

2015-16 CATALOG



**YOU.
SUCCESS.**



ACKNOWLEDGMENTS

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ACCREDITATION

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 in writing at 10 Commercial Boulevard, Suite 204, Novato, California 94949 or by phone at (415) 506-0234.

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 and the online version of this Catalog.

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
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(Hearing Impaired)

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 *2015-16 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

Dr. Manuel Baca
Rosanne M. Bader
Judy Chen Haggerty, *Esq.*
Fred Chyr
Dr. David K. Hall
Robert F. Hidalgo
Laura Santos
Elizabeth Santos, *Student Trustee*

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JUNE 2015						
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2015-16 College Calendar

Summer Intersession 2015 — 6 Weeks

June 22 2015 Summer Intersession begins

July 3-4 Independence Day (campus closed)
July 15 Registration begins for 2015 Fall Semester

August 2 2015 Summer Intersession ends

Fall Semester 2015 — 16 Weeks

August 24 2015 Fall Semester begins

September 4 Last day to add a class
September 4 Last day to change residency for 2015 Fall Semester
September 7 Labor Day (campus closed)

October 5 Last day to petition for Fall Semester graduation

November 3 International Student Application Due for 2016 Spring Semester
November 10 Registration begins for 2016 Winter Intersession
November 11 Veteran's Day (campus closed)
November 26 - 29 Thanksgiving Recess (campus closed)

December 4 Last day to petition for Winter Intersession graduation
December 6 - 12 Final Exams (see: www.mtsac.edu/finalexams for schedule)
December 13 2015 Fall Semester ends
December 13 - January 3 Winter Recess for students

2015-16 College Calendar

Winter Intersession 2016 — 6 Weeks

January 1, 2016	New Year's Day (campus closed)
January 4	2016 Winter Intersession begins
January 13	Registration begins for 2016 Spring Semester
January 18	Martin Luther King, Jr. Day (campus closed)

February 12	Lincoln's Birthday (campus closed)
February 14	2016 Winter Intersession ends
February 15	President's Day (campus closed)

Spring Semester 2016 — 16 Weeks

February 22	2016 Spring Semester begins
March 31	Cesar Chavez Day Observed (campus closed)
April 4	International Student Application Due for 2016 Summer Intersession
May 11	Registration begins for 2016 Summer Intersession
May 30	Memorial Day (campus closed)
June 6	International Student Application Due for 2016 Fall Semester
June 6 - 11	Final Exams (see: www.mtsac.edu/finalexams for schedule)
June 10	Commencement
June 12	2016 Spring Semester ends

DECEMBER 2015						
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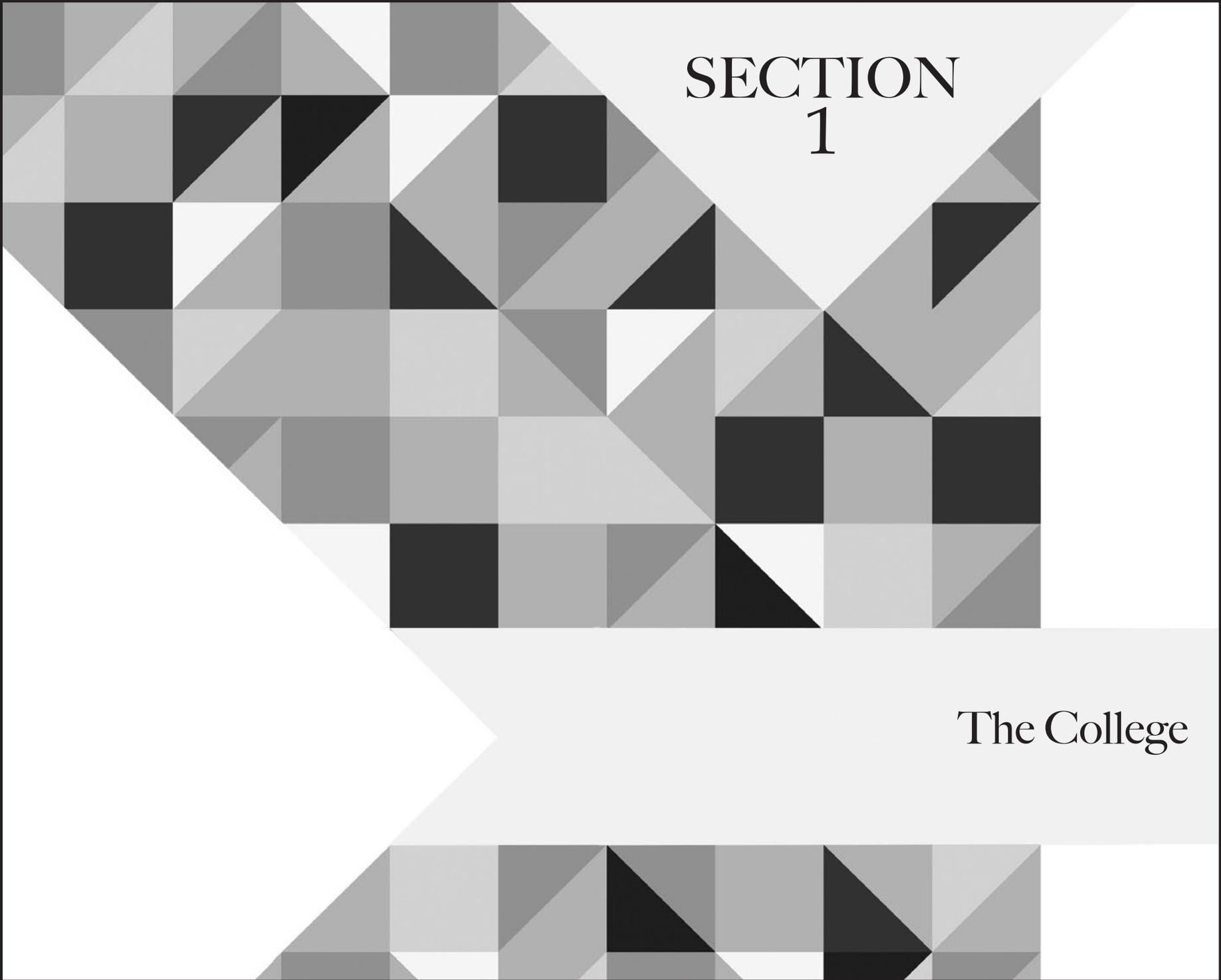
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COLLEGE DIRECTORY

The main College telephone number is (909) 274-7500.
For direct access to the offices listed below, dial (909) 274 + the 4-digit extension listed below.

