0 Units**

Lecture: 25-50 Lab: 25-50

Focus on manufacturing and production principles. Concepts include torque, basic assembly techniques, use of materials, safety, use of tools, bonding and finishing, accurate measurements, high voltage safety, and reading blueprint drawings.

VOC MFTH Manufacturing Theory and Blueprint Reading**0 Units**

Lecture: 50-100

Manufacturing theory, including lean manufacturing concepts, 5S methodology housekeeping, 7 wastes, principles of what is work, including value add and non-value add, continuous improvement, pull systems, and error proofing. Software includes Takt time production. Components of blueprints and how to read blueprint drawings.

VOC MIT Mobile Information Technology for the Beginner**0 Units**

Lecture: 12-54

Introduction to mobile information technology for skills, concepts, and principles to safely and effectively use mobile platform devices and the internet.

VOC MR01 Medical Records**0 Units**

Lecture: 25-60 Lab: 25-60

Basics of health information management and medical office skills. Topics include the content, structure, management, analysis, and processing of health information, and issues surrounding quality, confidentiality, and compliance. Special emphasis is placed on electronic information processing. Prepare students for the Electronic Health Records Specialist Certification exam from the National Healthcareer Association, with the potential to earn the Certified Electronic Health Records Specialist (CEHRS™) credential.

VOC NF81 Cooking for Health and Wellness**0 Units**

Lecture: 9 Lab: 27

Principles and techniques of healthful food preparation, investigation of chronic disease prevention through dietary means, and recipe modification. Includes laboratory experience in preparation of healthful foods and meals. Off-campus meetings may be required.

VOC NF82 Vegetarian Cuisine**0 Units**

Lecture: 9 Lab: 27

Principles and techniques of vegetarian food preparation and investigation of issues related to vegetarian eating practices. Includes laboratory experience in preparation of vegetarian foods and meals. Off-campus meetings may be required.

VOC OTA Occupational Therapy Aide**0 Units**

Lecture: 40-130 Lab: 20-50

Role and skills of occupational therapy aide. Includes terminology, procedures and interpersonal skills.

VOC PCA Personal Care Aide**0 Units**

Lecture: 90-130

Preparation to assist elderly, disabled, and ill persons. Roles and responsibilities of a caregiver. Communication skills, maintenance of a healthy environment, and procedures for emergencies. Physical, emotional, and developmental characteristics of the consumers served, personal hygiene, safe transfer techniques, and basic nutrition.

VOC PH11A Intermediate Photography**0 Units**

Lecture: 36 Lab: 54

Professional photography techniques and studio lighting. Includes studio and field assignments related to problems encountered while professionally photographing people and products. Topics include medium and large format film, continuous and strobe lighting.

VOC PH11B Digital Capture Workflow**0 Units**

Lecture: 36 Lab: 54

Advanced application of digital capture and workflow using digital single-lens reflex (DSLR) medium and large format digital camera systems and software to produce high-quality digital photographs. Field trips may be required.

VOC PH004 Digital Cameras and Composition**0 Units**

Lecture: 18

Use of digital cameras, lenses, filters and exposure to compose quality photographs. Shooting assignments are given for analysis in class. Camera will be required after the second week.

VOC PH009 Digital Image Editing for Photographers**0 Units**

Lecture: 36 Lab: 54

Software and techniques including digital workflow practices, digital image editing, enhancing and retouching methods commonly used in photography.

VOC PH010 Basic Digital and Film Photography**0 Units**

Lecture: 36 Lab: 54

Basic mechanical, optical and chemical principles of photography, including digital image systems. Laboratory experience involves problems related to camera and image output techniques.

VOC PH012 Photographic Alternatives**0 Units**

Lecture: 36 Lab: 54

Alternative photographic processes. Instant films: lifts and transfers, specialized lighting, stain toning, emulsion coating, and scenography will be applied to produce images not considered common to making photographic prints.

VOC PH014 Commercial Lighting**0 Units**

(May be taken for Pass/No Pass only)

Lecture: 36 Lab: 54

Use of studio equipment, and studio and location lighting techniques used in all aspects of commercial photographic applications. Field trips may be required.

VOC PH015 History of Photography**0 Units**

Lecture: 54

Survey of the history of photography from early 1800s to the present, introducing various concepts of photo representation and their impact on society. Field trip required.

VOC PH016 Fashion and Editorial Portrait Photography**0 Units**

Lecture: 36 Lab: 54

Fashion and editorial portrait photography with studio and location lighting techniques, creative concepts, styling, and working with models.

VOC PH017 Photocommunication**0 Units**

Lecture: 36 Lab: 54

Enhancing visual communication of commercial, documentary, and fine art imagery. Includes using camera tools (lens, aperture, shutter) lighting, color, and design to create images that clearly communicate messages.

VOC PH018 Portraiture and Wedding Photography**0 Units**

Lecture: 36 Lab: 54

Professional studio and field techniques for portrait and wedding photography. Off-camera assignment or field trips may be required.

VOC PH019 Digital Color Management**0 Units**

Lecture: 36 Lab: 54

Digital color management software and hardware skills, techniques and digital workflow practices commonly used in photography.

VOC PH01A Laboratory Studies: Beginning Black and White Photography**0 Units**

Lab: 54

Extended black-and-white laboratory experiences to improve skills through further instruction and practice, as well as pursue more advanced projects and experiments.

VOC PH01B Laboratory Studies: Advanced Black and White Photography**0 Units**

Lab: 54

Extended advanced black and white laboratory experiences with medium and large format cameras to improve skills and pursue more advanced photographic printing, processing, and enlarging techniques.

VOC PH01C Laboratory Studies: Studio Photography**0 Units**

Lab: 54

Extended studio photography experiences to supplement those available through the regular program. Provides students the opportunity to improve skills through further instruction and practice, as well as pursue more advanced projects and experiments.

VOC PH01D Laboratory Studies: Computer Applications in Photography**0 Units**

Lab: 54

Extended computer laboratory experiences to supplement those available in the regular program. Provides students the opportunity to improve skills through further instruction and practice, as well as pursue more advanced projects and experiments.

VOC PH020 Color Photography**0 Units**

Lecture: 36 Lab: 54

Use of color principles as they relate to commercial and artistic styles. This includes lighting, color theory, color management, exaggerated and unique color schemes applied color psychology principles.

VOC PH021 Exploring Color Photography**0 Units**

Lecture: 36 Lab: 54

Use of color principles as they relate to commercial and artistic styles and innovative use of color applications. Includes lighting and unusual techniques, exaggerated and unique color schemes, light-painting, lighting effects, high dynamic range effects and oversize output.

VOC PH024 Advanced Digital Image Editing for Photographers**0 Units**

(May be taken for Pass/No Pass only)

Lecture: 36 Lab: 54

Advanced software and techniques for digital image editing, archiving, and retouching used in commercial photography.

VOC PH028 Photography Portfolio Development**0 Units**

Lecture: 36 Lab: 54

Development of a photography portfolio for use in job application or gallery exhibition purposes. Field trips may be required.

VOC PH029 Studio Business Practices for Commercial Artists**0 Units**

Lecture: 54

Studio business practices for commercial artists. Small business operations, pricing services based on the Licensing Business Model, copyright basics, project production, and estimating and invoicing. Field trips may be required.

VOC PHO30 Advertising Photography**0 Units**

Lecture: 36 Lab: 54

Overview of the commercial photographic industry. Exploration of the various commercial photography specialties including studio product and people photography, lifestyle, fashion and industrial/location photography with an emphasis on the development of a personal creative style. Field trips may be required.

VOC PHOTO Basic Photography**0 Units**

Lecture: 60-180

Introductory photographic elements of art and principles of design, composition, and lighting. Explore career opportunities related to photography.

VOC PPCCR Professional and Postsecondary Skills for College and Career Readiness**0 Units**

Lecture: 4-80

Contextualized essential professional and postsecondary skills course to prepare students for successful transition to college, apprenticeships, or career. Topics include effective communication, analysis/solution mindset, collaboration, digital fluency, empathy, adaptability, entrepreneurial mindset, handling setbacks, self-awareness, and social diversity/awareness.

VOC PT81 Physical Therapy Aide**0 Units**

Lecture: 25-60 Lab: 25-60

Role and skills of physical therapy aide. Includes terminology, procedures, and interpersonal skills.

VOC PTEC1 Pharmacy Technician 1**0 Units**

Lecture: 30-150

Entry-level course in pharmacology, anatomy and physiology of the muscular, skeletal, respiratory, renal, cardiovascular, and hematologic systems, brand and generic name medications, alternative therapies, routes of administration, standard precautions, and the law and ethics of pharmacy practice. Introduction to the role of pharmacy clerks and technicians.

VOC PTEC2 Pharmacy Technician 2**0 Units**

Lecture: 50-150

Pharmacology, anatomy and physiology of the nervous, endocrine, gastrointestinal, reproductive, immune, ears/nose/throat, and dermatologic systems, brand and generic name medications, alternative therapies, routes of administration, and standard precautions. Introduction to over-the-counter (OTC) and non-prescription products.

VOC PTEC3 Pharmacy Technician 3**0 Units**

Lab: 75-150

Practical pharmacy experience in selected outpatient, inpatient, acute care, home health, or selected hospital settings under the supervision of registered pharmacists and clinical work-based learning coordinator. Intravenous additives, sterile compounding, prescription dispensing, inventory management, customer service, communication and professional ethics. Students will be prepared to take the Pharmacy Technician Certification Board examination upon course completion.

VOC RDTEC Intravenous Therapy for Radiologic Technology**0 Units**

Lecture: 10 Lab: 12

Principles and techniques of venipuncture. Includes anatomy and physiology of sites, instruments, intravenous (IV) solutions, equipment, puncture techniques, hazards and complications, emergency care, post-puncture care.

VOC RWCCR Reading and Writing for College and Career Readiness**0 Units**

Lecture: 1-80

Contextualized reading and writing course to prepare students for successful transition to apprenticeships, college, and career. Skimming and scanning, annotation, reading for main idea, reading strategies, sentence structure, summarizing versus responding, paragraph structure, paragraph types, reading charts and graphs, and vocabulary.

VOC SPMD Sports Medicine**0 Units**

Lecture: 60-180

Introductory theory and practice in sports medicine focusing on the prevention, recognition, evaluation, and treatment of common athletic injuries.

VOC SPT Solar Panel Technology**0 Units**

Lecture: 30-75 Lab: 10-25

Entry-level solar panel installation training for technician from project planning to final inspection and trouble shooting. Safe working practices, conditions where the most power can be captured from sunlight, and the physics of solar panel operation are covered. Additionally, the student will learn the mechanical aspects of installation such as tools, mounting hardware, and maintaining roof integrity. Electrical instruction will include the different configurations of circuitry and types of grid connections. Hands-on practical labs are designed to emphasize and support the lecture curriculum.

VOC ST1 Sewing and Tailoring 1**0 Units**

Lab: 4-54

Patternmaking and garment fitting with flat pattern and draping methods, learned through process of creating a personal fitting form.

VOC ST2 Sewing and Tailoring 2**0 Units**

Lab: 54

Haute couture garment construction, including couture tailoring techniques for inner structure, finishing, and achieving superior overall appearance.

VOC STECH Surgical Technician**0 Units**

Lecture: 60-180

Scope of practice, tasks, and responsibilities of the Surgical Technician; the operative environment and professional roles.

VOC TCH60 Customer Relations for the Technician**0 Units**

Lecture: 36

Customer relations (soft skills) for the technician including benefits for knowing and using effective customer contact tools, proper customer interactions, ethics, and maintaining customer satisfaction.

VOC THR14 Stagecraft**0 Units**

Lecture: 36 Lab: 54

Theory and practice of scenery construction, scenic painting, and stage rigging. Practical work in scene construction and rigging with the opportunity to perform these tasks in actual theater situations.

VOC THR19 Theatrical Costuming**0 Units**

Lecture: 36 Lab: 54

The study of costume history, principles of costume design, fibers and textiles, basic costume construction and design rendering techniques. Costume crew assignments for major productions will provide practical instruction in actual performance demands on costumes and their proper maintenance. Class is suitable for people interested in costuming for theater, dance, film, television and reenactments.

VOC TR10A Introduction to Tutoring**0 Units**

Lecture: 18

Introduction to tutoring with an emphasis on tutoring strategies, problem-solving, and working with a diverse student population.

VOC TR10B Tutoring in the English Language**0 Units**

Lecture: 18

Tutoring in the English language using approaches to working with students on written drafts and the needs of non-native speakers.

VOC TR10C Tutoring - Supplemental Instructor**0 Units**

Lecture: 18

Tutoring in the classroom and in small groups under the supervision of a designated instructor.

VOC TR10D Tutoring in Mathematics**0 Units**

Lecture: 18

Tutoring in mathematics with an emphasis on strategies, active learning, and dealing with obstacles in developmental algebra.

VOC TR10R Tutoring in Reading**0 Units**

Lecture: 18-18

Application of strategic reading processes and approaches to tutoring reading. Prepares students to become tutors for reading across disciplines.

VOC TRAD1 Introduction to Construction Trades 1**0 Units**

Lecture: 40-120

An introduction to the various building and construction trades. Overview and history of the trades and unions, and preparation for entrance into the apprenticeship programs and construction industry.

VOC TRAD2 Introduction to Construction Trades 2**0 Units**

Lecture: 40-120

Second module introducing essential topics related to various building and construction trades. Construction health and safety, basic components of a blueprint, green construction, and financial literacy.

VOC WL30 Metal Sculpture**0 Units**

Lecture: 18 Lab: 54

Welding processes used in the metal sculpting industry to create three-dimensional art forms. Covers design, pre-construction analysis, and cost estimates for projects. Includes use of equipment for oxyfuel welding, gas metal arc welding (GMAW), gas tungsten arc welding (GTAW), shielded metal arc welding (SMAW), and flux-cored arc welding (FCAW). Includes demonstrations and exercises in welding as it relates to the art industry.

VOC WL40 Introduction to Welding**0 Units**

Lecture: 18 Lab: 54

Fundamentals of welding processes related to the areas of fabrication, construction, machine tool, aerospace, and the transportation industries.

VOC WL50 Oxyacetylene Welding**0 Units**

Lecture: 18 Lab: 54

Oxyacetylene fusion welding (OAW), non-fusion welding and cutting, Brazing and Braze welding (OFB), Gas Tungsten Arc Welding (GTAW), fusion and non-fusion welding. Develops understanding of and fundamental skills in modern welding practices.

VOC WL51 Basic Electric Arc Welding**0 Units**

Lecture: 18 Lab: 54

Electric arc welding and cutting processes (SMAW, GTAW, GMAW, FCAW, PAC), and their similarities and differences. Exploring each of these arc welding processes to gain more experience and skill welding with these processes and also gain an understanding of each of these different welding processes' strengths and weaknesses. Lab and shop safety.

VOC WL53A Welding Metallurgy**0 Units**

Lecture: 54

Designed for students seeking a career in welding and welding inspection. Covers structure of matter, chemical, physical, and mechanical properties of metals, principles of alloying, solid state diffusion, plastic deformation, and heat treatment.

VOC WL60 Print Reading and Computations for Welders**0 Units**

Lecture: 54

Reading prints and performing computations for welding fabrication operations. Interpreting and visualizing prints, title blocks, welding symbols, specifications, notes, and bills of materials. Computations necessary to calculate materials, costs, sizes, and fractional, decimal, and metric conversions.

VOC WL70A Beginning Arc Welding**0 Units**

Lecture: 18 Lab: 108

Develops manipulative skills and techniques for shielded metal arc (SMAW) and flux cored arc (FCAW) welding processes in the flat and horizontal positions using AC and DC welding currents on carbon steel.

VOC WL70B Intermediate Arc Welding**0 Units**

Lecture: 18 Lab: 108

Welding high alloy steel with both Shielded Metal Arc (SMAW) and Flux Core Arc (FCAW) welding processes in the vertical and overhead positions with an introduction to Gas Metal Arc (GMAW) and Gas Tungsten (GTAW) welding.