Academic Counselor for Student Athletes.....	5929	*ESL & Intercultural Programs.....	4736	Performing Arts Center Box Office.....	(909) 468-4050, x2050
Academic Senate.....	5436	Event Services.....	4797	Performing Arts Operations.....	5623
*Accounting & Management.....	4909, 4910	Exercise Science/Wellness Center.....	4625	Photographics.....	4444
ACES Program.....	4411	Extended Opportunity Programs & Serv. (EOPS).....	4500	Photo I.D.....	4960
Adult Basic Education Center.....	4845	Facilities Planning & Management.....	4850	*Physical Therapy Aide.....	4750
Advising.....	4293	Faculty Association.....	4531	*Physics, Engineering.....	4421
Administrative Services.....	4230	Farm Tours.....	4794	Planetarium Shows.....	2050
Admissions & Records.....	4415	Fashion Merchandising & Design.....	4967	Planetarium Tour.....	4794
*Aeronautics & Transportation.....	5008	Financial Aid.....	4450	Presentation Services.....	4273
Affirmative Action.....	4225	*Fine Arts.....	4155, 4752	President & Board of Trustees.....	4250
*Agricultural Sciences.....	4540	*Fire Technology.....	5146	Printing Services.....	4255
*Air Conditioning, Water Technology & Welding.....	5107, 4638	Fiscal Services.....	4234	Professional & Organizational Development.....	4504
*Aircraft Maintenance & Manufacturing Technology.....	4762, 4770	*Foreign Languages.....	4583, 4581	*Psychology & Education.....	5369
*Alumni Association.....	5443	Foundation Office.....	4215	*Psychiatric Technician.....	4750
*American Language.....	6313	*Geography & Political Science.....	4507	Public Safety.....	4555
*Architecture & Engineering Design.....	4803	Grants Office.....	5418	*Public Services.....	4654
Art Gallery.....	4328	Grounds Service Requests.....	4850	Purchasing.....	4245
*Arts Division.....	5200	*Health Center.....	4400	*Radiologic Technology.....	4750
Aspire.....	6396	Help Desk (IT).....	4357	Real Estate.....	6428
Assessment Center.....	4265	High School Outreach.....	5906	Re-Entry Center.....	4392
Associated Students.....	4526	*History & Art History.....	4567	*Registered Veterinary Technology.....	4544
*Athletics.....	4630	*Histotechnology.....	4884	Registration.....	4415
Auxiliary Services.....	4470	Honors Program.....	4665	Research & Institutional Effectiveness.....	4109
*Biological Sciences.....	4013	Horticulture Unit.....	4893	*Respiratory Therapy.....	4750
Bookstore (SacBookRac).....	4475	Hospitality Management Coordinator.....	4139	Risk Management.....	4230, 5508
Bridge Program.....	5392	Housing Information.....	5959	SacBookRac.....	4475
Broadcast Services.....	4274	*Humanities & Social Sciences Division.....	4570	Security (Campus).....	4555
*Business Administration.....	4612	Human Resources.....	4225	*Service Learning.....	4656
*Business Division.....	4600	Information Technology.....	4365	*Sign Language.....	4443
Bursar's Office.....	4960	Instruction Office.....	4200	*Sociology & Philosophy.....	4591
CalWORKs.....	4755	*Kinesiology, Athletics & Dance Division.....	4630	Sodexo (Campus Cafe - for all food service locations).....	5284
Campus Café (Sodexo - for all food service locations).....	5284	KSAK Studio.....	4678	Special Events.....	4840
Campus Security.....	4555, 4299	*Language Learning Center.....	4580	Speech/Sign Success Center.....	6297
Campus Tours.....	4293	*Learning Assistance Center.....	4300	Stadium Ticket Office.....	4880
CARE.....	4500	Learning Lab.....	5666	Student Center.....	5959
Career & Transfer Services.....	4510	Library.....	4260	Student Life & Student Clubs.....	4525
Center of Excellence.....	6106	*Library & Learning Resources Division.....	5659	Student Services, Dean.....	6909
*Chemistry.....	4533	Lost & Found (Student Life).....	4525	Student Services, V.P. Office.....	4505
*Child Development.....	4632, 4902	Mail Services.....	4212	Study Abroad.....	6321
Child Development Center.....	4920	Maintenance & Operations.....	4850	*Teacher Prep Institute.....	4190
*Communication.....	4616	Marketing & Public Affairs Office.....	4259	Technical Services.....	4799
Computer Information Systems.....	4943, 4512	*Mathematics, Computer Sciences.....	5309, 4652	*Technology & Health Division.....	4750
*Continuing Education Division.....	4220	*Medical Services Department.....	4750	Technology Education Resource Center.....	4597
*Consumer Science & Design Technologies.....	4139	*Mental Health Technology.....	4750	*Theater.....	4337
Contract Education.....	4210	Mountaineer.....	6123	Transfer Center.....	6388
*Counseling.....	4380, 4293	*Music.....	4330	Transportation.....	4854
CSEA 262.....	4413	*Natural Sciences Division.....	4425	Tutorial Services.....	6605
Custodial Services.....	4850	*Noncredit Programs.....	4220	Upward Bound.....	5634
*Dance.....	4635	*Nursing Department.....	4560	Veterans' Service Center.....	4520
Disabled Student Programs & Services (DSP&S).....	4290	Online Learning Support Center.....	4378	Warehouse.....	4870
Distance Learning.....	5658	Parking Office.....	4233	Wellness Center.....	4625
*Earth Sciences & Astronomy.....	4148	Parking Services Cashier.....	4299	Wildlife Sanctuary Tours.....	4794
*Electronics & Computer Technology.....	4978, 5614	*Paralegal.....	4907, 5189	Writing Center.....	5325
*English, Literature & Journalism.....	6332	Payroll.....	4240		

*Instructional programs and departments



SECTION
1

The College

The College

MT. SAN ANTONIO 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.

Instruction at Mt. SAC is organized under a divisional structure with departments within each division. At present, the College has eight instructional divisions within which are 42 departments.

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, Basset, 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. In 2015 Mt. SAC proudly celebrated 69 years of educational excellence. The College will continue to offer access to quality programs and services as well as provide an environment for educational excellence throughout the 21st Century.

MISSION, VISION AND VALUES

Mission

The mission of Mt. San Antonio College is to support all students in achieving their full educational potential in an environment of academic excellence.

Vision

Mt. SAC 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.

As a premier community college, we will provide access to quality, 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 responsibly in an atmosphere of trust.

■ DIVERSITY

We respect and welcome all differences, and we foster equal participation throughout the campus community.

■ COMMUNITY BUILDING

We work in responsible partnerships through open communication, caring, and a cooperative spirit.

■ STUDENT FOCUS

We address the needs of students and the community in our planning and actions.

■ 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.



COLLEGE ORGANIZATION

BOARD OF TRUSTEES

President.....	Fred Chyr
Vice President.....	Dr. David K. Hall
Clerk.....	Judy Chen Haggerty, Esq.
Member.....	Rosanne Bader
Member.....	Dr. Manuel Baca
Member.....	Robert F. Hidalgo
Member.....	Laura Santos
Student Trustee.....	Elizabeth Santos
College President & CEO.....	Dr. William Scroggins

ADMINISTRATION

Administrative Services Ext. 4230

Vice President, Administrative Services.....	Michael Gregoryk
Associate Vice President, Fiscal Services.....	Rosa Royce
Director, Accounting.....	Shelly Zahrt-Egbert
Director, Bookstore and Operations.....	Suzanne Luetjen
Manager, Bursar's Office.....	Sheree Culross
Manager, Custodial Services.....	Ken McAlpin
Director, Facilities Planning and Management.....	Gary Nellesen
Assistant Director, Facilities Planning and Management.....	Bill Asher
Manager, Facilities Support Services.....	Becky Mitchell
Construction Project Manager.....	Roger Sneed
Director, Fiscal Services.....	Monica Cantu
Interim Director, Grounds and Transportation.....	Ruben Avila Jr.
Director, Payroll.....	Richard Lee
Chief, Public Safety.....	David Wilson
Deputy Chief, Public Safety.....	Robert Wren
Director, Purchasing.....	Teresa Patterson
Director, Safety and Risk Management.....	Karen Saldana
Director, Technical Services.....	William Eastham

Human Resources Ext. 4225

Vice President, Human Resources.....	James Czaja
Director, Human Resources.....	Cynthia Hoover
Director, Equal Employment Opportunity.....	Lorraine Jones

ADMINISTRATION

Information and Educational Technology Ext. 4357

Chief Technology Officer.....	Victor Belinski
Director, Enterprise Applications Systems.....	Robert Hughes
Director, Academic Technology and Infrastructure.....	Dale Vickers
Interim Assistant Director, Academic Technology and Infrastructure.....	Ron Bean
Manager, Data and Network Security.....	Chris Schroeder