VOC WL70C Certification for Welders**0 Units**

Lecture: 18 Lab: 108

Building construction for the advanced arc welding student. Special emphasis will be placed on welding symbols and the American Welding Society's (AWS) D1.1 and D1.3.

VOC WL80 Construction Fabrication and Welding**0 Units**

Lecture: 18 Lab: 108

Theory and practical applications of welding used in industry and construction. Designed to adapt and upgrade skills to industry standards and develop fabrication skills to supplement and augment welding skills. Includes project models such as ornamental iron gates and fences and material storage components.

VOC WL81 Pipe and Tube Welding**0 Units**

Lecture: 18 Lab: 108

Welding in all positions as applied to the pipe industry. Welding processes include shielded metal arc welding (SMAW), gas tungsten arc welding (GTAW), gas metal arc welding (GMAW), flux cored arc welding (FCAW) using a variety of materials and configurations on subcritical and critical piping and tubing.

VOC WL90A Gas Tungsten Arc Welding**0 Units**

Lecture: 18 Lab: 108

Advanced Gas Tungsten Arc Welding (GTAW) or tungsten inert gas (TIG) of steel, aluminum, corrosion resisting steel (CRES), and exotic metals. All position welds with many surfaces and transitions.

VOC WL90B Semiautomatic Arc Welding Process**0 Units**

Lecture: 18 Lab: 108

Semiautomatic Welding Processes including Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), Submerged Arc Welding (SAW) with solid and tubular wires with and without gas shielding. All position welds with many varying thickness will be covered.

VOC WL91 Automotive Welding, Cutting and Modification**0 Units**

Lecture: 18 Lab: 108

This course covers the welding and cutting of metals used in fabrication in the automotive industry. Gas metal arc (GMAW/MIG), gas tungsten arc (GTAW/TIG), plasma arc cutting (PAC), and oxy-fuel cutting (OFC) and welding will be demonstrated as they are used in the automotive industry, with an emphasis placed on specific applications and situational uses of each of these processes.

VOC WLD01 Welding Basics**0 Units**

Lecture: 30-90 Lab: 30-90

Fundamentals of welding processes including Oxyfuel, Shielded Metal Arc, and Gas Metal Arc welding. Welding processes related to the areas of fabrication, construction, machine tool, aerospace, and the transportation industries. Focus on use of welding tools and safety in the industry.



**2022-23
CATALOG**

**COLLEGE POLICIES
and NOTICES**



COLLEGE POLICIES AND NOTICES

For detailed information regarding Mt. San Antonio College Board of Trustees Policies (BP) and Administrative Procedures (AP), go to Board Policies & Administrative Procedures (<http://www.mtsac.edu/governance/trustees/apbp/>).

Accommodations and Academic Adjustments for Students with Disabilities or Medical Conditions

Under Federal and State laws, the College is required to make modifications to academic requirements and practices as necessary in order to ensure that they do not discriminate against a qualified student with a disability or medical condition. The College is also required to have a policy and procedure for responding to students with verified disabilities who request academic adjustments. Students with disabilities have the right to receive reasonable academic adjustments in order to create an educational environment where they have equal access to instruction without fundamentally altering any course, educational program, or degree. Board Policy (BP 5140) and Administrative Procedure (AP 5140) for Students with Disabilities may be found at Board Policies & Administrative Procedures (<http://www.mtsac.edu/governance/trustees/apbp/>) and at Accessibility Resource Centers for Students (formerly known as DSPS) (909) 274-4290. Students not participating with the Accessibility Resource Centers may contact the ADA/504 Compliance Officer in Human Resources at (909) 274-4110.

Alcohol and Other Drugs

The possession or consumption of alcoholic beverages or illegal drugs prior to, or during any College-sponsored activity, on or off-campus, by any person attending, regardless of age, is forbidden by State law.

The federal Drug-Free Schools and Communities Act Amendments of 1989, P. L. 101-226 has mandated that as of October 1, 1990, there will be no drug usage by students, staff, or faculty on college campuses anywhere in the United States. Please see the current Schedule of Classes for the College's Alcohol and Other Drugs Policy (BP 3550, AP 3550).

Animals on Campus

Board Policy does not allow for any animals on campus except as provided for by the California Penal Code, Section 365.5 (specially trained guide, signal, or service dogs and service animals, and/or therapy/comfort animals, as described within the requirements of AP 3440 "Service Animals"). Leaving a pet in a parked vehicle, no matter what provisions are made for its safety, may constitute unnecessary suffering or cruelty which is a violation of California Penal Code 597. (BP 3940)

Campus Disturbances

In accordance with California Penal Code (P.C. Section 626), the willful disturbance of classes, College activities, or procedures is a misdemeanor.

Campus Hours

The College offers instruction between the hours of 6:30 a.m. and 10:00 p.m., Monday through Sunday. Office hours vary depending on the services provided. Visit the website or call for specific office hours.

Children on Campus

While on the campus of Mt. San Antonio College, children under 12 years of age who are not approved for enrollment must be directly supervised at all times by a responsible adult. Such children shall not

be left unattended in College buildings, outdoor areas, or in private automobiles (BP 3930).

Classroom Visitors and Other Attendees

Classroom activities are intended to benefit those students officially registered for the class. Others are permitted to attend a regularly scheduled class meeting only in specific situations. The professor assigned to teach the class may grant permission to visit the class. Accessibility Resource Centers for Students ("Access Center" formerly known as DSPS,) may authorize a person to be a Personal Care Attendant (PCA) when the need for such accommodation is authorized by Access Center prior to beginning service as a PCA (BP 4700, AP 4700).

Dress Regulation

Students are expected to dress in accordance with commonly accepted standards of appropriateness. It is mandatory that shoes be worn as general campus attire.

Eye Protection

Pursuant to the Education Code, the following regulation regarding eye protective devices shall be observed: Students, teachers, and visitors shall wear approved eye protective devices in all classes, shops, and laboratories when they are engaging in or observing the use of hazardous materials likely to cause injury to the eyes. Such eye protective devices shall meet the requirements of the American National Standards Institute Safety Code.

Non-Discrimination Policy

Mt. San Antonio College is committed to equal opportunity in educational programs, employment, and all access to institutional programs and activities. The College provides an educational and employment environment in which no person shall be unlawfully denied full and equal access to, the benefits of, or be unlawfully subjected to discrimination on the basis of ethnic group identification, national origin, religion, age, sex or gender, sexual orientation, gender identity/expression, genetic information, race (including traits historically associated with race such as hair texture and protective hairstyles), color, ancestry, medical condition, marital status, veteran/military status or disability, or on the basis of these perceived characteristics or based on association with a person or group with one or more of these actual or perceived characteristics, in any program or activity that is administered by the College. The lack of English language skills will not be a barrier to admission.

Students who believe they have been discriminated against may begin the process with the **Associate Vice President, Human Resources and Title IX Coordinator**, Human Resources Office, Building 4, Room 1460, (909) 274-4225. Harassment and discrimination investigation procedures are described in Administrative Procedure 3435. Formal complaint forms can be found at: <https://www.mtsac.edu/discriminationcomplaint/> (<https://www.mtsac.edu/discriminationcomplaint/>) All complaints of unlawful discrimination or sexual harassment by students of the College will be fully investigated by Human Resources. College employees have similar rights which can be found in the College's Board Policy and Administrative Procedures. (BP 3410, 3430, AP 3410, 3430, 3435)

Reserve Officer Training Corps (ROTC)

Students interested in a military career can join an approved Reserve Officer Training Corps (ROTC) program offered through local universities. These programs are open to community college students pursuing an undergraduate degree, prior to transfer. Air Force ROTC programs are offered through Cal State San Bernardino, Loyola Marymount University,

University of Southern California (USC), and UCLA; Army ROTC programs are offered at Claremont McKenna College, USC, UCLA and Cal State Fullerton; and Navy ROTC programs are offered through USC and UCLA. Competitive scholarships are available to qualified applicants as well as allowances for books and other costs. Students are advised to contact the ROTC program at the participating university.

Sexual Harassment & Sexual Misconduct

Sexual misconduct, including sexual assault, harassment, rape, stalking, dating violence and domestic violence are prohibited. Mt. San Antonio College has adopted Board policies and procedures to address sexual harassment and sexual misconduct, sanctions for offenders, and to outline access to treatment and general information for victims (BP 3430, 3500, 3540 and AP 3430, 3500, 3540). All applicable punishment, including disciplinary action, shall be applied whether the violator is an employee, student, or otherwise affiliated with Mt. SAC. <https://www.mtsac.edu/discriminationcomplaint> (<https://www.mtsac.edu/discriminationcomplaint/>)

Services available to help assure student safety include:

- Campus Safety Escorts are available during evening hours to escort students safely to their car. Escorts are stationed throughout campus or are provided upon request. Please call (909) 274-4233.
- Blue emergency telephone towers located throughout the campus and parking lots access the Police and Campus Safety Department immediately for assistance.
- Call 911 for any emergency. Be prepared to identify your exact location. The Police and Campus Safety Department can be reached at (909) 274-4555.
- The Office of Title IX and EEO Programs in Human Resources at (909) 274-4225 provides unlawful discrimination complaint procedures and resolutions.
- Student Life Office at (909) 274-4525 provides assistance with referrals and resources.
- Student Health Services at (909) 274-4400 provides personal counseling and medical attention.

Smoking on Campus

Student, employee, and visitor health is a primary concern of Mt. San Antonio College. Smoking and the use of e-cigarettes will be prohibited on Mt. San Antonio Community College District property except in designated smoking areas. Designated smoking areas can be found on campus maps and the College website. Violations of this policy will be subject to a citation and a fine, as allowed per Government Code 7597.1. Appeals may be submitted in writing to the Police and Campus Safety Department within twenty-one (21) calendar days of issuance of the citation. (BP 3565, AP 3565)

Student Grievance Process

The Student Life Office oversees the Student Grievance Process in accordance with the College Administrative Procedures 5530. Students are protected against capricious, arbitrary, unreasonable, unlawful, false, malicious, or professionally inappropriate evaluations or behavior by a College employee. Student complaints may be classified as grievances and fall into two categories: Academic- and Non-Academic. Academic grievances involve grades. To grieve a grade, a student must prove that the professor issued a grade by mistake, fraud, bad faith, or incompetence (Education Code 76224). Non-Academic grievances include: any act or threat of intimidation, harassment, or physical aggression, arbitrary action, violation of student rights, or imposition of sanctions without proper regard to College policy as specified in the

Education Code, Board Policy, and/or Administrative Procedures, violation of Title IX Education Amendments of 1972, or violation of Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) with reference to the rights of disabled students.

Students can obtain the Student Grievance form on-line at Complaints and Grievances (<https://www.mtsac.edu/studentlife/studentgrievances.html>). Complaints of discrimination, harassment, retaliation, sexual misconduct, dating violence, domestic violence, or stalking can be filed online at Discrimination Complaint (<http://www.mtsac.edu/discriminationcomplaint/>). Students have up to one year from the date of the incident to file a discrimination complaint.

Grievances must be filed no later than 30 school days (Monday - Friday when classes are in session) after the beginning of the primary term following the alleged violation, or 30 school days from the time that the student learns of the basis for the grievance. To begin the formal grievance process students are required to meet with the Student Life Director regarding the grievance prior to starting the process since timelines are established for every step and must be met precisely.

The process for filing a grievance includes two levels: in Level I (informal level) the student obtains the grievance form online, meets with the Director of Student Life, initiates the grievance with established timelines and attempts to resolve the grievance by meeting first with the faculty member (or staff member/administrator for non-academic grievances), then with the department chair or immediate supervisor, and then with the division dean. In the event that the grievance cannot be resolved within 20 instructional days, the student may proceed to Level II (formal grievance) in which the student submits all signed forms and documents to the Student Life Office within the established timelines. Level II consists of a Grievance Review Committee. Level III consists of a Formal Hearing. Refer to the Student Grievance Form for detailed instructions and guidelines.

Traffic and Parking

Users of Mt. San Antonio College campus roads and parking areas must observe and obey all traffic laws of the State of California and the College traffic and parking rules and regulations adopted pursuant to Section 21113 of the California Vehicle Code and the Mt. San Antonio College Board of Trustees (BP 6750, AP 6750).

All vehicles parked in designated student lots **must** bear a valid parking permit. The Student Parking Permit is valid in designated student lots except pay lots or in spaces controlled by parking meters or reserved signage. Student Parking Permits are not valid in designated employee parking lots. Free 30-minute parking is available north of the Bookstore (Building 9A), west of the Administration Building (Building 4), and south of the Performing Arts Center. Permit parking regulations are strictly enforced 24 hours a day, 7 days a week.

Department of Police & Campus Safety Statistical Crime Report

Please review the Annual Security Report at <https://www.mtsac.edu/safety/asr.html>

Student Academic Honesty

All members of the academic community have a responsibility to ensure that scholastic honesty is maintained. Faculty have the responsibility of planning and supervising all academic work in order to encourage honest and individual effort, and of taking appropriate action if instances of academic dishonesty are discovered.

Honesty is primarily the responsibility of each student. The College considers cheating to be a voluntary act for which there may be reason, but for which there is no acceptable excuse.

Cheating and Plagiarism (Academic Dishonesty)

The term "Cheating" includes but is not limited to:

- Plagiarism
- Receiving or knowingly supplying unauthorized information
- Using unauthorized material or sources
- Changing an answer after work has been graded and presenting it as improperly graded
- Illegally accessing confidential information through a computer
- Taking an examination for another student or having another person take an examination for you
- Presenting another person's work as your own
- Forging or altering registration or grade documents
- Submitting collectively developed work as your own, unless specifically allowed by the professor
- Other methods that misrepresent original and/or independent work

A professor who determines that a student has cheated may give the student a failing grade for the assignment and shall report the alleged academic dishonesty to the Student Life Office, which will maintain a record of the report and appropriate action under the provisions of the Administrative Procedures on Student Discipline (AP 5520).

Students are advised that allegations of dishonesty are serious, and can lead to disciplinary sanctions including suspension and expulsion. (BP 4290, AP 4290)

Plagiarism

"Plagiarism is a direct violation of intellectual and academic honesty. Although it exists in many forms, all plagiarism refers to the same act: representing somebody else's words or ideas as one's own. The most extreme forms of plagiarism are the use of material authored by another person or obtained from a commercial source, or the use of passages copied word for word without acknowledgment. Paraphrasing an author's idea or quoting even limited portions of his or her text without proper citation is also an act of plagiarism. Even putting someone else's ideas into one's own words without acknowledgment may be plagiarism. In none of its forms can plagiarism be tolerated in an academic community. It may constitute grounds for a failing grade, probation, suspension, or expulsion."

"One distinctive mark of an educated person is the ability to use language correctly and effectively to express ideas. Faculty assign written work for the purpose of helping students achieve that mark. Each instructor will outline specific criteria, but all expect students to present work that represents the student's understanding of the subject in the student's own words. It is seldom expected that student papers will be based entirely or even primarily on original ideas or original research."

"Therefore, to incorporate the concepts of others may be appropriate with proper acknowledgment of sources, and to quote others directly by means of quotation marks and acknowledgments is proper. However, if a paper consists entirely of quotations and citations, the paper should be rewritten to show the student's own understanding and expressive ability. The purpose of the written assignment (i.e., development of communication and analytic skills) should be kept in mind as each paper is prepared. It should not be evaded through plagiarism."¹

¹ Adopted, with permission of California State University, Los Angeles, from their policy printed in the 1987-88 General Catalog.

Notices

Equal Opportunity Statement

The Board of Trustees of Mt. San Antonio College has a commitment to establishing and maintaining a policy of equal educational and employment opportunities and prohibiting discrimination based on ethnic group identification, national origin, religion, age, sex or gender, sexual orientation, gender identity/expression, genetic information, race, color, ancestry, medical condition, marital status, veteran/military status, or disability. This commitment applies to educational programs, activities, service, and employment practices (BP 3410, AP 3410).