President's Office Ext. 4121/4215

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

Instruction Ext. 4200

Vice President, Instruction.....	Dr. Irene Malmgren
Executive Dean, Instructional Services.....	Dr. Joumana McGowan
Associate Dean, Instructional Services.....	Don Sciore
Dean, Arts Division.....	Dr. Susan Long
Associate Dean, Arts Division.....	Mark Lowentroun
Dean, Business Division.....	Jennifer Galbraith
Associate Dean, Business Division.....	Vacant
Director, Child Development Center.....	Tamika Addison
Dean, Humanities and Social Sciences Division.....	James Jenkins
Associate Dean, Humanities and Social Sciences Division.....	Dr. Jeanne Marie Velickovic
Director, Writing Center.....	Dr. David Charbonneau
Dean, Kinesiology, Athletics and Dance Division.....	Joseph Jennum
Associate Dean, Kinesiology, Athletics and Dance Division.....	Debbie Cavion
Dean, Library and Learning Resources Division.....	Meghan M. Chen
Director, Learning Assistance Center.....	Bailey Smith
Dean, Natural Sciences Division.....	Matthew Judd
Associate Dean, Natural Sciences Division.....	Karelyn Hoover
Dean, Technology and Health Division.....	Jemma Blake-Judd
Associate Dean, Technology and Health Division.....	Vacant
Dean, School of Continuing Education.....	Vacant
Associate Dean, Career Education and Workforce Development.....	Dr. Madelyn Arballo
Assistant Director, Adult Basic Education.....	Omidh Sloan
Director, Community and Contract Education.....	Paulo Madrigal
Associate Dean, Continuing Education Programs and Services.....	Dr. Liza Becker
ESL Instructional Support Manager.....	Margaret Teske
Director, Grants.....	Adrienne Price
Director, Research and Institutional Effectiveness.....	Barbara McNeice-Stallard
Director, Honors.....	Dr. Maryann Tolano-Leveque

The College

ADMINISTRATION *(continued)***Student Services** **Ext. 4505**

Vice President, Student Services	Dr. Audrey Yamagata-Noji
Dean, Counseling	Thomas Mauch
Dean, Student Services	Carolyn Keys
Dean, Enrollment Management	Dr. George Bradshaw
Assistant Director, Admissions and Records	Patricia Montoya
Director, Assessment and Matriculation	James Ocampo
Director, CalWORKS	Dr. Stephen Brown
Director, Career and Transfer Services	Vacant
Director, Disabled Student Programs and Services (DSP&S)	Grace Hanson
Manager, Deaf and Hard of Hearing Services	Don Potter
Director, Extended Opportunity Programs and Services (EOPS)	Irene Herrera
Director, Financial Aid	Chau Dao
Director, Health Services	Marguerite Whitford
Director, Student Life	Andrea Sims
Director, TRiO Program	Dr. Zolita Fisher

INSTRUCTIONAL DIVISIONS**Arts Division** **Ext. 5200****Dr. Sue Long, Dean****Mark Lowentrou, 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 6 Associate in Science degrees, 2 Associate in Arts degrees, 2 Associate in Arts for Transfer degrees, and 17 Certificates of Achievement.

The Arts Division's educational departments and program areas are:

- Fine Arts (Drawing, Figure, Painting, Sculpture, Ceramics)
- Commercial & Entertainment Arts (Animation & Gaming, Graphic Design & Illustration, Photography, Radio & Television)
- Music (Theory, Choral, Instrumental)
- Theater (Acting, Design & Technical, Playwriting)
- Art Gallery (Gallery Design and Operations)

INSTRUCTIONAL DIVISIONS**Business Division** **Ext. 4600****Jennifer Galbraith, Dean****Vacant, 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 20 Associate in Science degrees, 2 Associate in Arts degrees, and 69 Certificates. The Business Division also includes the services of the new Child Development Center and the Center of Excellence.

The Business Division's educational departments and their program areas are:

- Accounting and Management (Accounting, Business Management, Business Office Communications, and Marketing & Sales)
- Business Administration (Paralegal Studies, Real Estate, Economics, and Business Law)
- Child Development
- Computer Information Systems (Computer Basics, Database Management, CIS Management, Networking, Programming, Computer & Network Security, and Web Development)
- Consumer Science and Design Technology (Family & Consumer Sciences, Fashion Merchandising & Design, Hospitality & Restaurant Management, Interior Design, and Nutrition & Food)

School of Continuing Education Division **Ext. 4220****Dr. Madelyn Arballo, Associate Dean****Dr. Liza Becker, Associate Dean**

School of Continuing Education provides a variety of noncredit courses and certificates as well as an array of fee-based, not-for-credit community services classes and contract training. The Division offers 9 Certificate of Competency and 48 Certificates in Occupational Training. The division provides assessment for placement, orientation, registration, educational advising, and counseling services embedded within its programs.

School of Continuing Education programs include:

- Adult Basic Education
- Adult High School Diploma & GED
- Citizenship
- Education for Older Adults
- English as a Second Language
- Short-Term Vocational (Business, Health Careers, Technology, and other fields)

INSTRUCTIONAL DIVISIONS**Humanities and Social Sciences Division****Ext. 4570****James Jenkins, Dean****Dr. Jeanne Marie Velickovic, 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, 4 Associate in Arts degrees, 7 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 Study Abroad program, Teacher Preparation Institute, Writing Center, and Speech & Sign Success Center.

The Humanities and Social Sciences Division's educational departments and their programs are:

- American Language
- Communication (speech and forensics)
- English, Literature and Journalism (English, journalism, literature and Latin)
- Foreign Languages (Arabic, Chinese, French, German, Italian, Japanese and Spanish)
- History and Art History (history, art history and humanities)
- Geography and Political Science
- Psychology
- Sign Language (American Sign Language and interpreting)
- Sociology and Philosophy

Kinesiology, Athletics and Dance Division**Ext. 4630****Joe Jennum, Dean/Athletics Director****Debbie Cavion, Associate Dean /Associate Athletics Director**

The Kinesiology Athletics and Dance Division has been a leader among community colleges for over 60 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 20 competitive teams. The division offers one Associate in Science degree, one Associate in Arts degree and 5 Certificates. The Division also houses the WIN student athlete academic resource center, Exercise Science/Wellness Center and Athletics and Dance venues throughout the campus.

The Kinesiology Athletics and Dance Division's educational departments and their program areas are:

- Dance (Theory and Activity)
- Kinesiology (Adaptive, Aquatics, Athletics, Fitness, Individual, Team Sports, and Theory)

Library and Learning Resources Division**Ext. 5659****Meghan M. Chen, Dean****Bailey Smith, Director, Learning Assistance Center**

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 Online Learning Support Center.

Housed in the Learning Technology Center, the Library and Learning Resources Division's educational departments and their program areas are:

- Learning Assistance (Reading, Study Skills, Learning Communities, and Basic Skills Math)
- Library

INSTRUCTIONAL DIVISIONS**Natural Sciences Division****Ext. 4425****Matthew Judd, Dean****Karelyn Hoover, 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 12 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 and a 25 acre Wildlife Sanctuary.