Open Enrollment

All classes are open to all students who meet the course prerequisites and enrollment requirements, unless specifically exempted by statute. The College provides open access to all program offerings, opportunities, and support services without regard to sex, race, color, religious creed, national origin, ancestry, age over 40, marital status, physical or mental disability (including HIV and AIDS), sexual orientation, or Vietnam Era Veteran Status (BP 5052, AP 5052).

Department of Police and Campus Safety

In compliance with the Clery Act, the College publishes an annual security report which contains information regarding campus crime statistics. This information may also be found on the Mt. San Antonio (<http://www.mtsac.edu/>) website by clicking on Police & Campus Safety. Copies of the annual report can be obtained from the Police and Campus Safety Department in Building 23. A Daily Crime Log is also available on the Department of Police and Campus Safety Website. The crime log is published bi-monthly in the student newspaper and Emergency Procedures are posted throughout the campus. (BP 3515, AP 3515)

Emergency Procedures

Students and staff should report serious crimes and emergencies, i.e., fire/medical, occurring on campus to the Campus Safety Department or call 911. When using an on-campus extension, call 9-911. Incidents may be reported to Campus Safety by calling (909) 274-4555, 24 hours a day, seven days a week. Campus Safety may also be contacted during and after business hours from public telephone locations on campus by dialing *91. In the event of an emergency, students and staff are requested to make a prompt and accurate report to the Campus Safety Department. The Campus Safety Department is located at the southeast portion of the campus off Bonita Drive in Building 23. (AP 3503)

Enforcement

The Mt. San Antonio College Campus Safety Department has the authority to enforce the Student Discipline Code of Conduct and the State of California Penal Code under Education Code Section 72330. The Mt. San Antonio College Board of Trustees has established the Campus Safety Department as a community college police department under Education Code Section 72330(a), which authorizes the governing board of a community college district to establish a community college police department under the supervision of a community college chief of police. Although a designated police department, the Mt. San Antonio College Campus Safety Department has a memorandum of understanding mandated by the "Crime Awareness and Campus Safety Act of 1990," that the Los Angeles County Sheriff's Department has jurisdiction to investigate all crimes occurring on Mt. San Antonio College Campus. (BP 3520, AP 3520)

Crime Prevention

The Campus Safety Department's primary responsibility is the safety and security of all members of the College community. Every effort is made to inform students and staff of criminal activity or any other concern that may be an immediate threat to the safety and security of those on campus. Information and workshops on crime prevention are made available to College students and staff. It is the responsibility of every member of the campus community to act in ways that promote the safety of self, others, and the protection of District property. (AP 3500)

- You can now **Text-a-Tip** when you witness crimes or any suspicious behavior on campus. Text it to: (909) 610-9139

Campus Emergency Phone System

Mt. San Antonio College has installed a campus wide emergency phone system. This system is divided into two primary segments. The inner campus system consists of emergency phones that are placed on the outside of selected campus buildings and are identified by the familiar blue light affixed to the top of the phone housing.

The second segment of emergency phones consists of stand-alone emergency phone towers, located in open campus spaces, primarily in campus parking lots. These phone towers are identified by a blue light affixed to the top of the tower. Use of any of these emergency phones will connect the user to Campus Security during normal business hours, located in Building 23. During hours when the campus is closed, the Emergency phones will connect the user directly to a cell phone carried by Campus Security Officers who are on duty 24 hours a day, 7 days a week (BP 3505, AP 3500, 3503).

Notice of Students' Rights and Privacy Act

Students at Mt. San Antonio College are notified annually of their rights under FERPA (Family Educational Rights and Privacy Act) within this section of the Catalog. More detailed information on student rights is available from <http://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html> (<http://www2.ed.gov/policy/gen/guid/fpco/ferpa/>) Following is a summary of the Mt. San Antonio College policy related to the Family Educational Rights and Privacy Act of 1974 (FERPA), P.L. 93-380 (also referred to as the Buckley Amendment) and [Chapter 1297, Statutes of 1976, State of California.]:

- a. type of information and material contained within the student's educational record;
- b. the official responsible for the maintenance of each type of record;
- c. the procedure for student review and inspection of the educational record;
- d. the procedure for challenging the contents of the educational record;
- e. the charges to the student for reproducing copies of the record if requested;
- f. the categories of information which the College has designated as Directory Information and to whom this information will be released unless the student objects and
- g. the rights of a student to file a complaint with the

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Ave., S.W.
Washington, D.C., 20202-5920

concerning alleged failure of the College to comply with the provisions of FERPA.

Access to Educational Records

All former and present students have the right to review and inspect their educational records in the Office of Admissions and Records provided they make a written request fifteen (15) days in advance. Such a review will be under the direct supervision of a classified or certificated employee in the Admissions and Records Office. Expressly exempted from the right of review and inspection are the following materials:

- a. Financial records of the parents of the student(s).
- b. Confidential letters and statements of recommendation maintained by the College on or before January 1, 1975, provided that such letters or statements are not used for purposes other than those for which they were specifically intended.
- c. Records of instructional, supervisory, counseling, and administrative personnel which are in the sole possession of such personnel and are not accessible or revealed to any other person except a substitute.
- d. Records of employees of Mt. San Antonio College, made and maintained in the normal course of business which relate exclusively to such person in that person's capacity as an employee, are not available for use for any other purpose.
- e. Records of students made and maintained by the Student Health Services, the College nurse, the College physician, and the College therapist, which are used in the treatment of students and are not available to anyone other than persons providing such treatment. However, such a record may be personally reviewed by a physician or other appropriate professional of the student's choice.
- f. Discipline File Records are made and maintained by the Student Life Office. All reported violations of the Student Conduct Policy (BP 5500) are considered a discipline file. In accordance with Federal Law, the information contained a discipline file can be released to specific groups or individuals without consent. A discipline record is kept separate from and is not included on an academic transcript.

Release of Educational Records Information

- a. Any release of a student's educational records, with the exception listed below, must be made with the student's written consent.
- b. The College may release copies of or otherwise divulge material in the student's educational records only to the official agencies, groups, officials, or individuals specifically mentioned below:
 - i. College staff members; provided that such employees have a legitimate educational interest to inspect such a record.
 - ii. Representatives of the Comptroller General of the United States, the Secretary of Education, and administrative head of an educational agency, state education officials, and the United States Office of Civil Rights, where such information is necessary to audit a program.
 - iii. Accrediting organizations in order to carry out their accrediting functions.
 - iv. Organizations conducting studies on behalf of the institution.
 - v. Officials of other schools or school systems in which the student seeks or intends to enroll subject to the rights of students.
 - vi. Agencies or organizations in connection with a student's application for financial aid.
 - vii. Organizations conducting studies for, or on behalf of, educational agencies or institutions for the purpose of developing, validating, and administering predictive tests, administering student aid programs, and improving instruction, if such studies are conducted in such a manner as will not permit the personal identification of students or their parents by persons other than representatives of such organizations and such information will

be destroyed when no longer needed for the purpose for which it is compiled.

- viii. Appropriate persons in connection with an emergency if the knowledge of such information is necessary to protect the health and safety of the student or other persons.
- ix. Courts or other agencies in compliance with a subpoena or judicial order. A reasonable effort will be made to notify the student in advance of the compliance by the College.
- c. Directory Information
 - i. "Directory Information" means a student's name, community of residence, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous public or private school attended by the student.
 - ii. Any student desiring to withhold "Directory Information" may file a written request with the Dean, Enrollment Management, within fifteen (15) days of the opening day of each semester or session that the student does not want such information released.
 - iii. The College reserves the right to limit or deny the release of specific categories of directory information based upon a determination of the best interests of the student(s).

Students may file a complaint with the United States Department of Education regarding alleged institutional FERPA violations.

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202-5920

The 1996 Solomon Amendment

The 1996 Solomon Amendment is federal law that compels institutions that receive federal funding to provide (upon request) directory information, plus address, phone number, date and place of birth, level of education, degrees received, prior military experience, and/or the most recent previous educational institutions enrolled in by the student for the purposes of federal military recruitment.

Transfer of Information to Third Parties

Educational records or personal information transferred to other institutions or agencies will not be transferred to a third party without the written consent of the student (AP 5040).

Student Right-to-Know Transfer Rates

In compliance with the Student-Right-to-Know and Campus Security Act of 1990 (Public Law 101-542), it is the policy of the Mt. San Antonio Community College District and Mt. San Antonio College to make available its completion and transfer rates to all current and prospective students. For this calculation, a fall cohort of all certificate-, degree-, and transfer-seeking first-time, full-time students are tracked over a three-year period. These rates do not represent the success rates of the entire student population at Mt. San Antonio College, nor do they account for student outcomes occurring after this three-year tracking period.

A Completer is a student who attained a certificate or degree or became "transfer-prepared" during a three-year period. Students who are "transfer-prepared" have completed 60 transferable units with a GPA of 2.0 or better. Transfer students are those who transferred to another postsecondary institution (UC, CSU or another California Community College) prior to attaining a degree, certificate, or becoming "transfer-

prepared" during a five-semester period. For up-to-date rates please see <http://srtk.cccco.edu/index.asp> (<http://srtk.cccco.edu/>)

Standards of Conduct

(BP 5500) Adopted 6/23/04

Copies of the Standards of Conduct Policy can be obtained at Board Policies & Administrative Procedures (<http://www.mtsac.edu/governance/trustees/apbp/>)

The College President/CEO shall establish procedures for the imposition of discipline on students in accordance with the requirements for due process of the federal and State law and regulations.

The procedures shall clearly define the conduct that is subject to discipline, and shall identify potential disciplinary actions, including but not limited to the removal, suspension, or expulsion of a student.

The Board shall consider any recommendation from the College President/CEO for expulsion. The Board shall consider an expulsion recommendation in closed session unless the student requests that the matter be considered in a public meeting. Final action by the Board on the expulsion shall be taken at a public meeting.

The procedures shall be made widely available to students through the College catalog and other means.

The following conduct shall constitute good cause for discipline, including but not limited to the removal, suspension, or expulsion of a student:

- a. Causing, attempting to cause, or threatening to cause physical injury to another person.
- b. Possession, sale or otherwise furnishing any firearm, knife, explosive, or other dangerous object, including but not limited to any facsimile firearm, knife, or explosive, unless, in the case of possession of any object of this type, the student has obtained written permission to possess the item from a College employee, which is concurred with by the College President/CEO.
- c. Unlawful possession, use, sale, offer to sell, or furnishing, or being under the influence of, any controlled substance listed in Chapter 2 (commencing with Section 11053) of Division 10 of the California Health and Safety Code, an alcoholic beverage, or an intoxicant of any kind; or unlawful possession of, or offering, arranging, or negotiating the sale of any drug paraphernalia, as defined in California Health and Safety Code Section 11014.5.
- d. Committing or attempting to commit robbery or extortion.
- e. Causing or attempting to cause damage to College property or to private property on campus.
- f. Stealing or attempting to steal College property or private property on campus, or knowingly receiving stolen College property or private property on campus.
- g. Willful or persistent smoking in any area where smoking has been prohibited by law or by regulation of the College.
- h. Committing sexual harassment as defined by law or by College policies and procedures.
 - i. Engaging in harassing or discriminatory behavior based on disability, gender, gender identity, gender expression, marital status, nationality, race or ethnicity, religion, sexual orientation, or any other status protected by law.
 - j. Engaging in intimidating conduct or bullying against another student through words or actions.

- k. Willful misconduct that results in injury or death to a student or to College personnel or which results in cutting, defacing, or other injury to any real or personal property owned by the College or on campus.
- l. Disruptive behavior, willful disobedience, habitual profanity or vulgarity, or the open and persistent defiance of the authority of, or persistent abuse of, College personnel.
- m. Cheating, plagiarism (including plagiarism in a student publication), or engaging in other academic dishonesty.
- n. Dishonesty, forgery, alteration, or misuse of College documents, records, or identification; or knowingly furnishing false information to the College.
- o. Unauthorized entry upon or use of College facilities.
- p. Lewd, indecent, or obscene conduct on College-owned or controlled property, or at College-sponsored or supervised functions.
- q. Engaging in expression which is obscene, libelous, or slanderous; or which so incites students as to create a clear and present danger of the commission of unlawful acts on College premises, or the violation of lawful College administrative procedures, or the substantial disruption of the orderly operation of the College.
- r. Persistent, serious misconduct where other means of correction have failed to bring about proper conduct.
- s. Unauthorized preparation, giving, selling, transfer, distribution, or publication, for any commercial purpose, of any contemporaneous recording of an academic presentation in a classroom or equivalent site of instruction, including but not limited to handwritten or typewritten class notes, except as permitted by any College policy or Administrative Procedure.
- t. Harassment of students and/or College employees that creates an intimidating, hostile, or offensive environment.
- u. Violation of College rules and regulations including those concerning affiliate clubs and organizations, the use of College facilities, the posting and distribution of written materials, and College safety procedures.



**2022-23
CATALOG**

**INSTRUCTION and STUDENT
SERVICES DIVISIONS**



INSTRUCTION, SCHOOL OF CONTINUING EDUCATION, AND STUDENT SERVICES

Arts Division

(909) 274-5200

Mark Lowentrout, Dean

Michelle Sampat, Associate Dean

The Arts Division is comprised of four educational departments offering numerous degrees and certificates that provide students with the knowledge and training necessary for transferring to a university or fulfilling career opportunities in the arts. The division houses an acclaimed art gallery and supports the new state-of-the-art Design Technology Center. The division offers 7 Associate in Science degrees, 1 Associate in Arts degree, 4 Associate in Arts for Transfer degrees, 1 Associate in Science Transfer degree, and 18 Certificates of Achievement.

The Arts Division's educational departments and their program areas include:

- Fine Arts (Drawing, Figure, Painting, Sculpture, Ceramics, Printmaking, Gallery Design and Operations)
- Commercial & Entertainment Arts (Animation & Gaming, Augmented Reality and Virtual Reality, Graphic Design, Journalism, Photography, Radio & Television)
- Music (Audio Arts, Choral, Commercial Music, Instrumental, Theory)
- Theater (Acting, Design & Technical, Playwriting)

Business Division

(909) 274-4600

Jennifer Galbraith, Dean

Dr. Fawaz Al-Malood, Associate Dean

The Business Division's educational programs and services are designed to respond to the changing trends, needs, and job requirements of the community, state, and national economy while ensuring a high quality of education. The division offers over 120 certificate and degree programs in: Accounting, Business Management, Child Development & Education, Computer Information Systems, Consumer Studies, Culinary Arts, Fashion Design & Merchandising, Hospitality & Restaurant Management, Interior Design, Nutrition & Foods, Paralegal Studies, and Real Estate.

The Business Division also includes the services of a:

- Career Services Specialist
- Strong Workforce & Carl D. Perkins Grant Office
- Center of Excellence
- Child Development Center
- Computer Laboratory
- High-School Articulation Office

The Business Division's educational departments and their program areas include:

- Accounting and Management (Accounting, Business Management, Business Office Communications, and Marketing & Sales)
- Business Administration (Business Law, Economics, Paralegal Studies, and Real Estate)
- Child Development and Education
- Computer Information Systems (Computer Basics, Database Management, Mobile Programming, Networking, Programming, Computer & Network Security, and Web Development) Big Data, Artificial Intelligence, and Amazon Web Services (AWS).
- Consumer Sciences and Design Technologies (Family & Consumer Sciences, Fashion Merchandising & Design, Hospitality & Restaurant Management and Culinary Arts, Interior Design, and Nutrition & Foods)

Humanities and Social Sciences

(909) 274-4570

Dr. Karelyn Hoover, Dean

Lance Heard, Associate Dean

The Humanities and Social Sciences Division provides students with a broad selection of general education courses in language arts, humanities, and social sciences. It offers 2 Associate in Science degrees, 5 Associate in Arts degrees, 10 Associate in Arts for Transfer degrees and one Certificate of Achievement. The division publishes the student newspaper and magazine and houses the Honors program, the Pride Center, Study Abroad, Teacher Preparation Institute, Writing Center, and Speech & Sign Success Center.