Natural Sciences Division departments include:

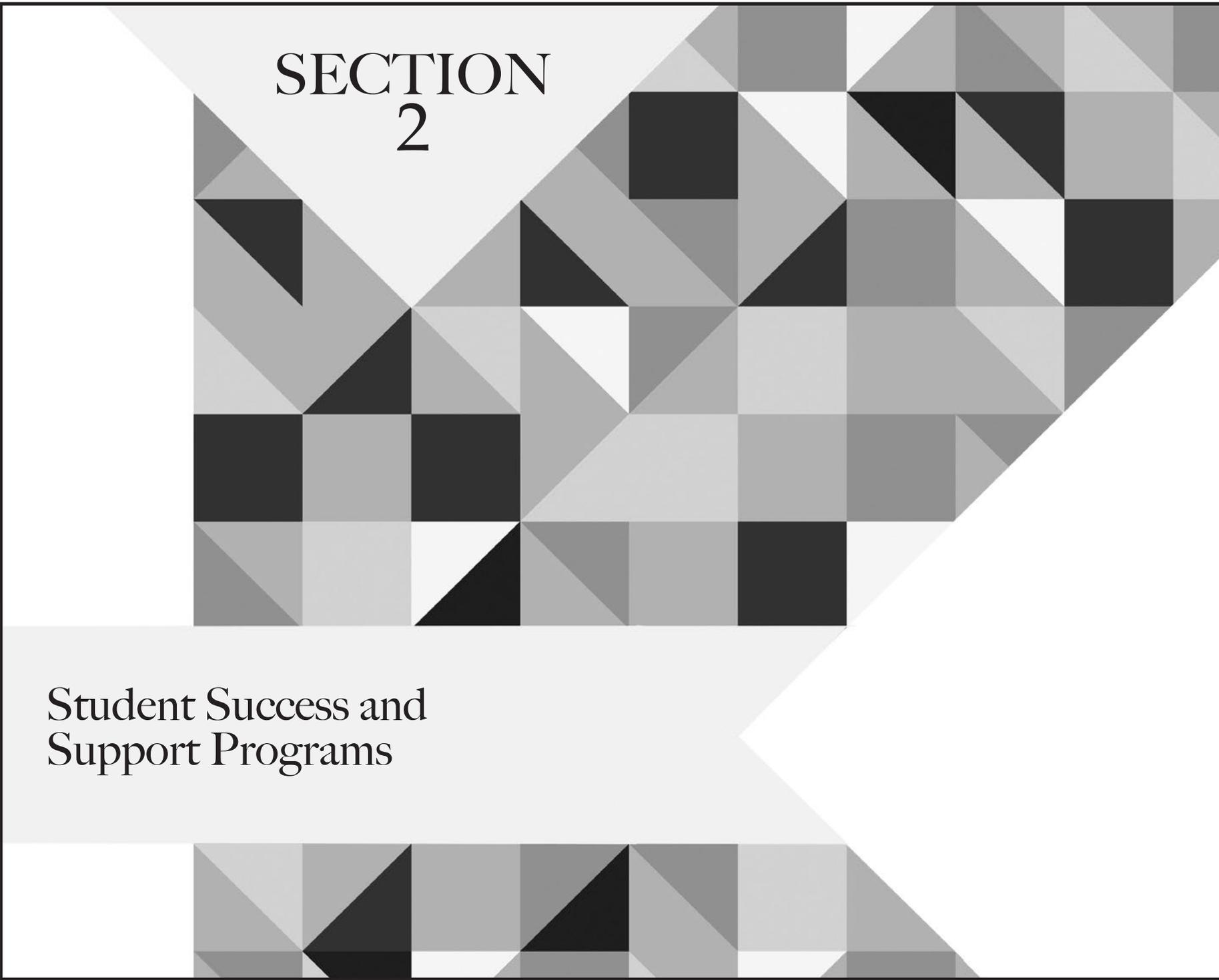
- Agriculture (Horticulture, Animal Science and Registered Veterinary Technician)
- Biology (Anatomy & Physiology, Anthropology, Biological Sciences, Botany, Histotechnician Program and Microbiology)
- Chemistry (Inorganic Chemistry, Organic Chemistry and Biochemistry)
- Earth Sciences (Astronomy, Geology, Meteorology and Oceanography)
- Mathematics & Computer Science
- Physics and Engineering (Engineering, Physical Sciences, Physics and Surveying)

Technology and Health Division**Ext. 4750****Jemma Blake-Judd, Dean****Vacant, Associate Dean**

The Technology and Health Division provides 31 Associate in Science degrees, one Associate in Science for Transfer degree, and 31 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 and the Mt. SAC Fire Academy.

The Division's educational departments and their program areas are:

- Aeronautics, Transportation (Aeronautics, Air Traffic Control, Transportation)
- Air Conditioning & Welding Technologies (Air Conditioning & Refrigeration, Building Automation Systems, Welding)
- Aircraft Maintenance Technology (Aircraft Maintenance Technician)
- Architecture, Industrial Design Engineering & Manufacturing
- Electronics & Computer Technology (Computer & Networking Technology, Electronics Systems Technology, Electronics)
- Fire Technology
- Medical Services (Emergency Medical Technician, Paramedic)
- Mental Health (Psychiatric Technician)
- Nursing
- Public Services (Alcohol and Drug Counseling, Administration of Justice)
- Radiologic Technology
- Respiratory Therapy



SECTION
2

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. Below are the important steps to follow to begin your academic career including information on the services you are required to participate in.

Step 1 – Apply to Mt. SAC

Complete and submit a Mt. SAC Admission Application at www.mtsac.edu/apply. Computers are available in the Student Services Center for your convenience. For further information, contact Admissions Office at (909) 274-4415 or visit www.mtsac.edu/admissions

Step 2 – 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. For further information, contact the Financial Aid Office at (909) 274-4450 or visit <http://www.mtsac.edu/financialaid>

Step 3 – Attend Placement Test Information Sessions

The sessions will prepare students to take the required placement tests and provide an opportunity for students to ask questions regarding the tests. For further information, contact the Assessment Center at (909) 274-4265 or visit www.mtsac.edu/assessment

Step 4 – Get Assessed

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 be successful in their course work. For further information, contact the Assessment Center at (909) 274-4265 or visit www.mtsac.edu/assessment

Step 5 – Attend New Student Orientation

At orientation, a counselor will review placement test scores and help you select your courses based on your test scores. Counselors will also review graduation and university transfer requirements. You will also create your Mountie Academic Plan (MAP). For further information, contact the Counseling Center at (909) 274-4380 or visit www.mtsac.edu/counseling/orientation.html

Step 6 – Get Counseling

Counselors are available to help if you:

- a. are undecided about your major or career goal,
- b. need assistance in planning your educational and/or career goal,
- c. need assistance in choosing a university or college for transfer, or
- d. have personal problems that impact your college success.

For further information, contact the Counseling Center at (909) 274-4380 or visit www.mtsac.edu/counseling

Step 7 – Register Online

Register online, based on your assigned registration date/time. Check your registration date on your portal account at <https://my.mtsac.edu>

Step 8 – Pay Fees

You can pay your fees online with a credit card (MasterCard, Visa, Discover, American Express) or in person at the Bursars’s Office (Lower Level – Bldg 4). For further information, contact the Bursar’s Office at 909-274-4960 or visit www.mtsac.edu/bursars

ADMISSION AND REGISTRATION

Admissions

Any person possessing a high school diploma or its equivalent is eligible for admission to Mt. San Antonio College. Admission to Mt. San Antonio College includes the filing of an application for admission by the student and the filing of transcripts from high school or college(s). 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 admission to the college should be directed to the Admissions and Records Office. Admission is granted only by filing an application for admission using one of the following methods:

- 1. The application for admission of credit classes can be submitted online. To access the online application, visit the Mt. SAC Admissions Website at <http://www.mtsac.edu/students/admissions> and click on the online application link at the top of the web page.
- 2. Assistance is available in English, Spanish, Vietnamese, Chinese and Sign Language. Information is also available in alternative formats (Braille, enlarged text, e-text, etc.).

Residency Requirements (for fee purposes)

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.”

- 1. **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.
- 2. **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:

- 1. Every person has, by law, a residence.
- 2. Every person who is married or 18 years of age or older, and under no legal disability to do so, may establish residence.
- 3. In determining the place of residence, the following rules are to be observed:
 - a. There can be only one residence.
 - b. 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.
 - c. A residence cannot be lost until another is gained.
 - d. The residence can be established and/or changed only by the union of act and intent.

- e. 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.
- f. 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.
- g. 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.

Concurrent Enrollment for K-12 Students (Special Admits)

The Special Admit program is designed for high school sophomores, juniors and seniors (10th, 11th and 12th grades) who would benefit from taking advanced scholastic or vocational work at Mt. San Antonio College. Students must meet the following criteria to participate in the Special Admit program:

1. Be recommended by their high school principal or counselor;
2. Be approved to participate by their parents/guardian;
3. Have a 3.0 cumulative high school grade point average or better to enroll in degree appropriate courses, or a 2.0 or better GPA for a vocational course;
4. Meet all course prerequisites and/or co-requisites;
5. Sophomores and juniors will only be allowed to enroll in a single course.
6. Seniors may enroll in two courses.

Special Admit application packets may be obtained in the Counseling Center or online at http://www.mtsac.edu/students/counseling/special_admit.html

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.

A parent/guardian approval form allowing the student to participate must be submitted as part of the application process. Parents must acknowledge that their student will be instructed in an adult environment and that the student will be expected to conform to all college policies.

Students who have previously enrolled and who have dropped their courses and/or have not made satisfactory progress will not be allowed to continue their participation in the Special Admit program.

Highly-gifted students enrolled in grades 9 and earlier 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 being accepted for admission.

College credit will be earned as a result of taking courses at Mt. San Antonio College and those grades 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.

Evaluation of Other College Coursework

Mt. San Antonio College reserves the right to evaluate work completed at other regionally accredited colleges and universities. Transfers 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 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 must bring official copies of their transcripts prior to their registration appointment.

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

Acceptance of Domestic Coursework from Accredited Colleges and Universities in the United States

The College will accept "degree appropriate" or "baccalaureate" level courses from 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 same 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 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 complete the paperwork at Admissions and Records.

Acceptance of International Coursework from Accredited Colleges and Universities outside the United States

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.

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 with three possible methods of rewarding student achievement in the Career Technical Education courses taken at the secondary level. The three types of articulation include Project Credit, Course Equivalency and College Units of Credit.

Project Credit is the minimum level of articulation and results in a certificate to be submitted in a specified college course in lieu of a specific required project or projects. Course Equivalency recognizes the information gained from the secondary experience and allows students to use that experience to continue their career education by taking an advanced college level course. Project Credit and Course Equivalency articulation will not result in units of credit at the college.

College Units of Credit is the most common form of articulation between the college and secondary schools. 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:

- 2+2 Articulation Equivalency Form
- High School Transcript
- ROP/Adult Education Certificate of Completion

Forms are available from participating high school instructors. Secondary instructors submit all required paperwork to the Tech Prep 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 articulations with high schools, ROPs and adult schools, please contact the CTE Transitions Office, Bldg. 21D, at (909) 274-5252.

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. SAC Application for Admission
- International (F-1 Visa) Student Application
- Application processing fee of \$50.00 (Must be paid in U.S. currency (check or money order) made payable to Mt. San Antonio College. Personal checks must have the accountholder's name and address preprinted on them.
- Confidential Financial support documents
- Qualifying score from one of the following College approved tests:
 - 1) TOEFL (minimum score of 133 on the computer-based test, or 450 on the paper-based test, or a score of 45 on the Internet-based test). Information regarding TOEFL may be obtained at www.toefl.org. If you are mailing your score directly, our institution code is "4494".
 - 2) IELTS (overall band score of 4.5 or higher). Information regarding IELTS may be obtained at www.ielts.org.
 - 3) Mt. SAC's AWE (Assessment of Written English) - Placement in AMLA 41W or higher. Information regarding the AWE may be obtained at www.mtsac.edu/students/assessment.
- Transcripts from high school and/or college attended
- TB (tuberculosis) test
- Proof of health insurance (prior to registration)

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

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

	Application Deadline	Classes Begin
Fall Semester	First Monday of June	Late August
Summer Intersession	First Monday of April	Late June
Spring Semester	First Monday of November	Late February

F-1 Visa students can obtain all application materials from our College Website at <http://www.mtsac.edu/international/index.html> 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. Students will be required to take the

Assessment of Written English (AWE) when they arrive at Mt. San Antonio College. Applications received after the deadline will be considered for the following semester. The application fee must accompany the admission application. (AP 5010)

Registration

Registration for classes is conducted online via the web at <http://my.mtsac.edu>. Students who enrolled in the previous semester or session preceding the enrollment term are eligible to register for classes. Students may check their date and time to register at <http://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 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

Students are charged an enrollment fee of \$46 per unit and a mandatory Health Services fee for each term at Mt. San Antonio College. A Student Representation fee and an optional Student Activities fee are collected for Fall and Spring semesters only. In addition to these fees, non-resident and international students also pay tuition of \$227 per unit. Students wishing to park in the student parking lots are required to have a valid Student Parking Permit which can be purchased online through the student portal. Fees are subject to change. Financial aid, scholarships and Board of Governors Fee Waiver (BOGW) 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.

Student Representation Fee

The Student Representation Fee is a mandatory fee that is collected during fall and spring registration for the purpose of providing Mt. SAC students the means to state their positions and viewpoints before city, county, district, and state government agencies. 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, then the student must: 1) visit the Student Life Office in Building 9C or <http://as.mtsac.edu> to get the opt-out form; 2) complete the form and; 3) return it to the Bursar's Office prior to paying the college fees.

Refund of Fees

To be eligible for a refund, students must drop their classes by the refund deadline for that class. The deadline can be found on their Student Schedule/Receipt. 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, materials 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, transcripts, 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, unpaid library fine, 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 transact College business until the hold is satisfied. (BP 5035, AP 5035)

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 in their course work. In addition, the process allows the faculty to instruct their courses at an appropriate level with the knowledge that students will be reasonably prepared. For more information, visit

<http://www.mtsac.edu/assessment>

Placement Tests

Placement tests are required for appropriate course placement. Students take placement exams for Math, English, Chemistry and Reading courses. Advanced level math placement exams should be taken when applicable to the student's academic background and intended program of study.

Test Information Sessions

The sessions will prepare students to take the English and Math placement test and provide an opportunity for students to ask questions. The information sessions will also provide strategies and resources. For further information, contact the Assessment Center at (909) 274-4265 or visit www.mtsac.edu/assessment

English Placement

The College utilizes the Assessment of Written English (AWE) to evaluate students' writing skills. Most students are required to have their English competency assessed prior to registration. Students will be given a writing prompt and the writing sample will be evaluated by at least two faculty members. Based on the faculty evaluation of the student's writing skills, they are placed in one of the following categories:

- Eligible for English classes. Based on assessment results, students will be eligible for either ENGL 1A, 68, 67, or LERN 81.
- Eligible for AMLA writing courses (designed for students who are not fluent in the English language). Students may enroll in AMLA writing courses and continue enrolling in AMLA writing courses until they are eligible for ENGL 67 or ENGL 68.
- Eligible for ESL (English as Second Language) classes. Students may enroll in ESL adult education courses each semester until eligible for AMLA courses; then enroll in AMLA courses each semester until they are eligible for ENGL 67 or English 68.

Students in any of the categories listed above may enroll in other courses for which they are eligible. Students with limited English skills are not prohibited from enrolling in vocational courses.

Math Placement

The College utilizes a selection of assessment instruments to place students into math courses. Students take one of the math placement exams commensurate with their most recent, successful completion of Pre-Algebra, Algebra, Intermediate Algebra or Pre-Calculus.

Reading Placement

The College utilizes the Degrees of Reading Power (DRP) and COMPASS/ESL reading tests to assess student reading skills. Based on the results of the reading test, the student will be placed in an appropriate reading course. Please be advised that the reading competency requirement for graduation can be met by attaining eligibility for READ 100.

Chemistry Placement

The College utilizes the California Chemistry Diagnostic Test to determine student readiness for Chemistry 50. Students who pass the chemistry placement test will not be required to take chemistry prior to enrolling in Chemistry 50.

Retest Policy

Students may repeat a test once every three months. Under certain extenuating circumstances and with approval of the Director of Assessment and Matriculation, a test may be repeated prior to the three-month limit.

Placement Test and Eligibility Time Limits

Placement test scores are valid for two years from the date the test was taken. Eligibility based on test placement is not valid after the two-year period. Eligibility based on previous coursework does not expire.