The Humanities and Social Sciences Division's educational departments and their program areas include:

- American Language
- Art History (Art History, Latin, and Humanities)
- Communication (Speech and Forensics)
- English, Literature, & Creative Writing
- Geography and Political Science
- History (History)
- Psychology
- Sign Language (American Sign Language and Interpreting)
- Sociology and Philosophy
- World Languages (Arabic, Chinese, French, German, Italian, Japanese, and Spanish)

Kinesiology, Athletics, and Dance Division

(909) 274-4630

Joe Jennum, Dean / Athletics Director

Tammy Knott-Silva, Associate Dean / Associate Athletics Director

The Kinesiology, Athletics, and Dance Division has been a leader among community colleges for over 70 years. Our division provides a wide range of opportunities within the disciplines of kinesiology, wellness, fitness, coaching, athletic training, and dance, as well as fielding 24 competitive teams and internationally recognized athletics special events. The division offers one Associate Transfer degree, two Associate in Arts degrees, and six certificates. The Division also houses the WIN student

athlete academic support center, Exercise Science/Wellness Center, and Advanced Athletics and Dance venues throughout the campus.

The Kinesiology Athletics and Dance Division's educational departments and their program areas include:

- Dance (Theory and Activity)
- Kinesiology (Adaptive, Aquatics, Athletics, Fitness, Individual Activities, Team Sports, and Theory)
- Athletics Special Events

Library and Learning Resources Division

(909) 274-5659

Dr. Romelia Salinas, Dean

The Library and Learning Resources Division offers services in the Learning Assistance Center, the Library, Tutorial Services, and the Distance Learning Program which provide academic support for all students at the College. Faculty teaching distance learning courses are also supported by the division's Faculty Center for Learning Technology. Housed in the Learning Technology Center, the Library and Learning Resources Division's educational departments and their program areas include:

- Learning Assistance (Basic Skills Math, Basic Skills Writing, Learning Communities, Reading, Study Skills, and Tutoring)
- Library

Natural Sciences Division

(909) 274-4425

Matthew Judd, Dean

John Vitullo, Associate Dean

The Natural Sciences Division provides diverse educational opportunities and programs within its six departments. Academic and vocational programs are available and provide students with state of the art equipment in modern lab settings. The Division offers 11 Associate in Science degrees, 2 Associate in Arts degrees, one Associate in Science for Transfer degree, and 13 Certificates of Achievement. Natural Sciences houses a variety of facilities for learning and community outreach including the Math Activities Resource Center (MARC) and Transfer Math Activities Resource Center (T-MARC), the Jim and Eleanor Randall Planetarium, an Astronomy Observatory, a 25 acre Wildlife Sanctuary, the Science, Technology, Engineering, and Mathematics (STEM) Center, the Redinger Exploration Center and Meek Natural History Exhibit, and the Agriculture Literacy Trail.

The Natural Sciences Division's educational departments and their program areas include:

- Agriculture (Horticulture, Integrated Pest Management, Animal Science, and Registered Veterinary Technician)
- Biology (Anatomy & Physiology, Anthropology, Biological Sciences, Botany, Histotechnician Program, Microbiology, and Public Health)
- Chemistry (Inorganic Chemistry, Organic Chemistry, and Biochemistry)
- Earth Sciences (Astronomy, Geology, Geotechnician Program, Meteorology, and Oceanography)

- Mathematics & Computer Science
- Physics and Engineering (Engineering, Physical Sciences, Physics, and Surveying)

Technology and Health Division

(909) 274-4750

Sam Agdasi, Dean

Sarah Plesetz, Associate Dean

The Technology and Health Division provides 26 Associate in Science degrees, and 47 certificates in both occupational and vocational programs in the areas of technology, public services, and health care. Programs are driven by industry needs and many are governed by state and national accreditation agencies. The Technology and Health Division includes the services of the Health Careers Resource Center (HCRC), the Mt. SAC Fire Academy, the Technical Education Resource Center (TERC), and Mt. SAC College Aviation.

The Technology and Health Division's educational departments and their program areas include:

- Aeronautics (Air Traffic Control, Aircraft Dispatcher, Commercial Flight, UAS)
- Air Conditioning & Welding Technologies (Air Conditioning & Refrigeration, Building Automation Systems, Welding)
- Aircraft Maintenance Technology (Aircraft Maintenance Technician)
- Architecture, Engineering and Construction Technology, Industrial Design Engineering, Manufacturing Technology
- Electronics and Computer Technology (Electronics and Computer Networking Technology)
- Mental Health (Addictions Counseling, Psychiatric Technician)
- Nursing
- Public Safety (Administration of Justice, Emergency Medical Services: Paramedic, Fire Technology)
- Radiologic Technology (Computed Tomography, Mammography)
- Respiratory Therapy

School of Continuing Education

(909) 274-4220

Dr. Madelyn Arballo, Provost

Dr. Tami Pearson, Dean of Continuing Education and Workforce Development

Dr. Liza Becker, Associate Dean, Continuing Education Programs and Services

The School of Continuing Education (SCE) provides a variety of noncredit courses and certificates as well as comprehensive offerings of fee-based, not-for-credit community services classes and contract training. Students can earn noncredit Certificates of Competency and Certificates of Completion in Basic Skills, Career Technical/Vocational, and English as a Second Language areas. Programs within the Division provide orientation, assessment, educational planning, and embedded counseling services.

SCE programs include:

- Adult Basic Education
- Adult High School Diploma (Secondary Education)

- GED/High School Equivalency
- High School Credit Recovery
- Citizenship
- Education for Older Adults
- Adults with Disabilities
- English as a Second Language (ESL)
- VESL Career Paths (Vocational ESL)
- Short-Term Vocational
- Off-Campus High School

Student Services

(909) 274-4505

Mt. San Antonio College offers a number of support programs for students in all different types of situations. Whether you're a veteran, a foster youth, an international student, or a DREAMer, we have support programs designed to help you as you work to achieve your educational goals.

- Accessibility Resource Center for Students (<http://www.mtsac.edu/access/>) ("Access Center"), formerly known as (DSPS): Access provides counseling, instruction, and accommodations for students with disabilities, students who had an IEP or 504 Plan in high school, or students with medical conditions.
- Arise: (<http://www.mtsac.edu/arise/>) Designated as an Asian American Native American Pacific Islander Serving Institution (AANAPISI), the Arise Program provides academic support and student development opportunities for Asian, Pacific Islander, and Desi American (APIDA) students. Through academic advisement, counseling, and culturally relevant programming students explore their identity, APIDA issues in higher education, and celebrate their accomplishments and heritage with the campus community.
- UOMJA/ (<http://www.mtsac.edu/aspire/>) ASPIRE: (<http://www.mtsac.edu/aspire/>) Provides educational support to increase the academic success, degree completion, and transfer rates of African-American and other students.
- Bridge: (<http://www.mtsac.edu/bridge/>) Offers different learning communities to increase students' academic and personal success. Students participating in a learning community are enrolled in linked or clustered classes that are taught in a cooperative environment between instructors.
- CalWORKS: (<http://www.mtsac.edu/calworks/>) Provides educational assistance to students who receive cash-aid through Temporary Assistance for Needy Families (TANF).
- CARE: (https://www.mtsac.edu/eops/care_new/care_new.html) The Cooperative Agencies Resources for Education (CARE) Program is designed to support EOPS students who are single parents, head of household, and who are receiving public assistance through CalWORKS/TANF/CashAid for themselves and/or their children.
- DREAM: (<http://www.mtsac.edu/dream/>) The Dream Program provides services/resources to DREAMers (Undocumented Students) at Mt. SAC to ensure the students' success, personal growth, and development.
- El Centro (<http://catalog.mtsac.edu/college/instruction-and-student-services-divisions/www.mtsac.edu/elcentro/>): El Centro, the Latinx Chicanx Student Program provides educational, cultural, and social programming that affirms and celebrates Chicanx and Latinx identity and values. The goal of El Centro is to unite all cultural backgrounds, Latinx and Chicanx; to support, educate, and assist students in completing their educational goals while providing cultural enrichment and solidarity between Mt. SAC's students and surrounding communities.
- EOPS: (<http://www.mtsac.edu/eops/>) Extended Opportunity Programs and Services, also known as EOPS, was established on September 4, 1969 through Senate Bill 164. Mt. SAC's EOPS program provides "over and above" personalized ongoing comprehensive support services to historically underrepresented and low-socioeconomic students in order to increase their sense of belonging, self-efficacy, and awareness of opportunities to help students achieve their academic and personal goals.
- High School Outreach: (<http://www.mtsac.edu/hso/>) Helps local high school graduating seniors successfully transition into life at Mt. San Antonio College.
- International Students (<http://www.mtsac.edu/international/>): The International Student Program provides help with F-1 student admissions and regulations, academic advising, support programs, and resources for current and prospective international students.
- REACH Program: (<http://www.mtsac.edu/reach/>) REACH is an educational program designed to assist current and former Foster youth. REACH provides assistance and support to our Foster Youth students in their transition into college, while attending Mt. SAC, and as they transfer to a University.
- Rising Scholars (<https://www.mtsac.edu/rising-scholars/>): Rising Scholars provides resources and services to students who have experienced incarceration or are system impacted. Rising Scholars helps increase students' sense of belonging so they can accomplish their educational and personal goals.
- TRIO: (<https://www.mtsac.edu/trio/>) The Federal TRIO Programs (TRIO) are outreach and student services programs in the United States designed to identify and provide services for individuals from disadvantaged backgrounds. They are administered, funded, and implemented by the United States Department of Education. TRIO includes eight programs targeted to serve and assist low-income individuals, first-generation college students, and individuals with disabilities.
 - ACES (Student Support Services): (<https://www.mtsac.edu/aces/>) The goal of ACES is to increase the college retention and graduation rates of the participants and facilitate the process of transition from one level of higher education to the next.
 - Upward Bound: (<https://www.mtsac.edu/upwardbound/>) Upward Bound prepares eligible high school students with preparation for post-secondary education. The program provides academic enrichment opportunities, financial aid assistance, higher education preparation, and exposure to career opportunities.

- Veterans Resource Center: (<http://www.mtsac.edu/veterans/>) The Veterans Resource Center provides support programs and services for GI Bill recipients, military-connected students, and their family members.

Enrollment Management

(909) 274-4415

Dr. George Bradshaw, Dean

At Mt. San Antonio College, we make our application and enrollment process as easy as possible for our students. Explore the Admissions, Registration, and Financial Aid section (<http://www.mtsac.edu/admissions-and-aid/>) of our website to get answers to any questions you have about applying, registering for classes, graduation procedures, or financial aid.

Counseling

(909) 274-4380

Dr. Francisco Dorame, Dean

Lina Soto, Associate Dean

Not sure how to chart your path to your academic and career goals? Need help in creating your educational plan? Do you just need someone to talk to? The Mt. SAC Counseling Department is here to help!

The mission of the Counseling Department is to provide essential academic, career, and personal counseling services to a diverse and changing student population. We are committed to meeting the needs of students while serving the broader campus community in an innovative and equitable manner. More information can be found here (<http://catalog.mtsac.edu/http://www.mtsac.edu/counseling/>).

We also conduct new student orientations, probation workshops, and participate in community and high school outreach. We are involved in numerous programs that are designed to ensure your success: Bridge Program, Teacher Preparation, International Students, Student Athletes, and Career Institutes. We are here to help you succeed!

Accessibility Resource Centers for Students (formerly known as DSPS)

(909) 274-4290

Malia Flood, Dean

If you have a medical condition or disability that impacts your education, or think you might have one, join Accessibility Resource Centers for Students ("ACCESS" formerly known as DSPS). This office is committed to providing quality programs and services for students who have educational barriers because of a disability. Our mission is to promote equal access on campus. Registration status with ACCESS and any information you provide us will be held in the strictest confidence, and shared with only those whom you give us permission.

Based on individual, disability-related needs, services are directly related to the educational barrier the disability or medical condition causes. Examples of some of the services are:

- Accessible Technology Center: Student Success Center (9E), an adaptive computer lab with accessible software and hardware solutions, study center
- Academic strategies classes to increase student success
- Counseling: Disability-related, academic, career, transfer, and personal counseling
- The Center (for deaf and hard of hearing): Sign language interpreters and real time captioners, study center, internships for SIGN students
- Classroom accommodations: Educational advising, priority registration, note taking services, accommodated classroom testing, equipment Loans, alternate Media, adaptive classroom furniture
- Transportation on campus: Tram service upon approval
- Puzzle Project: Specialized programming for students on the Autism Spectrum
- Assessments: Learning disabilities, cognitive dysfunction, communication disorders, accessible technologies

We invite you to come in and talk to us to see how we might assist you.

Student Services Center, 9B - 1st floor

(909) 274-4290, Video Phone (ASL users) (909) 895-6634



2022-23
CATALOG

**COLLEGE FACULTY,
STAFF and FACILITIES**

FACULTY AND ACADEMIC ADMINISTRATORS

Mt. San Antonio College's professors and academic managers are some of the best in their fields. They graduate from top colleges and universities and have real world industry experience.

A

Agdasi, Sam (2018)

Dean, Technology & Health

B.A., Sharif University of Technology

M.S., Purdue University

Aguilar, Esteban (2018)

Librarian

B.A., California State University, Fullerton

M.S., San Jose State University

Ahmed, Esha (2018)

Accounting & Management

B.A., University of California, Los Angeles

M.S., Ph.D., Claremont Graduate University

Albertson, Toni (2006)

Commercial & Entertainment Arts

B.A., University of La Verne

M.A., University of Nebraska

Alexander, Carolyn (1991)

Fine Arts

B.A., Scripps College

M.F.A., Tyler School of Art, Temple University

Alghannam, Solene (2008)

World Languages

M.Ed., California State University, Fullerton

Allende, Kristina (2001)

English, Literature, & Creative Writing

A.A., Mt. San Antonio College

B.A., M.A., California State University, Fullerton

Al-Malood, Fawaz (2003)

Associate Dean, Business

Diploma, Hotel Institute Montreux - Switzerland

B.S., University of South Carolina

M.S., M.B.A., Western Governors University

DEd., University of South Africa

Alvarado, Kristina (2020)

Director, Learning Assistance Center

B.A., California State Polytechnic University, Pomona

M.Ed., University of Southern California

Ph.D., Claremont McKenna College

Alvarez, Hansel (2007)

English, Literature, & Creative Writing

B.A., California State University, San Bernardino

M.A., California State Polytechnic University, Pomona

Alvarez-Galvan, Maya (2000)

English, Literature, & Creative Writing

B.A., M.A., California State University, Los Angeles

M.A., California State Polytechnic University, Pomona

Ph.D., University of Southern California

Amos, Lisa (2006)

Consumer Science & Design Technologies

B.S., Iowa State University

M.S., California State University, Northridge

Anders, Tania-Maria (2015)

Earth Sciences & Astronomy

Diploma (6 year degree), University of Erlangen-Nuernberg, Germany

Ph.D., University of Kiel, Germany

Andrews, Barry (2001)

Computer Information Systems

B.S., Indiana University

M.S., California State University, Fullerton

Ano, Gene (2006)

Psychology

M.A., Ph.D., Bowling Green State University

Aquino, Lloyd (2007)

English, Literature, & Creative Writing

B.A., M.A. California State Polytechnic University, Pomona

Arballo, Madelyn (1998)

Provost, School of Continuing Education

B.A., Pitzer College

M.A., California State University, Los Angeles

Ed.D., California State University, Long Beach

Atanasio, Dominick (2021)

Mathematics, Computer Sciences

B.S., M.S., California State Polytechnic University, Pomona

Atkinson, Scott (2021)