Test Scores and Placement from Other Colleges

Math and reading test scores will be accepted from other colleges if that college uses the same test as Mt. SAC. Test scores from other college English tests are not accepted. Mt. SAC does not accept placement granted at other colleges.

Appeals Process

Students may appeal their English and/or Math placement if they can demonstrate alternate proof of course equivalency or competency. If extenuating circumstances exist that may affect course placement, students may seek consultation in the appropriate division office. Students should be prepared to present documentation such as high school or college transcripts, additional test results, or work experience.

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 make an appointment for orientation immediately after filing an application and taking the necessary placement tests.

Visit <http://mtsac.edu/counseling/orientation.html>

COUNSELING/ADVISEMENT

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 semester of enrollment to develop an Educational Plan. The Educational Plan lists the courses needed to complete a specific major, as well as identifying graduation and/or transfer requirements in general education.

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

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

1. completed an Associated degree or higher from a regionally accredited institution;
2. 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;
3. completed these services at another community college within a time period identified by the College;
4. enrolled at the College solely to take a course that is legally mandated for employment as defined Section 55000 or necessary in response to a significant change in industry or licensure standards;
5. enrolled at the College as a special admit student pursuant to Education Code section 76001.

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.

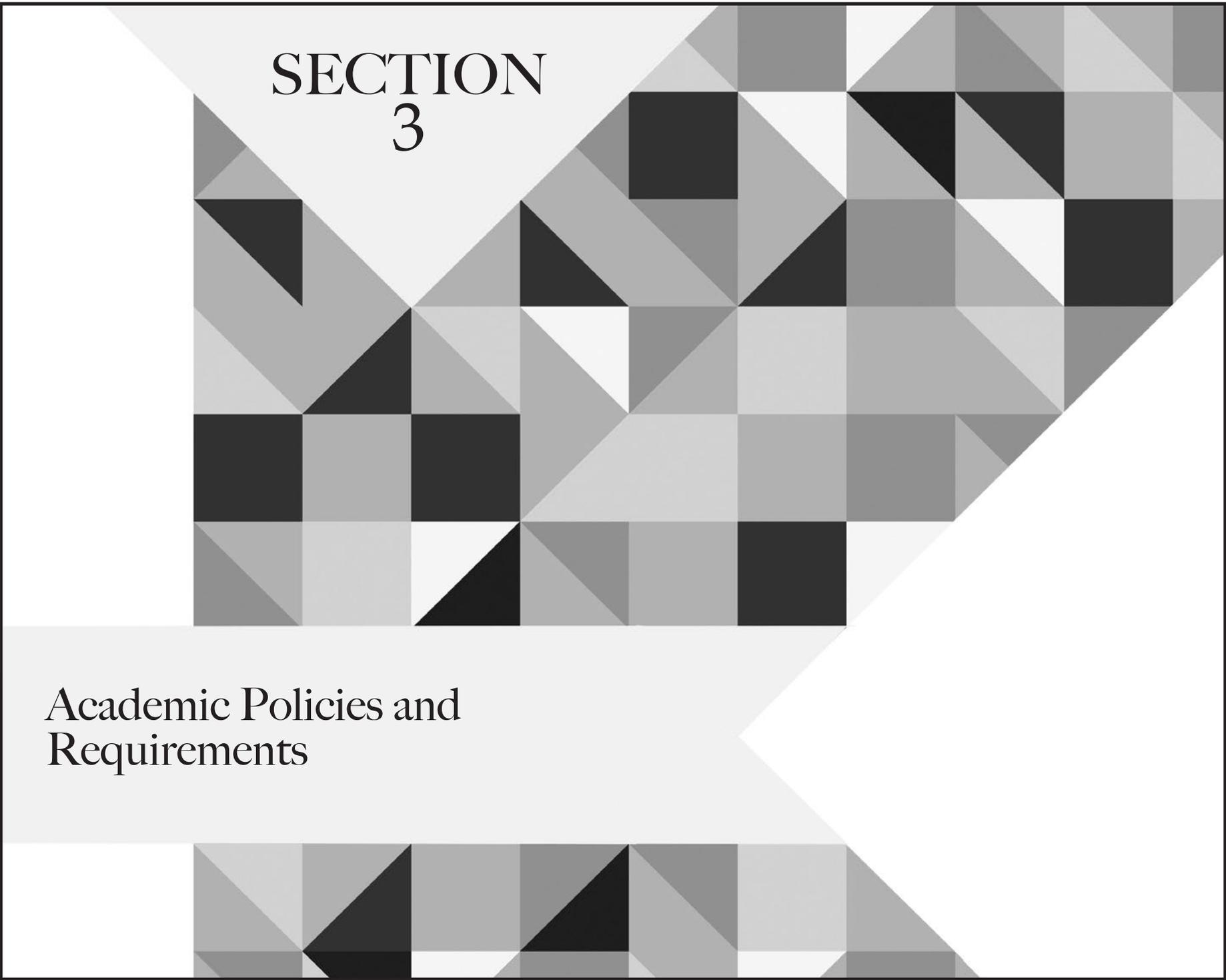
Advisory

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 meet with the Director of Assessment and Matriculation)
- The prerequisite or corequisite is being applied in a discriminatory manner. (The student will meet with the Director of Assessment and Matriculation)
- The prerequisite violates the provisions of the State Education Code. (The student will meet with the Director of Assessment and Matriculation)



SECTION
3

Academic Policies and
Requirements

ACADEMIC POLICIES AND REQUIREMENTS

For detailed information regarding Mt. San Antonio College Board of Trustees Policies (BP) and Administrative Procedures (AP), go to <http://www.mtsac.edu/governance/trustees/policies.html>

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)

ATTENDANCE AND ENROLLMENT

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 his/her classes of the attendance and absence policies at the beginning of each semester.

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.

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 for information regarding key dates. Dates vary and are often course specific.

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.

Student Unit Limits

Students may enroll in a maximum of 18 units each semester and up to seven units each summer and winter session. 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 Office, located on the upper level of the Student Services Center.

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)

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:

- Courses for which repetition is necessary to meet the major requirements of CSU or UC for completion of a Bachelor's degree.
- Intercollegiate athletics courses in which student athletes are enrolled to participate in an organized competitive sport.
- Intercollegiate academic or vocational competition courses that are designed specifically for non-athletic competitive events.

In some cases, a group of courses may carry a collective limitation on the number of allowed repetitions for that entire group/cluster of courses (for example, when a similar educational activity is offered in beginning and advanced course levels.) To determine whether a course is repeatable, refer to Section 10, Course Descriptions, in this Catalog.

Repeating Courses Previously Passed

Courses for which satisfactory grades of A, B, C, or Pass are received may not be repeated, according to current State regulations. Only upon extenuating circumstances will repetition in courses for which the student has satisfactorily passed be allowed. Students with extenuating circumstances may file a Petition for Exceptional Action form in the Admissions and Records Office. Students who repeat courses based on this provision will not earn additional units or grade points toward improving or changing the previous grade earned in the class or toward changing the overall grade point average.

Limitations on Repeating Courses

Students who have recorded a mark of W, D, F, No Credit or No Pass will only be allowed to repeat the same course two times, for a total maximum enrollment of three times. The student's permanent academic

Academic Policies and Requirements

record will be annotated such that all course work that has been taken and forgiven or repeated will remain legible, insuring a true and complete academic history.

In cases in which the student's grade and/or withdrawal was the result of an extenuating circumstance, students may file a petition to repeat a class an additional time (whether the prior enrollment was due to a substandard grade or a withdrawal.) Extenuating circumstances are verified accidents, illnesses or other circumstances beyond the control of the student.

Petitions for Exceptional Action

Student Petitions for Exceptional Action forms are available from the Counseling Office and 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 a class (past the census date) in one of the immediate prior two semesters.
- In order to maintain catalog rights at Mt. SAC, based on the initial semester of enrollment, a student may:
 1. Attend another regionally accredited post-secondary institution.
 2. Maintain "continuous attendance" at a regionally accredited post-secondary institution while away from Mt. SAC.
 3. Not be absent from Mt. SAC for four or more primary terms (two years).