Assistant Director, Public Safety Programs

A.S., Mt. San Antonio College

Augustus, Robert (2008)

Sign Language

B.A., California State University, Northridge

M.A., Gallaudet University

Avila, Naomi (2016)

Counseling, Adult Basic Education

M.S.W., M.A., Azusa Pacific University

Avila, Rocio (2006)

English, Literature, & Creative Writing

B.A., California State Polytechnic University, Pomona

M.A., California State University, Fullerton

B

Bachor, Alana (2015)

Counseling

B.A., University of California, Riverside

M.S., California State University, Los Angeles

Career Counseling Certificate, California State University, Los Angeles

Bacigalupi, Stacy (2006)

Psychology

B.A., University of California, Santa Barbara

M.A., California State University, Fullerton

Banks, Clarence (2008)

Director, Center for Black Culture & Student Success

B.A., University of California, Los Angeles

M.P.A., California State Polytechnic University, Pomona

Barnes, Naomi (2017)

Agricultural Sciences

A.S., Registered Veterinary Technology

D.V.M., Western University of Health Sciences

Barrios, Mary Beth (2016)

Counseling

A.A., Mt. San Antonio College

B.A., California State University, Fullerton

M.S., University of La Verne

Bates, Bobby (2016)

Accounting & Management

B.S.B., University of Phoenix

M.B.A., University of La Verne

Becker, Liza (1998)

Associate Dean, Continuing Education Programs & Services

B.A., California State University, Los Angeles

M.S., California State University, Fullerton

Ed.D., California State University, Long Beach

Benoe, Christopher

Commercial & Entertainment Arts

B.F.A., Art Center College of Design

Berch, Kari (2016)

Nursing

B.A., University of California, Riverside

B.S.N., Azusa Pacific University

M.S.N., Western Governors University

Beydler, David (2011)

Mathematics, Computer Science

B.S., Harvey Mudd College

M.S., California State University, Los Angeles

Birca, Alina (2005)

Mathematics, Computer Science

B.S., University Alexandru Ioan Cuza of Iasi

M.A., California State University, San Bernardino

Blacksher, Shiloh (2015)

Psychology

B.A., M.A., California State University, Fullerton

M.A., California Coast University

Blyzka, John (2001)

Computer Information Systems

B.S., University of California, Irvine

M.S., California State University, Fullerton

Boehner-Staylor, Maya (2001)

English, Literature, & Creative Writing

B.A., California State University, Los Angeles

M.A., Northwest Missouri State University

Ph.D., Claremont Graduate School

Boquiren, Sophie (2016)

Nursing

M.S.N., California State University, Fullerton

Borella, Frances (1999)

Biological Sciences

A.A., Mt. San Antonio College

B.S., California State Polytechnic University, Pomona

M.A., Ph.D., University of California, Riverside

Boryta, Mark (2001)

Earth Sciences & Astronomy

B.A., Amherst College

M.S., Ph.D., New Mexico Institute of Mining and Technology

Bowen, Melinda (2006)

Kinesiology, Athletics, & Dance

Pride Center Program Director

B.A., California State Polytechnic University, Pomona

M.A., Azusa Pacific University

Bowen, Robert (2006)

Music

B.A., M.A., University of California, Santa Barbara

M.F.A., Ph.D., Princeton University

Boyer, Michelle (2007)

Nursing

B.S., Plattsburgh State University

M.S.N., Syracuse University

Bradley, Julie (2005)

ACCESS

B.A., University of California, Riverside

M.S., California State University, Los Angeles

Bradshaw, George (2007)

Dean, Enrollment Management

B.A., M.A., California State University, San Bernardino

Ph.D., University of Utah

Brantingham, John (2002)

English, Literature, & Creative Writing

B.A., California State Polytechnic University, Pomona

M.F.A., California State University, Long Beach

Bray-Ali, Julie (2001)

Earth Sciences & Astronomy

B.A., California State Polytechnic University, Pomona

M.S., University of Southern California

Browne, Errol (2016)

History

B.A., M.A., Ph.D., University of California, Los Angeles

Burgoon, Steve (2002)

Commercial & Entertainment Arts

B.A., University of Phoenix

M.A., California State Polytechnic University, Pomona

Burgos, Matthew (2010)

Theater

B.A., University of Wisconsin-LaCrosse

M.F.A., Florida State University

Burman, Ema (2007)

English, Literature, & Creative Writing

B.S., M.Ed., University of La Verne

Burnes, Fatemeh (1992)

Fine Arts

B.A., Tehran University, Iran

B.A., M.F.A., California State University, Fullerton

Burton, Jared (2015)

Librarian

A.S., Antelope Valley College

B.A., University of California, Los Angeles

M.S. University of North Texas

Butler, Thomas (2011)

Fine Arts

B.A., Laguna College of Art and Design

M.F.A., California State University, Long Beach

C

Caldwell, Ellen (2016)

Art History

B.A., Santa Clara University

M.A., University of California, Santa Barbara

Calverley, Russell (2019)

Aeronautics, Transportation

B.S., M.A., University of Phoenix

Calzada, Silverio (1999)

Counseling

B.A., Pitzer College

M.A.T., Harvard University

Cammayo, Christina (2016)

Consumer Science & Design Technologies

B.S., California State Polytechnic University, San Luis Obispo

R.D./R.D.N., Dietetic Internship Program, Glendale Memorial Hospital & Health Center

M.S., California State University, Fullerton

Cannon, Kathleen (2005)

History

B.A., M.A., M.F.A., Ph.D., University of California, Los Angeles

Cantrell, David (2011)

Communication

B.S., University of California, San Diego

M.S., California State University, Fullerton

Case, Marissa (2016)

Mathematics, Computer Sciences

A.A., Mt. San Antonio College

B.S., M.S., California Polytechnic State University, Pomona

Casian, Elizabeth (2017)

American Language

B.A., M.S., California State University, Fullerton

Castillejos, Manuel (1989)

World Languages

B.A., California State University, San Diego

M.A., California State University, Fullerton

Cevallos, Susana (2005)

Sociology, Philosophy

B.A., M.S., California State University, Fullerton

Chamberlain, Alison (2006)

Biological Sciences

B.S., California State University, Bakersfield

M.S., California State Polytechnic University, San Luis Obispo

Chang, Chih-Ping (Andrew) (1997)

World Languages

B.Ed., National Changhwa University of Education

M.A., National Taiwan Normal University

Ph.D., University of Southern California

Chaplot, Landry (2019)

Adult Basic Education

B.A., M.A., University of California, Los Angeles

Chavez, Dalia (2016)

Adult Basic Education

B.A., B.S., University of California, Riverside

M.A., M.S., California State University, San Bernardino

Chavez, Dolores (2008)

Mathematics, Computer Science

B.A., University of California, Riverside

M.A., California State University, San Bernardino

Chavez, Monika (2019)

Librarian

M.S., Syracuse University

Chavez, Raul (2000)

History

B.S., California State Polytechnic University, Pomona

M.A., California State University, Los Angeles

Ph.D., University of California, Riverside

Chavez, Susan (2016)

Consumer Science & Design Technologies

B.A., Western Carolina University

M.A., National University

Chen, Gou-Ling Susie (2003)

Nursing

A.D.N., National Taipei College of Nursing

B.S.N., Kaohsiung Medical College

M.A., Oklahoma City University

M.S.N., University of California, Los Angeles

Ph.D., Western University of Health Sciences

Chen, Jenny (1998)

Chemistry

B.S., University of California, Irvine

M.S., Ph.D., University of California, Los Angeles

Chen, Meghan (2000)

Associate Vice President, Instruction

B.A., University of California, Los Angeles

M.A., California State University, Los Angeles

M.P.A., California Lutheran University

Ph.D., Claremont Graduate University

Childress, Scot (2014)

Mathematics, Computer Science
 B.A., California State University Fullerton
 Ph.D., University of California, Riverside

Chiu, Paul (2018)
Computer Information Systems
 B.A., State University of NY - Buffalo
 M.S., National University

Christ, Joshua (2019)
Theater
 B.S., Illinois State University

Christopher, Micol (2005)
Earth Sciences & Astronomy
 B.A., Harvard University
 M.S., Ph.D., California Institute of Technology

Churchill, Diana (2017)
Biological Sciences
 B.S., University of California, Santa Cruz
 Ph.D., Florida International University

Churchill, Peter (2005)
English, Literature, & Creative Writing
 B.A., M.A., California State University, Fullerton

Clements, Todd (2012)
Chemistry
 B.S., Harvey Mudd College
 M.S., Ph.D., University of California, San Diego

Condra, Denise (2006)
Nursing
 B.A., Whittier College
 B.S.N., M.S.N., Azusa Pacific University

Cooper Mark (1997)
Biological Sciences
 B.S., M.S., California State Polytechnic University, Pomona

Coreas, Kelly (2000)
Respiratory Therapy
 A.S., East Los Angeles College
 B.S., Loma Linda University
 M.S., Western University Pomona

Cortez, Julie (2020)
ACCESS
 B.A., M.Ed., University of California, Los Angeles

Crichlow, Brian (2013)
Kinesiology, Athletics, & Dance
Head Coach, Women's Basketball
 A.A., Mt. San Antonio College
 B.A., University of La Verne
 M.S., California Baptist University

Cummings, Christine (2015)
Theater
 B.A., California State University, Fullerton
 M.F.A., Illinois State University

Cunningham, Melissa (2019)
Public Safety Programs

B.A., Case Western Reserve University
 B.A., University of Pennsylvania

D

Daland, William (2005)
Counseling
 B.A., California State University, Fullerton
 M.S., California State University, Long Beach

Danson, Erin (2014)
English, Literature, & Creative Writing
 B.A., M.A., California State University, Fullerton

Datko, Catherine (2022)
Director, Distance Learning & Instructional Technology
 M.S., Middlebury Institute of International Studies at Monterey

Davis, Maria (2005)
Consumer Science & Design Technologies
 B.A., American Inter Continental University
 Ed.D., California State University, Fullerton

Degtyareva, Anna (1999)
Computer Information Systems
 B.S., M.S., Leningrad University for Economics Engineers
 M.S., California State University, San Bernardino

Deines, Craig (1997)
Fine Arts
 B.A., M.F.A., Central Washington University

Denny, Joseph (2010)
Electronics & Computer Technology
 B.A., Azusa Pacific University
 B.S., California Polytechnic State University, Pomona
 M.A., California State University, Fullerton

Dervishian, Danielle (2019)
Biological Sciences
 M.S., Georgetown University

DeWilde, Krysten (2019)
Mathematics, Computer Science
 B.S., M.S., University of California, Riverside

Diem, Andrea (1991)
Sociology, Philosophy
 B.A., University of California, San Diego
 M.A., Ph.D., University of California, Santa Barbara

Dokter, Derek (2019)
Business Management
 M.B.A., Azusa Pacific University

Domico, Brenda L. (1997)
Accounting & Management
 B.S., M.B.A., California State Polytechnic University, Pomona
 Certified Managerial Accountant

Doonan, Shelley (2015)
Consumer Science & Design Technologies
 A.S., California Culinary Academy, San Francisco
 B.S., California State Polytechnic University, Pomona

Dorame, Francisco (2014)

Dean, Counseling

B.A., M.A., California State University, Northridge

Ed.D., California Lutheran University

Doshi, Dhaval (2018)

Chemistry

B.S., M.S., California State University, Fullerton

Dougherty, Michelle (2007)

English, Literature, & Creative Writing

B.A., M.A., California State Polytechnic University, Pomona

Dowdle, Michael (2005)

Psychology

A.A., Butte Community College

B.A., M.A., California State Polytechnic University, Chico

Dorris, Doyon (2021)

Music

B.A., Pacific Lutheran University

M.A., Truman State University

Dua, Amrik Singh (1990)

Business Administration

B.A., M.A., Panjab University

M.A., Dalhousie University

Ph.D., Southeastern University

E

Earhart, Kimberly (2005)

History

A.A., Riverside Community College

B.A., M.A., Ph.D., University of California, Riverside

Eatman, Elisabeth (2006)

Consumer Science & Design Technologies

B.F.A., California State University, Long Beach

Ebue, Traci (2021)

Counseling & Guidance

B.A., University of California, Davis

B.A., M.S., University of La Verne

EchevarriaNewberry, Luis (2019)

Counseling, Veteran's Services

B.S., M.S., California State University, Los Angeles

Edwards, William (2005)

Mathematics, Computer Sciences

B.S., M.S., California State Polytechnic University, Pomona

Ellwood, Jeffrey (2006)

Music

B.M., Berklee College of Music

M.M., California State University, Fullerton

Engisch, Paulette (2003)

Radiologic Technology

A.S., Mt. San Antonio College

B.S., University of St. Francis California

C.R.T., Certified Radiologic Technologist California Certified

Mammographer

R.T., American Registry of Radiologic Technology

R.T.(M), American Registry of Mammography

Engle, Tim (2006)

ACCESS

B.S., Liberty University

M.A., Psy.D., Biola University

Espy, Sheila (2015)

Consumer Science & Design Technologies

B.A., California State University, Los Angeles

M.A., California State University, Long Beach

Esslinger, Sandra (2002)

Art History

M.A., University of Southern California

Ph.D., University of California, Los Angeles

Estes Jr., Edwin (2008)

Business Administration

A.B., University of Southern California

J.D., Pepperdine University School of Law

Member, State Bar of California

Licensed California Real Estate Broker

Estrada, Maria (2004)

English, Literature, & Creative Writing

B.A., M.A., California State Polytechnic University, Pomona

Ezzell, Sun (2006)

Learning Assistance

B.A., M.A., Humboldt State University

F

Felix, Diana (2011)

Counseling

B.A., University of California, Santa Barbara

M.S., California State University, Long Beach

Felix, Marcos (2019)

Aircraft Maintenance

B.S., University of Redlands

M.B.A., Chapman University

Fernandez, Juan (2021)

Chemistry

Ph.D., University of California, Los Angeles

Fernando, Jody

Director, English Language Learners

B.S., Taylor University

M.A., Azusa Pacific University

M.Ed., George Mason University

FioRito, Arleen (2000)

Nursing

A.S., A.A., Mt. San Antonio College

C.N.S., B.S.N., M.S.N., P.H.N., California State University, Dominguez Hills

F.N.P., Azusa Pacific University

Flameno, Bernadette (2016)

Counseling

B.S., California State University, Los Angeles

M.A., Ohio University

M.S., University of Virginia

Flisik, Tyler J., (2016)

Biological Sciences

B.S., M.S., California State University, Fullerton

Flood, Malia (2021)

Dean, Access and Wellness
Ph.D., Syracuse University

Fowler, Jamaika (2011)

Counseling
B.S., California State Polytechnic University, Pomona
M.S., California State University, Long Beach

Fowler, Kelly (2021)

Vice President, Instruction
M.A., Appalachian State University

Frickert, Allison (2008)

History
B.A., M.A., California State University, Fullerton

G

Galbraith, Jennifer (1988)

Dean, Business
A.A., Chaffey College
B.S., M.S., California State Polytechnic University, Pomona

Gallarde, Marlene (2007)

Sociology, Philosophy
B.A., M.A., California State University, Fullerton

Garcia, Daniel (2007)

Air Conditioning & Welding
B.S., Azusa Pacific University, Azusa

Garcia, Urias (2019)

Counseling, EOPS
B.A., California State University, Los Angeles
M.B.A., California State University, Long Beach

Garcia, Vanessa (2016)

English as a Second Language
B.A., M.A., Loyola Marymount University

Gatillon, Jean-Pierre (2019)

Sociology, Philosophy
B.A., M.A., California State University, Fullerton

Gau, Jim (2000)

Computer Information Systems
B.E., Feng Chia University
M.B.A., California Lutheran University

Genovese, Richard (2020)

Public Safety Programs
A.S., Mt. San Antonio College
B.S., University of La Verne

Gernhart, Jennifer (2021)

Biological Sciences
B.S., Buena Vista University
M.S., University of Nebraska-Kearney

Gethers, Shireeetha (2021)

Child Development
B.A., M.A., California State University, Long Beach

Ph.D., University of Southern California

Golden, Dafna (2001)

Geography & Political Science
B.S., Humbolt State University
M.S., California State University, Los Angeles

Golestaneh, Kamran (2008)

Chemistry
B.S., B.S., M.S., California State Polytechnic University, Pomona

Gomez, Francisco (2011)

English, Literature, & Creative Writing
B.A., California State University, Fullerton
M.F.A., Chapman University

Gonzalez, Alejandra (2020)

Assistant Director, Student Life
M.S., California State University, Fullerton

Gonzalez, Maribel (2019)

Counseling, English as a Second Language
A.A., Mt. San Antonio College
B.A., M.S., California State University, Fullerton

Greco, Victoria (1999)

ACCESS
B.A., California State University, Fullerton
M.A., California State University, San Bernardino

Griffith, Hugh (1998)

Mathematics, Computer Science
B.A., University of California, Berkeley
M.S., California State University, Los Angeles

Grimstad, Ann Lee (2015)

History
B.A., University of Virginia
M.A., Ohio University

Guo, Hong (2013)

Librarian
B.A., M.L.I.S., University of California, Los Angeles
M.S., California State University, Los Angeles

Guth, Scott (1990)

Mathematics, Computer Science
A.A., San Bernardino Valley College
B.S., M.S., California Polytechnic State University, San Luis Obispo

Gutierrez, Daisy (2016)

Counseling
B.S., California State University, Fullerton
M.S., University of La Verne

Gyurindak, Katalin (2019)

Manager, ESL Instructional Support
B.A., M.A., California State University, Fullerton
TESOL Certificate, University of California, Irvine

H

Hagler, LaTasha (2018)

Director, CalWORKs
B.A., M.A., California State University, Northridge

Ph.D., California Lutheran University

Hall, Martha (2007)

Learning Assistance

B.A., University of California, Riverside

M.A., Claremont Graduate University

M.A., California State University, Fullerton

Hallsted, Christopher (2015)

English, Literature, & Creative Writing

B.A., M.A., La Sierra University

Hanna, Richard (2019)

Consumer Science & Design Technologies

A.A., Culinary Institute of America

B.A., Le Cordon Bleu College of Culinary Arts

M.A., Colorado Technical University

Harper, Michael (2000)

English, Literature, & Creative Writing

B.A., M.A., San Diego State University

Hart, Jeremy (2012)

Counseling

B.A., M.A., California State University, Dominguez Hills

Ph.D., University of Southern California

Hayward, Jason (2016)

Counseling

B.A., University of California, Irvine

M.Ed., University of Southern California

He, Cuiwen (2021)

Chemistry

Ph.D., University of California, Los Angeles

Heard, Lance (2008)

Associate Dean, Humanities & Social Sciences

B.S., United States Military Academy, West Point

M.S., University of Cincinnati

Henry, Anthony (2007)

Child Development

B.A., Humboldt State University

M.A., California State University, Los Angeles

M.A., Azusa Pacific University

Heredia, Evelyn (2016)

Counselor, Short-Term Vocational

A.A., Fullerton College

B.A., California State University, Fullerton

M.S., P.P.S., Credential, University of La Verne

Adult Education Training Credential, California State University

Dominguez Hills

Hernandez, Corie (2011)

Mental Health

B.S., California State University, Fullerton

Hernandez, Cristina (1997)

Art History

B.A., M.A., University of California, Santa Barbara

Hernandez, Elizabeth (2016)

Counseling, ACCESS

A.A., Mt. San Antonio College

B.S., California State University, Fullerton

M.Ed., University of Southern California

Hernandez, Mario (2019)

Air Conditioning & Welding

A.A., Mt. San Antonio College

Hernandez-Magallon, Karla (2017)

Sociology, Philosophy

B.A., M.A., Sociology

Hight, Lynette (1971)

English, Literature, & Creative Writing

B.A., M.A., California State University, Los Angeles

Hinostroza, Jennifer (2006)

Agricultural Sciences

B.S., California State Polytechnic University, Pomona

Hoffman, Harlan (2005)

History

B.A., M.A., California State University, Fullerton

Ph.D., University of California, Riverside

Holbert, James (2018)

Computer Information Systems

B.A., North Carolina State University

Holt, Marlyn (2016)

Assistant Director, Dual Enrollment

B.S., M.A., Azusa Pacific University

Hood, Michael (2009)

Earth Sciences & Astronomy

B.S., University of Wisconsin-Madison

M.S., University of California, Irvine

Hooper, Jaime (2014)

Nursing

A.S., Rio Hondo Community College

B.S., M.S., California State University, Dominguez Hills

Hoover, Karelyn (1995)

Dean, Humanities & Social Sciences

B.S., M.S., New Mexico Institute of Mining & Technology

Ph.D., California State University, Fullerton

Horton, Tamra (2000)

English, Literature, & Creative Writing

B.A., University of California, Davis

M.A., University of Wyoming

Ph.D., Louisiana State University

Huang, Kenneth (2006)

Chemistry

M.S., California State University, Long Beach

Ph.D., University of California, Santa Barbara

Hughey, Douglas (1999)

Child Development

A.A., San Diego City College

B.A., M.A., Pacific Oaks College

Hutchinson, James (2011)

Respiratory Technology

B.A., University of Phoenix

Hymer, Jonathan (2005)

Electronics & Computer Technology

B.A., University of California, Davis

I

Impara, Carol (2005)

Consumer Science & Design Technologies

B.A., Davidson College

M.S., University of Maryland

Itani, Nadim (2019)

Architecture, Industrial Design Engineering & Manufacturing

B.A., M.A., California State University, Sacramento

Ito Rocha Santana, Naluce (2016)

Biological Sciences

B.S., Federal University of Bahia, Brazil

M.P.H., Loma Linda University

Certified Health Education Specialist (CHES), National Commission for Health Education Credentialing, Loma Linda University

J

Jackson, Christopher (2005)

Kinesiology, Athletics, & Dance

Head Coach, Women's Water Polo and Swimming

B.S., California State University, Fullerton

M.S., Azusa Pacific University

Jagodka, Ralph (1997)

Accounting & Management

B.S., Western Illinois University

M.B.A., Pepperdine University

Ed.D., University of La Verne

James, Stephen (2012)

Architecture, Industrial Design Engineering & Manufacturing

B.A., California State University, Northridge

James-Perez, Samantha (2019)

Mental Health

A.A., B.A., Liberty University

Jastrab, Robert (2001)

Kinesiology, Athletics, & Dance

Head Coach, Men's Football

B.A., University of Miami

M.S., University of Nevada

Jefferson, Paul (2001)

Public Safety Programs

A.S., Los Angeles City College

B.S., Pepperdine University

M.A., John F. Kennedy University

Jennum III, Joe (1997)

Dean, Kinesiology, Athletics, & Dance

Athletics Director

B.S., California State Polytechnic University, Pomona

M.S., California State University, Fullerton

Johnson, Dana (2021)

ACCESS

B.A., Bradley University

M.S., National University

Johnson, Lesley (2016)

Director, Adult Basic Education

B.A., M.A., California State University, San Bernardino

Johnson, Michelle (1998)

Mathematics, Computer Science

B.S., M.S., University of California, Irvine

Jones, William (1992)

History

A.A., Mt. San Antonio College

B.A., University of California, Los Angeles

M.A., Ph.D., Claremont Graduate School

Judd, Matthew (1990)

Dean, Natural Sciences

B.A., University of California, Berkeley

M.A., Claremont Graduate School

K

Kaljumagi, Eric (1999)

Mathematics, Computer Science

B.S., University of California, Davis

M.A.T., University of California, Davis

Karn, Tamara (2001)

English, Literature, & Creative Writing

B.A., University of California, Los Angeles

M.A., Chapman University

Kelly, Stillman (2018)

Commercial & Entertainment Arts

California Community College Credential (Communication Services and Related Technology, including printing)

Kemp, Kurt (2000)

World Languages

A.A., Mt. San Antonio College

B.A., California State University, Fullerton

M.A., University of California, Los Angeles

Khan, M. Zahir (1990)

Physics, Engineering

B.E., University of Poona

M.S., Ohio State University

Registered Professional Engineer

Khoddam, Kambiz (1999)

Mathematics, Computer Science

B.S., M.A., California State University, Long Beach

Kido, Janine (2005)

Biological Sciences

B.A., M.S., California State University, Fullerton

Kim, Candice (2000)

Mathematics, Computer Science

B.S., M.S., California State University, San Diego

Kirchgraber, Albert (1999)

Mathematics, Computer Science

B.S., California State Polytechnic University, Pomona

M.A., California State University, Fullerton

Klawitter, Kenneth (1991)

Communication

B.S., Bradley University, Illinois

M.A., Miami University, Ohio

M.A., California State University, Los Angeles

Knapp, Joshua (2000)

Psychology

B.A., University of California, Berkeley

Ph.D., University of California, Santa Barbara

Knott, John (2016)

Kinesiology, Athletics, & Dance

Head Baseball Coach

B.A., M.S., Teaching Credential, Azusa Pacific University

Knott-Silva, Tamara (2019)

Associate Dean, Kinesiology, Athletics, & Dance

Athletics Assistant Director

M.A., Southeastern Louisiana University

Kobzoff, Fred (2015)

Air Conditioning & Welding

A.S., Mt. San Antonio College

Kojima, Tetsuro (2000)

Mathematics, Computer Science

B.A., M.S., California State University, Los Angeles

Ph.D., University of Southern California

Kolchakian, Misty (2005)

Psychology

B.S., University of Florida

M.A., Ph.D., University of Maryland, College Park

Komrosky, Joseph (2019)

Sociology, Philosophy

M.A., Biola University

Ph.D., Claremont Graduate University

Kordich, Jason (2014)

English, Literature, & Creative Writing

B.A., University of California, Berkeley

M.A., California State University, Fullerton

Kuchta, John (2005)

Air Conditioning & Welding

B.A., City University of New York - Hunter College

Kung, Alvin (2018)

Chemistry

Ph.D., University of Southern California

Kunkler, Constance (2006)

Nursing

A.A., A.S.N., Mt. San Antonio College

B.S.N., M.S.N., C.S.N., P.H.N., California State University, Dominguez Hills

Kuo, Tiffany (2011)

Music

B.A., Stanford University

M.A., The Juilliard School

Ph.D., New York University

Kuroki, Hirohito (2016)

Architecture, Industrial Design Engineering & Manufacturing

B.A., California State Polytechnic University, Pomona

M.A., New School of Architecture and Design

L

Lackey, Hilary (2010)

Earth Sciences & Astronomy

Ph.D., University of Wisconsin - Madison

Lai, Irving (2015)

Mathematics, Computer Science

B.A., University of California, Berkeley

M.A., California State University, Fullerton

California Teaching Credential - National University

Lake-Bain, Carolyn (2021)

Counselor, EOPS

A.A., Fullerton College

B.A., University of California, Riverside

M.A., Azusa Pacific University

Lanaro, Giovanni (2015)

Kinesiology, Athletics, & Dance

Assistant Coach, Cross Country/Track and Field

B.A., California State University, Fullerton

M.A., Azusa Pacific University

Lancaster, Stephen (2011)

Mathematics, Computer Science

M.A., Ph.D., The University of Oklahoma

Lane, David (1989)

Sociology, Philosophy

A.A., Los Angeles Valley Community College

B.A., California State University, Northridge

M.A., Graduate Theological Union, Berkeley

M.A., Ph.D., University of California, San Diego

Lara, Eric (2016)

Associate Dean, Student Equity

B.S., M.A., California State Polytechnic University, Pomona

Ed.D., University of Southern California

Larson, Sandon (2016)

Sign Language

B.A., California State University, Fullerton

M.A., Gallaudet University

Laverty, Julie (2014)

Communication

A.A., Cypress Community College

B.A., M.A., California State University, Fullerton

Lawlor, Elizabeth (2000)

Biological Sciences

A.B., Brown University

M.A., Ph.D., University of California, Riverside

Leader, Jennifer (2006)

English, Literature, & Creative Writing

M.A., Azusa Pacific University

Ph.D., Claremont Graduate University

Lee, Don (2021)

World Languages

Ed.D., University of California, Los Angeles

Lee, Eddie (2006)*Counseling*

B.A., California State Polytechnic University, Pomona

M.S., California State University, Long Beach

Ed.D., California State University, Fullerton

Lee, Phebe (2007)*Mathematics, Computer Science*

B.S., M.S., University of California, Irvine

Leung, Jenny (2006)*Chemistry*

B.S., M.S., University of California, Irvine

Lewis, Nicole (2019)*Fine Arts*

M.F.A., University of California, Los Angeles

Lobb, Elizabeth (1998)*Geography & Political Science*

B.A., University of California, Berkeley

M.A., University of Washington

Loera-Ramirez, Dionne (2001)*English, Literature, & Creative Writing*

B.A., M.A., California State University, Fullerton

Lopez, Alixandria (2019)*Communication*

B.S., M.S., San Francisco State University

Lopez, Anthony (2018)*Biological Sciences*

B.S., M.S., San Francisco State University

Lopez, Audra (2001)*Agricultural Sciences*

B.S., M.S., California State Polytechnic University, Pomona

Lopez, Danny (2018)*Public Safety Programs*

A.S., Crafton Hills College

A.S., Mt. San Antonio College

M.A., Chapman University

Lopez, Jesse (2016)*Counseling*

A.A., Mt. San Antonio College

B.A., California State Polytechnic University, Pomona

M.S., California State University, Long Beach

Loredo, Jennifer (2018)*Agricultural Sciences*

A.A., Mt. San Antonio College

B.A., California Baptist University

Louie, Charis (2000)*Psychology*

B.A., Pomona College

M.A., University of Missouri

Ph.D., University of Missouri, Columbia

Lowentrou, Mark (2015)*Dean, Arts*

B.A., California State University, Long Beach

M.F.A., University of Utah

Loyd, Rene (1999)*Mathematics, Computer Science*

A.S., Crafton Hills Community College

B.S., M.S., University of California, Riverside

Lujan, Angel (1999)*Counseling*

B.A., M.S., California State University, Fullerton

Lupercio Ibarra, Diana (2022)*Director, Short-term Vocational*

M.P.A., California State Polytechnic University, Pomona

Lynes, Billie (2006)*Nursing*

A.S.N., Mt. San Antonio College

B.S.N., M.S.N., F.P.N., University of Phoenix

M**Ma, Jannie (2008)***Learning Assistance*

B.A., M.A., University of Southern California

M.A., California State University, Fullerton

MacDonald, Jennifer (2001)*Program Director, Histologic Technician**Biological Sciences*

A.S., Canadore College, Canada

Macias, Melissa (2012)*Fine Arts*

B.A., M.F.A., California State University, Long Beach

Madrid, Raul (2019)*Geography & Political Science*

M.A., Ph.D., Claremont McKenna College

Maestro, Patricia (2004)*Counseling/Coordinator Learning Communities*

A.A., East Los Angeles Community College

B.A., California State University, Long Beach

M.S., University of La Verne

Mageean, Michael (2000)*English, Literature, & Creative Writing*

B.A., M.A., California State Polytechnic University, Pomona

Ph.D., University of California, Irvine

Mah, David (2016)*Public Safety Programs*

A.S., Mt. San Antonio College

B.S., University of California, Los Angeles

M.S., Fordham University

Mahjoor, Parisa (2016)*Chemistry*

M.S., University of New Orleans

Ph.D., Florida State University

Mahmoud, Eugene L.D. (2016)*Physics, Engineering*

B.S., University of California, San Diego
M.S., California Institute of Technology

Maloney, Clark (2012)

Kinesiology, Athletics, & Dance
Head Coach, Men's Basketball
B.A., Mid America Nazarene College
M.Ed., Azusa Pacific University

Marquez, Julieta (2018)