CREDITS AND GRADES

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

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.)	

number of in class hours per week is required for each unit of credit. During 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:

- **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 session
- **Part-time** — enrolled in less than 12 units during the fall or spring semester or less than 4 units during a six-week session.
- **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 semester. Any student enrolled as of the first day of the fourth week in a full semester course for any semester shall receive one of the designated grading scale marks on his/her permanent records.

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.

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 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 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)

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

Some courses offered at Mt. San Antonio College are available to students on two different grading options: letter grade (A, B, C, D, F) or Pass/No Pass (Pass = A, B, or C; NP = D, F). A few classes are offered for Pass/No Pass only. These courses are designed to encourage students to explore areas outside their major field of study in order to broaden and enrich their collegiate experience, and to afford an opportunity for departments to offer courses in which there is diminished emphasis on grades. The Pass/No Pass grading option is not available for General Education courses or for courses used to meet major requirements. 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 or in person with a picture ID at the Admissions and Records Office in the Student Services Center. The grading option may not be changed at a later date. Students enrolled in short-term courses of less than semester length, but greater than six weeks, must determine their grading option no later than the end of the first 30% of the course or 30% of the required hours of instruction listed in the description for an open-entry/open-exit course. In any short-term course of less than six weeks, students must determine their grading option at the time of registration.

Credit toward graduation by using Pass/No Pass classes is limited to a maximum of 16 units (AP 4232). Courses taken for Pass/No Pass are not counted in calculating grade point average, or in determining eligibility for the Dean's List or President's List, but such courses are considered in progress probation and dismissal procedures.

Students are cautioned that upon transfer to baccalaureate institutions, "NP" grades typically are considered to be "F" grades. (BP 4230, AP 4232)

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)

CREDIT BY EXAMINATION		
<p>ARTS DIVISION</p> <p><i>Commercial & Entertainment Arts</i></p> <p>ARTC 100 Graphic Design I ARTC 200 Web Design GRAPH 10 Photo Editing with Photoshop GRAPH 16 Digital Image Design (Illustrator) PHOT 4 Digital Photography PHOT 10 Basic Digital and Film Photography PHOT 20 Color Photography</p> <p><i>Fine Arts</i></p> <p>ANIM 108 Principles of Animation ARTC 70 Computer Graphics: Introduction ARTC 74 Web Design</p> <p><i>Music</i></p> <p>MUS 2 Music Theory MUS 5A Musicianship MUS 7 Fundamentals of Music MUS 17A Elementary Class Piano MUS 17B Intermediate Class Piano</p> <p>BUSINESS DIVISION</p> <p><i>Accounting and Management</i></p> <p>BUSA 11 Fundamentals of Accounting BUSA 53 Ten Key Calculations BUSA 68 Business Mathematics BUSA 72 Bookkeeping/ Accounting BUSM 20 Principles of Business BUSM 60 Human Relations in Business BUSM 61 Business Organization and Management BUSM 66 Small Business Management</p> <p><i>Business Administration</i></p> <p>BUSR 50 Real Estate Principles</p> <p><i>Child Development</i></p> <p>CHILD 5 Principles/ Practice in Child Development Programs CHILD 61 Language Arts & Art Media for Young Children CHILD 64 Health, Safety, and Nutrition of Young Children</p> <p><i>Computer Information Systems</i></p> <p>CISB 11 Computer Information Systems CISB 15 Microcomputer Applications</p>	<p><i>Consumer Science & Design Technologies</i></p> <p>FASH 10 Clothing Fundamentals FCS 41 Life Management NF 10 Nutrition for Personal Health and Wellness NF 61 Creative Foods HRM 51 Introduction to Hospitality HRM 52 Food Safety & Sanitation HRM 53 Dining Room Service Management HRM 54 Basic Cooking Techniques HRM 56 Management of Hospitality Operations and Personnel HRM 57 Restaurant Cost Control HTM 60 Purchasing for the Restaurant Industry HRM 61 Menu Planning HRM 62 Event Planning and Catering HRM 64 Hospitality Financial Accounting I HRM 66 Hospitality Law HRM 70 Introduction to Lodging HRM 81 Garde Manger HRM 82 Baking and Pastry HRM 83 International Cuisines HRM 91 Work Experience in Rest/Hospitality</p> <p><i>Office Technology</i></p> <p>BUSO 5 Business English BUSO 96 A Business Vocabulary COMP 1 Computer Keyboarding COMP 1A Computer Keyboarding COMP 1B Computer Keyboarding COMP 2 Intermediate Computer Keyboarding COMP 10 Operating the Macintosh Computer COMP 12 Office Computer Applications COMP 20 Microsoft Word</p> <p>CONTINUING EDUCATION</p> <p><i>Adult Basic Education</i></p> <p>BSHS ALG1 High School Algebra I BSHS BIO High School Biology BSHS USH High School United States History BSHS WHS High School World History</p> <p>HUMANITIES & SOCIAL SCIENCES DIVISION</p> <p><i>Sign Language/ Interpreting</i></p> <p>SIGN 101 American Sign Language 1 SIGN 102 American Sign Language 2</p>	<p>SIGN 103 American Sign Language 3 SIGN 104 American Sign Language 4 SIGN 105 American Sign Language 5</p> <p>PHYSICAL EDUCATION DIVISION</p> <p><i>Physical Education & Wellness Programs</i></p> <p>KIN 19 Introduction to Prevention of Athletics Injuries</p> <p>NATURAL SCIENCES DIVISION</p> <p><i>Agricultural Sciences</i></p> <p>AGAN 1 Animal Science AGLI 16 Horse Production AGOR 1 Horticultural Science AGOR 13 Landscape Design</p> <p><i>Biological Sciences</i></p> <p>ANAT 50 Basic Anatomy & Physiology BIO 1 General Biology</p> <p>TECHNOLOGY AND HEALTH DIVISION</p> <p><i>Aeronautics, Transportation</i></p> <p>AERO 23 Primary Pilot Ground School AERO 25 Commercial Pilot Ground School AERO 26 Aviation Weather AERO 29 Federal Aviation Regulations AERO 30 Instrument Ground School TRAN 17 Air Transportation</p> <p><i>Air Conditioning, Welding, and Water Technology</i></p> <p>AIRC 10 Technical Mathematics in Air Conditioning and Refrigeration AIRC 11 Welding for Air Conditioning and Refrigeration AIRC 20 Refrigeration Fundamentals AIRC 25 Electrical Fundamentals for Air Conditioning and Refrigeration AIRC 26A Heat Pump Fundamentals AIRC 26B Gas Heating Fundamentals WATR 60 Introduction to Water Systems WATR 61 Water Treatment WATR 62 Water Distribution WATR 63 Cross Connection Control-Certified Tester WATR 64 Cross Connection Control-Certified Specialist WATR 65 Water Hydraulics and Instrumentation</p>

CREDIT BY EXAMINATION (CONTINUED)