Director, EOPS & CARE
M.A., Loyola Marymount University
Ed.D., University of Southern California

Marston, Karen (2016)

Music
B.M., University of North Texas
M.M., Rice University
M.Ed., Ed.D., Columbia University

Martinez, Regina (2014)

Business Management
B.S., M.B.A., University of La Verne

Mason, Martin (2002)

Physics, Engineering
B.S., M.S., University of California, Riverside

Matsushita-Sanchez, Marci (2022)

Director, Transfer Center
B.A., University of California, Davis
M.A., University of California, Los Angeles

Mauch, Thomas (2005)

Associate Vice President, Student Services
B.A., California State Polytechnic University, Pomona
M.S., California State University, Fullerton

Mbuthi, Stanley (1998)

Counseling
A.A., Mt. San Antonio College
B.A., California State Polytechnic University, Pomona
M.S., California State University, Los Angeles

McCall, Andreana (2021)

English, Literature, & Creative Writing
M.A., Grand Canyon University

McCormick, Elizabeth (1991)

English, Literature, & Creative Writing
B.A., Barnard College
M.A., Ph.D., Claremont Graduate University

McDaniel, Larry (2021)

Ethnic Studies
B.A., University of California, Berkeley
M.A., California State University, Los Angeles
M.Ed., University of Pennsylvania

McFaul, Jason (1999)

English, Literature, & Creative Writing
B.A., M.A., University of the Pacific

McGuire, Mary (2019)

Art History

M.A., Ph.D., University of California, Santa Barbara

McKee, Catherine (1995)

Business Administration
B.A., University of California, Berkeley
J.D., University of San Diego School of Law
Member, State Bar of California

McLaughlin, David (1997)

Radiologic Technology
A.A., A.S., Mt. San Antonio College
B.S., University of St. Francis
R.T., American Registry of Radiologic Technology
California Certified Radiologic Technologist
M.Ed., California State Polytechnic University, Pomona

McLeod, Jasmine (2018)

Communication
B.S., M.S., Northern Illinois University

McMullin, Janet (1990)

Mathematics, Computer Sciences
M.S., California State University, Los Angeles

Medrano, Bertha (2019)

History
Ph.D., Indiana University – Bloomington

Mehta, Jaishri (1999)

Computer Information Systems
B.A., M.A., Florida Institute of Technology

Mejia Gonzalez, Estela (2018)

Child Development
A.A., Pasadena City College
B.A., University of La Verne
M.A., Pacific Oaks College

Melendez, Luz (2018)

Child Development
B.S., California State University, Fullerton
M.A., California State University, Long Beach

Mestas, Sara (2015)

Counseling
A.A., A.S., Mt. San Antonio College
B.S., California State University, Fullerton
M.S., California State University, Long Beach
Ph.D., California State University, Fullerton

Metter, Jean (1999)

Consumer Science & Design Technologies
B.S., California State Polytechnic University, Pomona
M.P.H., University of California, Berkeley

Meyer, Elizabeta (2001)

Biological Sciences
B.A., University of Pennsylvania
Ph.D., Michigan State University

Mezaki, Barbara (1990)

American Language
B.A., M.Ed., University of Buffalo
J.D., Southwestern University

Miho, Yoshiko (2014)*English as a Second Language*

A.A., Grays Harbor Community College

B.A., Western Washington University

M.A., California State University, San Bernardino

Miller, Carrie (2019)*Chemistry*

Ph.D., University of Notre Dame

Miller, John (2019)*Physics, Engineering*

B.A., California State Polytechnic University, Pomona

M.S., University of California, Los Angeles

Miller, Kenneth (2011)*Electronics, Computer Science*

B.S., California State Polytechnic University, Pomona

M.S., California State University, Fullerton

Miri, Omideh (2008)*Assistant Director, Adult Basic Education*

B.A., George Washington University

M.A., Ph.D., University of California, Santa Barbara

Mirman, David (2000)*Biological Sciences*

B.A., University of Pennsylvania

M.S., University of California, Davis

Morales, Lisa (2016)*Mathematics, Computer Science*

B.S., California State Polytechnic University, Pomona

M.S., University of California, Riverside

Morgan, Jay P. (2019)*Commercial & Entertainment Arts*

B.F.A., Art Center College of Design

Mosack, Raymond (2017)*Director, Public Safety Programs*

B.S., California State University, Los Angeles

M.S., California State University, Long Beach

Mrofka, David (2011)*Earth Sciences & Astronomy*

B.S., Ph.D., University of California, Riverside

Muniz, Edgar (2015)*English, Literature, & Creative Writing*

B.A., M.A., California State University, Fullerton

Muñiz, Laura (2005)*Counseling, EOPS/CARE*

A.A., Mt. San Antonio College

B.S., California State University, Fullerton

M.S., University of La Verne

Munro, Matthew (1998)*Mathematics, Computer Science*

B.S., University of Washington

M.A., University of Colorado

Myers, Richard (2011)*English, Literature, & Creative Writing*

B.S., University of La Verne

M.A., California State Polytechnic University, Pomona

N**Nakamatsu, Stacie (2015)**

B.S., University of Southern California

M.A., Loyola Marymount University

Nakamura, Amy Bates (2005)*Dance*

B.A., California State University, Fullerton

M.F.A., University of California, Irvine

Nassar, Sam (2007)*Counseling*

B.A., California State Polytechnic University, Pomona

M.A., Azusa Pacific University

Nava, Michelle (2019)*English, Literature & Creative Writing*

B.A., University of Southern California

M.A., Loyola Marymount University

Nazzal, Jane (2012)*English, Literature & Creative Writing*

B.A., M.Ed., University of California, Los Angeles

Necke, Donna (2016)*Adult Basic Education*

B.S., California State Polytechnic University, Pomona

M.A., Concordia University

Neel, Monique (2006)*Radiologic Technology*

A.S., A.A., Mt. San Antonio College

B.A., University of Phoenix

Certified Radiology Technologist California Certified Mammographer

R.T., American Registry of Radiologic Technology

R.T. (M), American Registry of Mammography

Nejad, Iraj Behbahani (1992)*Chemistry*

B.S., Judi Shapur University, Iran

Ph.D., Michigan State University

Ngo, Michael (2016)*English as a Second Language*

A.A., Mt. San Antonio College

B.S., California State University Fullerton

M.S., University of La Verne

Nguyen, Bao-Chi (2010)*Mathematics, Computer Sciences*

M.S., University of Southern California

Nguyen, Hoang-Quyen (2019)*Mathematics, Computer Sciences*

M.A., California State University, Fullerton

Nguyen, Kim-Leiloni (2000)*Biological Sciences*

B.A., University of California, San Diego

M.D., University of California, Irvine

Ph.D., University of California, Los Angeles

Nguyen, Thang (2014)

Chemistry

B.S., University of California, Irvine

Ph.D., California Institute of Technology

Nichols, Sarah (2018)

Physics, Engineering

Ph.D., State University of New York - Stony Brook

Nixon, Bruce (1999)

Mental Health

B.S., California State Polytechnic University, Pomona

Norvell, John (2016)

Biological Sciences

B.A., M.A., Ph.D., Cornell University

O

O'Brien, Paul (1999)

English, Literature, & Creative Writing

B.A., University of California, Los Angeles

M.A., San Jose State University

Olds, Jennifer (2008)

English, Literature, & Creative Writing

B.A., M.A., California State Polytechnic University, Pomona

Orr, Jondea (2004)

Nursing

A.D.N., Rio Hondo College

B.S.N., California State University, Dominguez Hills

M.S.N., University of Phoenix

Ortega, Sonia (2020)

English as a Second Language

B.A., M.A., California State Polytechnic University, Pomona

Ott, Serena (2012)

World Languages

B.A., University of Bologna, Italy

M.A., University of Saarland, Germany

Overoye, Sage (2016)

Director, Education for Older Adults & Adults with Disabilities

B.A., California State University, Long Beach

M.A., Claremont Graduate University

P

Padilla, Maya (2011)

Registered Veterinary Technician

A.A., Mt. San Antonio College

B.A., California State Polytechnic University, Pomona

Parker, Stacy (2001)

Kinesiology, Athletics, & Dance

B.A., University of California, Irvine

M.Ed., Azusa Pacific University

Pascoe, Virginia (1995)

Biological Sciences

A.A., Cerritos College

B.S., B.A., M.S., California State University, Long Beach

Patterson, Richard (2002)

Computer Information Systems

B.S., California State Polytechnic University, Pomona

M.Div., St. Johns Theological Seminary

Payte, Trista (2021)

Director, Writing Center

B.A., M.A., Ph.D., California State University, Northridge

Pearson, Tami (2016)

Dean, Continuing Education & Workforce Development

B.A., California State Polytechnic University, Pomona

M.A., California State University, Los Angeles

M.S., Florida State University

California Teaching Credential, Whittier College

Ed.D., University of Southern California

Pedersen, Kirk (1998)

Fine Arts

B.A., Midland College

M.A., San Francisco State University

M.F.A., Claremont Graduate School

Pellitteri, John (1999)

Psychology

B.A., California State Polytechnic University, Pomona

M.S., University of La Verne

M.A., Psy.D., California School of Professional Psychology

Perea, Chaz (2016)

Agricultural Science

A.S., Mt. San Antonio College

B.S., Pennsylvania State University

M.S., University of Illinois

Certified Arborist, International Society of Arborists

Pest Control Advisor, Department of Pesticide Regulation

Perez, Anabel (2007)

Counseling, Bridge Program

B.A., University of California, Los Angeles

B.A., M.S., California State University, Long Beach

Ph.D., California State University, Fullerton

Perez, Christopher (2008)

Mathematics, Computer Science

B.S., California State University, San Bernardino

M.S., California State University, Los Angeles

Perez, Jason (2013)

Commercial & Entertainment Arts

B.F.A., Art Center College of Design

Perez-Garcia, Julie (1999)

Counseling

B.A., University of California, Santa Barbara

Ph.D., Washington State University

Pham, Thuy (2008)

Communication

B.S., M.A., California State University, Long Beach

Phillips, Jamie (2008)

Agricultural Sciences

B.S., M.S., California State Polytechnic University, San Luis Obispo

Piluso, Robert (2016)

English, Literature, & Creative Writing

B.A., M.A., California State University, Fullerton
M.F.A., University of Southern California

Plesetz, Sarah (2008)

Associate Dean, Technology & Health

A.A., Mt. San Antonio College

A.S., Los Angeles County School of Nursing

B.S.N., M.S.N., P.H.N., Ed., California State University, Dominguez Hills

Ponce, Heather (2018)

ACCESS

M.S., California State University, East Bay

Pop, Horia (1998)

Mathematics, Computer Science

B.A., University of Bucharest

M.S., University of Iowa

M.A., Ph.D., University of Southern California

Poulter, Shane (2007)

Counseling

B.A., California State Polytechnic University, Pomona

M.A., California State University, Dominguez Hills

Powell, Chara (2015)

Psychology

B.A., University of Southern California

M.S., California State Polytechnic University, Pomona

Presch, Melissa (2008)

Biological Sciences

B.A., California State University, Fullerton

M.S., California State University, San Bernardino

Pride, Angelena (1997)

Director, Off Campus High School Programs

B.S., University of La Verne

M.Ed., Capella University

Pulido, Alejandra (2019)

American Language

B.A., M.A., California State Polytechnic University, Pomona

Purcell, Robert (2011)

Kinesiology, Athletics, & Dance

Assistant Coach, Football

B.A., M.S., Azusa Pacific University

Q

Quinn, Barbara (2006)

ACCESS

B.A., California State University, Fullerton

M.S.W., University of Southern California

Quintana-Mullane, Kimberly (2004)

English, Literature, & Creative Writing

A.A., Mt. San Antonio College

B.A., M.A., California State Polytechnic University, Pomona

R

Ramirez Catalan, Briseida (2021)

Education for Older Adults

M.A., National University

Revell, Timothy (1999)

Biological Sciences

A.A., Ventura College

B.A., University of California, Santa Cruz

M.S., California State University, Fullerton

Ph.D., Loma Linda University

Rexach, Carmen (2005)

Biological Sciences

B.A., University of California, Los Angeles

M.S., California State University, Stanislaus

Ph.D., University of California, Davis

Reyes James, Mary-Ellen (1998)

Mental Health

A.A., Chaffey College

Reyes, Eloise (2012)

ACCESS

B.A., University of Nevada, Las Vegas

M.S., California State University, Los Angeles

Career Counseling Certificate

Reynolds, Franklin

Communication

B.A., Carroll College

M.A., Northern Illinois University

Richardson, Lanny (1995)

Air Conditioning & Welding

A.S., Mt. San Antonio College

Rickard, Malcolm (2008)

Physics, Engineering

B.A., M.S., San Francisco University

Ph.D., University of Colorado

Rillorta, Linda (1989)

Sociology, Philosophy

A.A., Pasadena City College

B.A., M.A., Ph.D., University of Southern California

Rinaldi, Francesca (2019)

World Languages

B.A., University of California, Irvine

M.A., Ph.D., University of California, Los Angeles

Rincon, Priscilla (2018)

Public Safety Programs

A.A., Mt. San Antonio College

Rios-Alvarado, Eva (2016)

Librarian

B.A., California State University, Los Angeles

M.S., Simmons College

Ritz, Karol (1997)

Dance

B.A., University of California, Irvine

M.A., California State University, Fullerton

Rivas, Antonio (2005)

Counseling, EOPS/CARE

A.A., Santa Ana College

B.A., San Jose State University

M.S., California State University, Long Beach

Rivas, Hector (2007)

Commercial & Entertainment Arts

B.A., California State Polytechnic University, Pomona

M.B.A., Keller Graduate School of Management

Rivas, Karla (2015)

Mathematics, Computer Science

B.A., University of California, Los Angeles

M.A., California State University San Bernardino

Rivera, David (2016)

Kinesiology, Athletics, & Dance

Head Coach, Men's Wrestling

B.S., Embry - Riddle Aeronautical University

M.S., Azusa Pacific University

Rivera, Kelly Ann (2016)

Geography & Political Science

B.A., University of California, San Diego

M.A., University of California, Irvine

Rivers, Deborah (1992)

Mathematics, Computer Science

B.S., California State Polytechnic University, Pomona

M.A., California State University, Fullerton

Robinson, Carolyn (2006)

Learning Assistance

B.S., California State Polytechnic University, Pomona

M.Ed., University of Southern California

Rodriguez Anzora, Elmer (2019)

Counseling

A.A., Mt. San Antonio College

B.A., University of California, Riverside

M.S., California State University, Long Beach

Rogers, Bruce (1994)

Music

B.S., University of Connecticut

M.A., Claremont Graduate University

Rogus, Linda (2005)

Aeronautics, Transportation

A.S., Mt. San Antonio College

B.S., California State University, Los Angeles

F.A.A. Certificates: Flight Instructor, Airplanes & Instruments; Airline Transport Pilot

Rogus, Robert (2001)

Aeronautics, Transportation

A.S., Mt. San Antonio College

B.S., California State University, Los Angeles

F.A.A. Certificates: Flight Instructor; Airplanes & Instruments; Commercial Pilot

Rojas, Rubilena (2014)

Kinesiology, Athletics, & Dance

Head Coach, Women's Softball

B.A., University of Virginia

M.A., California State University, Long Beach

Rojas, Victor (2018)

Director, TRIO Programs

M.S., California State University, Fullerton

Romero, Oscar (2007)

Nursing

A.S., Mt. San Antonio College

R.N., Los Angeles County - University of Southern California School of Nursing

M.S.N., California State University, Fullerton

Roueintan, Masoud

Chemistry

B.A., B.S., California State University, Los Angeles

M.A., California State University, Fullerton

Rowley, Dianne (2012)

Learning Assistance

B.A., California State Polytechnic University, Pomona

M.Ed., Azusa Pacific University

Ruano, Sylvia (2022)

B.A., Simpson University

M.S., University of La Verne

Ruh, Lani (2019)

Kinesiology, Athletics, & Dance

Assistant Coach, Men's Water Polo and Swimming

B.S., University of La Verne

M.S., Azusa Pacific University

M.S., Capella University

Ruh, Marc T. (1997)

Kinesiology, Athletics, & Dance

Head Coach, Men's Water Polo and Swimming

A.A., Mt. San Antonio College

B.A., University of California, Santa Barbara

M.A., Azusa Pacific University

S

Salinas, Romelia (2016)

Dean, Library & Learning Resources

B.A., University of California, Santa Barbara

M.A., University of California, Los Angeles

Ph.D., University of California, Los Angeles

Salinger, Aaron (2011)

World Languages

B.A., University of California, Santa Cruz

M.A., University of New Mexico

Saller, Brandon (2019)

Physics, Engineering

B.S., University of California, Irvine

Ph.D., University of California, Davis

Samel, Kolap (2019)

Librarian

M.A., California State University, Long Beach

M.S., San Jose State University

Sampat, Michelle (2007)

Associate Dean, Arts Division

B.A., Pomona College

M.A., Claremont Graduate School

J.D., Whittier Law School

Sanchez, Andrew (2001)

Mental Health

A.S., R.N., Mt. San Antonio College

Ph.D., California State University, Fullerton

Sanchez, Hector (2006)

Counseling, EOP&S/CARE

A.A., Glendale Community College

B.A., University of California, Los Angeles

M.S., University of La Verne

Sanchez, Juan (2005)

Kinesiology, Athletics, & Dance

Head Coach, Men's Soccer

B.S., California State University, Los Angeles

M.Ed., University of La Verne

Sanchez, Lizbet (2008)

World Languages

B.A., California State University, Los Angeles

M.A., New Mexico State University

Sandoval, Crystal Lane Swift (2008)

Communication

B.A., M.A., Ball State University

Ph.D., Louisiana State University, Shreveport

Santacruz, Rudy

Counseling

B.A., University of California, Irvine

M.S., California State University, Long Beach

Sardinas, Ignacio (2008)

Architecture, Industrial Design Engineering & Manufacturing

B.A., California State Polytechnic University, Pomona

Schnurbusch, Karen (2002)

Physics, Engineering

B.S., University of California, Santa Barbara

M.S., University of Illinois, Urbana-Champaign

Scott, Brian (2001)

Agricultural Sciences

A.S., Mt. San Antonio College

B.S., California State Polytechnic University, Pomona

Scott, Sarah (2007)

Biological Sciences

B.S., University of Massachusetts, Amherst

M.S., University of Connecticut, Storrs

Scroggins, William T. (2011)

President & CEO

B.S., University of California, Los Angeles

Ph.D., University of California, Riverside

Shackelford, Stephen (2010)

Aeronautics, Transportation

B.A., University of San Francisco

M.A.S., Embry-Riddle Aeronautical University

Shannon, Cynthia (1991)

Biological Sciences

A.A., Fullerton College

B.A., California State University, Fullerton

B.S., M.S., California State Polytechnic University, Pomona

Ph.D., University of California, Riverside

Shear, Michelle

Dance

B.A., California State University, Fullerton

M.F.A., Mills College

Silva, Lawrence (2005)

Learning Assistance

B.A., California State Polytechnic University, Pomona

M.A., Chapman University

Simon, Curtis (2009)

Geography & Political Science

B.A., California State University, Chico

M.A., University of California, Riverside

Ph.D., University of California, Davis

Sims, Andrea Fejeran (2015)

Director, Student Life

A.S., Irvine Valley College

B.A., M.S., California State University, Long Beach

Ed.D., California State University, Fullerton

Smith, Cuyler (2018)

Fine Arts

M.F.A., California State University, Fullerton

Smith, James (1998)

Counseling

A.A., Fullerton College

B.A., M.A., California State University, Fullerton

Somers, Bernard (2015)

Counseling, Veteran's Services

B.A., California State University, San Bernardino

M.A., University of Redlands

Ph.D., California State University, Fullerton

Song, Sokha (2017)

Vice President, Human Resources

Ed.D., Pepperdine University

Soriano, Venus (2017)

Short-Term Vocational

A.A., Long Beach City College

B.S., California State University, San Bernardino

Soto, Lina (2001)

Associate Dean, Counseling

B.A., University of California, San Diego

M.A., San Diego State University

Springfield, Cristina (2021)

Librarian

B.A., M.A., University of Wisconsin-Madison

Staley, Garrett (2016)

Public Safety Programs

B.A., Pitzer College

M.S.W., M.P.A., University of Southern California

Stewart-Thomas, Michelle (2007)

Sociology, Philosophy
M.S., Purdue University
M.S., M.A., Fuller Theological Seminary
Ph.D., University of Southern California

Stone, James (2008)

Geography & Political Science
M.A., University of Kentucky
M.F.A., Ph.D., Chapman University

Strope, Byron (1990)

Aircraft Maintenance Technology
A.S., Chaffey College
B.S., California State Polytechnic University, Pomona
F.A.A. Certificates, Airframe and Powerplant, Inspection Authorization
Private Pilot, F.C.C.
F.A.A. Safety Counselor
F.A.A. Designated Mechanic Examiner

Summers, Melody (2006)

Mathematics, Computer Science
B.S., M.S., California State Polytechnic University, Pomona

Sun, Christine (2001)

Mathematics, Computer Science
B.S., National Taiwan University
M.A., Ph.D., University of South Carolina

Swartz, Pauline (2006)

Librarian
B.A., University of California, Santa Cruz
MLIS, University of California, Los Angeles

T

Takashima, Timothy (2000)

Mathematics, Computer Science
B.S., M.S., California State University, Long Beach

Tamayo, Santiago (Jimmy) (2002)

Mathematics, Computer Science
B.S., California State Polytechnic University, Pomona
M.S., University of California, Riverside

Tan, Cara (2019)

Psychology
B.S., Pacific Union College
M.A., Claremont Graduate University

Tapia, Raul (2018)

Air Conditioning & Welding
A.A., Mt. San Antonio College

Tellez, April (2008)

History
B.A., M.A., University of California, Riverside

Terreri, Joseph (1989)

Mathematics, Computer Science
B.S., M.S., California State Polytechnic University, Pomona

Thankamushy, Sreekanth (2014)

Commercial & Entertainment Arts
B.S., Mahatma Gandhi University, India

M.F.A., University of California, Los Angeles

Tharp, Nathan

Music
B.M., Berklee College of Music
M.M., California State University, Los Angeles
Ed.D., California State University, Sacramento

Thay, Cecilia (2012)

Child Development
B.A., Institute of Education, Rangoon, Burma
M.S., University of La Verne

Thomas, Antoine (2006)

Counseling
B.A., University of California, Riverside
M.S., California State University, Long Beach
Ph.D., California State University, San Bernardino

Thomas, James (1998)

English, Literature, & Creative Writing
B.A., Westmont College
M.A., Ph.D., Claremont Graduate University

Ton, Chan-Phuong (2005)

Counseling
B.A., University of California, San Diego
M.S., California State University, Long Beach
Ed.D., California State University, Fullerton

Tran, Frank (2002)

Mathematics, Computer Science
B.S., University of California, Davis
M.A., University of California, Santa Barbara

Tran, Niki (2011)

Consumer Science & Design Technologies
B.F.A., California State University, Long Beach
M.A., California State Polytechnic University, Pomona

Trejo, Lysette (2009)

Counseling
B.A., California State University, Fullerton
M.S., University of La Verne

Troxell, Cameron (2001)

Mathematics, Computer Science
B.A., Gonzaga University
M.S., University of La Verne

Trull, Stephen Tyler (2001)

Geography & Political Science
A.A., Mt. San Antonio College
B.A., California State University, Fullerton
M.A., University of California, Santa Barbara

Truttmann, Janet (2002)

Chemistry
B.A., University of California, San Diego
Ph.D., California Institute of Technology

Tsurumi, Keiko (2017)

World Languages
B.A., University of Nevada
M.A., University of California, Los Angeles

M.A., California State University, Long Beach

Tull, Amy (2016)

Mental Health

A.A., Rio Hondo College

Turcios, Ana (2016)

Counseling, EOPS/CARE

B.A., University of California, Santa Cruz

M.S., California State University, Los Angeles

U

Uesugi, Koji (2017)

Dean, Student Services

B.S., University of California, Davis

M.A., California State University, Fullerton

M.A., Claremont Graduate University

Ed.D., University of California, Los Angeles

Uranga, Jaime (2007)

Electronics & Computer Technology

A.A., Mt. San Antonio College

Uyeki, Elizabeth Chisato (2007)

Librarian

B.A., Earlham College

M.L.I.S., University of California, Los Angeles

Uyeno, Gary (1999)

Registered Veterinary Technology

B.S., University of California, Davis

D.V.M., Iowa State University

V

Valdes, Steven (2016)

Accounting & Management

A.S., Don Bosco College of Science and Technology

B.S., California State University, Los Angeles

Certified Public Accountant, Certified Fraud Examiner, Personal Financial Specialist

Valdez, Edward (2021)

Public Safety Programs

B.S., California State University, Long Beach

Valdez, Jessica (2016)

Counseling, Athletics

A.A., Rancho Santiago College

B.A., California State University, Fullerton

B.A., M.A., California State University, Dominguez Hills

Vane, Sierra Joelle Powell (2016)

Geography & Political Science

B.A., University of California, Redlands

M.A., Ph.D., University of California, Irvine

Vayo, Louis (2018)

Accounting & Management

M.A., University of Michigan - Ann Arbor

Velazquez, Lorena (2017)

Counselor, Short-Term Vocational

B.A., University of California, Irvine

M.S.W., University of Southern California

Versace, Emily (2015)

Counseling

A.A., Citrus College

B.A., University of California, Irvine

M.S., California State University, San Bernardino

Vitullo, John (2002)

Associate Dean, Natural Sciences

B.A., Southern Utah University

M.A., Ball State University

Vo, Tuan (2000)

Mathematics, Computer Science

A.A., San Bernardino Valley College

B.S., M.S., California State Polytechnic University, Pomona

Vu, Benjamin (2019)

Short-Term Vocational

B.A., University of California, Irvine

W

Wakefield, Jeffrey (2000)

Mathematics, Computer Science

B.S., University of California, Los Angeles

M.S., California State University, Long Beach

Walker, Ann (2019)

Sign Language

B.A., California State University, Northridge

Walker, Lori (2000)

Sociology, Philosophy

B.S., University of California, Riverside

M.A., Ph.D., Claremont Graduate University

Walker, Rebecca (2006)

Earth Sciences & Astronomy

B.A., Hamilton College

M.S., University of Arizona

Wang, Allen (2015)

Counseling, International Students Program

A.A., Fullerton College

B.A., University of Southern California

M.S., California State University, Long Beach

Ward, Elizabeth (1999)

Kinesiology, Athletics, & Dance

B.A., California State University, Long Beach

M.A., California State Polytechnic University, Pomona

Wasson, Sheri (2011)

Fine Art

B.F.A., California State University, Fullerton

M.F.A., University of New Mexico

Waters, Dawn (2008)

Agricultural Sciences

B.S., California State Polytechnic University, Pomona

M.Ed., University of La Verne

Weatherilt, Sandra (2001)

Consumer Science & Design Technologies

B.A., M.A., California State University, Long Beach

Webb, Craig (1998)

Earth Sciences & Astronomy
B.A., B.S., Syracuse University, New York
M.S., Duke University

Weidner, Ned (2016)

English, Literature, & Creative Writing
B.A., University of Cincinnati
M.A., California State University, Stanislaus

Wheeler, Daniel (2011)

English, Literature, & Creative Writing
B.A., University of California, Berkeley
M.S., California State University, Fullerton

White-Tremazi, Shelby (2019)

Education for Older Adults
A.A., Mt. San Antonio College
B.S., California State University, Los Angeles
M.S., University of La Verne

Wiesner, Mary Rose (2002)

Respiratory Therapy
B.S., Northeastern University

Willis, Roger (2013)

Communication
B.A., M.A., California State University, Fullerton

Wohlgezogen, Laura (2017)

Mathematics, Computer Science
B.S., University of California, Los Angeles
M.S., California State Polytechnic University, Pomona

Wolde-Yohannes, Samuel (2001)

Sociology, Philosophy
B.A., M.A., Ph.D., Pontifical Gregorian University, Rome, Italy

Wolf, Phillip (1995)

Physics, Engineering
B.S., Harvey Mudd College
M.S., California State University, Los Angeles

Wood, Abby (2014)

Business Administration
B.A., Wake Forest University
J.D., Wake Forest University of Law
Member, State Bar of California

Woolery, Emily (2000)

Librarian
B.A., Occidental College
M.L.I.S., University of California, Los Angeles

Wright, Carola (2001)

Biological Sciences
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CATALOG UPDATE

Updates for the 2022-23 Winter Catalog Addendum as January 3, 2022

Courses

AIRM 72:

Unit change from 1.5 to 2.0

AIRM 73:

Deleted

Programs

Aircraft Powerplant Maintenance Technology - Day (Certificate T0982):

Unit change from 41 to 40 due to AIRM 72 unit change from 1.5 to 2.0 and the deletion of AIRM 73

Aircraft Power Plant Maintenance Technology - Evening (Certificate T0952)

Unit change from 39 to 38 due to AIRM 72 unit change from 1.5 to 2.0 and the deletion of AIRM 73

Airframe and Aircraft Powerplant Maintenance Technology - Day (AS Degree S0911a)

Unit change from 67 to 66 due to AIRM 72 unit change from 1.5 to 2.0 and the deletion of AIRM 73

Airframe and Aircraft Powerplant Maintenance Technology - Evening (AS Degree S0951)

Unit change from 63 to 62 due to AIRM 72 unit change from 1.5 to 2.0 and the deletion of AIRM 73

Airframe Maintenance Technology - Day (Certificate T0991)

Unit change from 41 to 40 due to AIRM 72 unit change from 1.5 to 2.0 and the deletion of AIRM 73

Airframe Maintenance Technology - Evening (Certificate T0981)

Unit change from 39 to 38 due to AIRM 72 unit change from 1.5 to 2.0 and the deletion of AIRM 73

Added missing courses to required electives: ADJU 9 and ADJU 50.

Engineering with Emphasis in Chemical and Material Engineering Applications AS S0829

Required Core units corrected from 18 to 26-27. Total required units for major 38-39.

Geography AS-T A0356

Added originally omitted sentence for List A: Choose two courses from the following or any course not selected from core, and sentence for List B went from Select two courses from the following or any course not already selected from list A: to Select two courses from the following or any course not already selected.

Sales Engineering S0852

Added CHEM 55 as part of the Civil Engineering Application AS option. Left out in error.

Social Justice AA-T A0669

Wrong units printed in error. Should be 18-21.

Technical Sales N0856

Added 'or' between SPCH 1AH and SPCH 8.

Mt. SAC General Education

Local GE requirements Area C: MUS 110A

Replaced with MUS 110A with 110.

IGETC: pages 247 - 254

AMLA 1A and ENGL 1AM were added to Area 1 Group A.

BUSC 17 and ENGR 285 were added to Area 2.

HIST 9, HIST 10H, HIST 11H, HIST 18, ITAL 61, JAPN 62, LING 2, LING 3, PUBH 20 were added to Area 3 Humanities.

AABS 35, ANTH 15, ANTH 16, ANTH 17, ANTH 30, ANTH 50, GEOG 5, HIST 9, HIST 10H, HIST 11H, HIST 18, LCAS 25 were added to Area 4.

ZOOL 3 was added to Area 5 Biological Sciences.

Summary of Corrections for the 2022-23 Catalog as November 2022

Courses

AMLA 98

AMLA 98 course is Degree Applicable.

BUSS 34

Removed transfer designation error from BUSS 34.

DN-T 9

Added: Formerly DNCE 9 to DN-T 9.

MUS 110A

Added: Formerly MUS 2.

Programs

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