WELD 40	Introduction to Welding	Electronics & Computer Technology	Industrial Design Engineering
WELD 50	Oxyacetylene Welding	CNET 50	IDE 120
WELD 51	Basic Electric Arc Welding	CNET 52	IDE 130
WELD 53A	Welding Metallurgy	CNET 54	IDE 220
WELD 70A	Beginning Arc Welding	CNET 60	IDE 230
WELD 70B	Intermediate Arc Welding	CNET 62	
WELD 70C	Certification for Welders	ELEC 11	
Aircraft Maintenance Technician and Manufacturing Technology		ELEC 50A-B	Public Services
MFG 11	Manufacturing Processes I	ELEC 50AL-BL	AD1
MFG 12	Manufacturing Processes II	ELEC 51	ADJU 1
MFG 15	AutoCAD 2D	ELEC 51L	ADJU 2
MFG 17	3-D CAD Mechanical Modeling	ELEC 56	ADJU 3
MFG 19	Parametric Solid Modeling for Manufacturing	ELEC 56L	ADJU 4
MFG 25	Advanced Parametric Solid Modeling	ELEC 61	ADJU 5
MFG 27	Auto Desk Inventor	ELEC 76	ADJU 6
MFG 38	MasterCAM I	ELMA 65A-B	ADJU 13
MFG38B	Advanced MasterCAM		ADJU 20
MFG 38C	MasterCAM Solids	Fire Technology	ADJU 28
MFG 39	SurfCAM I	FIRE 1	ADJU 38
MFG 39B	SurfCAM II	FIRE 2	ADJU 59
MFG 58	Blueprint Reading for Manufacturing	FIRE 3	ADJU 68
MFG 70	Technical Mathematics - Manufacturing Application	FIRE 4	ADJU 74
MFG 85	Manual Computerized Numerical Operations	FIRE 5	CORS 10
Architecture & Engineering Design Technology		FIRE 6	
ARCH 10 1	Design I - Elements of Design	FIRE 7	
ARCH 121	CADD and Digital Media Level I	FIRE 8	
ARCH 141	Architectural Drawing	FIRE 9	
ARCH 146	Architectural Drawings and Fabrications	FIRE 10	
ARCH 25	Architectural Working Drawings II	FIRE 11	
EDT 11	Technical Drawing	FIRE 20	
EDT 12	Technical Engineering Working Drawings	FIRE 21	
EDT 16	Basic CAD and Computer Application	FIRE 30	
INSP 17	Legal Aspects of Construction	FIRE 40	
INSP 67	Blue Print Reading	FIRE 41	
INSP 70	Elements of Construction	FIRE 50	
INSP 71	Construction Estimating	FIRE 51	
		FIRE 60	
		FIRE 61	

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

- Credit by Examination will be granted only for those courses which have been so designated by the departments.
- Any grade received for Credit by Examination will be entered on the student's permanent record with a notation of "Credit by Comprehensive Exam."
- A student may petition for Credit by Examination provided:
 - The student has been registered at Mt. San Antonio College.
 - 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).
 - The student has at least a 2.0 grade point average. This includes transfer/new students.
- The student may obtain the petition for Credit by Examination from the Division Office.
- The department will establish written guidelines by which the eligibility of a student to take such an examination is determined.
- 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.
- 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.

HEALTH SCIENCES DIVISION

Radiologic Technology

RAD 50	Radiologic Technology
RAD 61A	Theory of Radiologic Technology
RAD 61B	Radiographic Positioning
RAD 61C	Radiologic Technology Seminar
RAD 91	Nursing Procedure in Radiologic Technology

Respiratory Therapy

RESD 50	Theory and Principles of Respiratory Therapy
RESD 50A-B	Respiratory Theory Science
RESD 52	Pulmonary Anatomy and Physiology
RESD 53	Cardiopulmonary Pathophysiology
RESD 55	Adult Respiratory Intensive Care
RESD 57 A-B	Special Procedures for Respiratory Care
RESD 58	Neonatal Intensive Care
RESD 59	Respiratory Therapeutic Modalities
RESD 60	Comprehensive Pulmonary Assessment
MEDI 90	Medical Terminology

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 table on page 14.

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.

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.

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*	*3/4	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	None	6
Chinese Language and Culture	3	C2	3	CHIN 1 + CHIN 2	6
Computer Science A	3	N/A	N/A	CSCI 145	3
Computer Science AB	3	N/A	N/A	None	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
Government and Politics: Comparative	3	D2	3	None	3
Government and Politics: US	3	D1	3	None	3
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: 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 B	3	B1	3	None	6
Physics C: Electricity and Magnetism	3	B1	3	None	4
Physics C: Mechanics	3	B1	3	None	4
Psychology	3	D2	3	PSYC 1A	3
Spanish Language	3	C2	3	SPAN 1 + SPAN 2	6
Spanish Literature	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 History	3	C2 or D1	3	HIST 1	6
World History	3	C2 or D2	3	None	6

*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.

INTERNATIONAL BACCALAUREATE PROGRAM					
International Baccalaureate (IB) Higher Level (HL) 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)	5	C2	3	None	6
IB Language A2	5	C2	3	None	6
IB Language A2 (Classical Languages)	5	C2	3	LATN 1	6
IB Mathematics	4/5	Math Competency	N/A	MATH 160/MATH 180	6
IB Physics	5	B1	3	None	6
IB Psychology	5	D2	3	PSYC 1A	3
IB Theatre Arts	5	C1	3	THTR 9	6

- 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 insure 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)

HONORS

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

Graduation honors are awarded as follows:

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, Ext. 4528

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 the following universities: 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 and medal upon honors certification.

Entrance Requirements

- **High School Students** — Eligibility for ENGL 1A; 3.5 GPA; letter of recommendation; short essay
- **Mt. San Antonio College Students** — Nine transferable units; Eligibility for ENGL 1A; 3.2 GPA, short essay, letter of recommendation (Waivers can be obtained through the Honors Program Office for highly motivated students with a competitive GPA, an in-progress grade report and professor recommendation.)

Requirements for "Honors Scholar" Designation

- Complete 15 units of honors courses with a minimum 3.2 GPA for honors certification
- Maintain a 3.2 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).

1. **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.
2. **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.
3. **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. Applications are available in Student Life, Building 9C. For further information and review of academic eligibility, students should consult an Alpha Gamma Sigma Officer or an Alpha Gamma Sigma Advisor.

Phi Theta Kappa

Mt. SAC sponsors the Alpha Omega Alpha Chapter of Phi Theta Kappa, an international scholastic honorary organization for two-year colleges. Eligibility for membership is established for the following:

1. Full and part-time students who have completed 12 appropriate degree units with a 3.5 grade point average at an accredited institution.
2. Students who have maintained a 3.5 grade point average while a member.

There are several advantages which accompany this honor, including recognition at graduation and access to scholarships offered to members by more than 700 U.S. colleges and universities. For further information and review of academic eligibility, students should consult a Counselor or a Phi Theta Kappa advisor. Applications are available in the Honors Program office in Building 26A-1680.

ACADEMIC STANDARDS

Probation and Dismissal

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

Academic Probation

A student is placed on Academic Probation when the student has:

1. attempted at least 12 units, and
2. earned a cumulative grade point average (GPA) below 2.00.

Progress Probation

A student is placed on Progress Probation when the student has:

1. enrolled in a total of at least 12 units, and
2. 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 session, while on probation. (BP 4250, AP 4250)

Clearing Probation

1. **Academic Probation** - The student shall be cleared from Academic Probation when the student's cumulative grade point average is 2.0 or higher.
2. **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

1. Probation
 - a. 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
 - b. 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.

2. Continued Probation
 - a. Continued Academic Probation - occurs when the student in a second consecutive semester continues to have a cumulative grade point average below 2.0, or
 - b. 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.
3. Dismissal occurs after three consecutive semesters of Academic or Progress Probation. The student shall be dismissed for at least one semester. If the student has enrolled in the subsequent term 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 terms or more.

Appeal of Dismissal

A student who is subject to dismissal may request an appeal of dismissal through the Counseling Department 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 at least one semester.

Reinstatement after Dismissal

A dismissed student may request reinstatement through the Counseling Center after an interval of one semester. Requests must be made NO LATER THAN TWO WEEKS BEFORE the beginning of the semester. Requests for reinstatement will not be allowed thereafter. 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. A reinstated student shall also remain on contract until clearance of probation. Failure to comply with the terms and conditions of the contracts may result in subsequent dismissal. (BP 4250, AP 4255)

RECORDS

Definition of Educational Records

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

Challenge of Educational Records

1. 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 with the time and place of the observation noted.
2. 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/universities need to contact those institutions to see if they are eligible for academic renewal under the provisions of academic renewal of said institution.

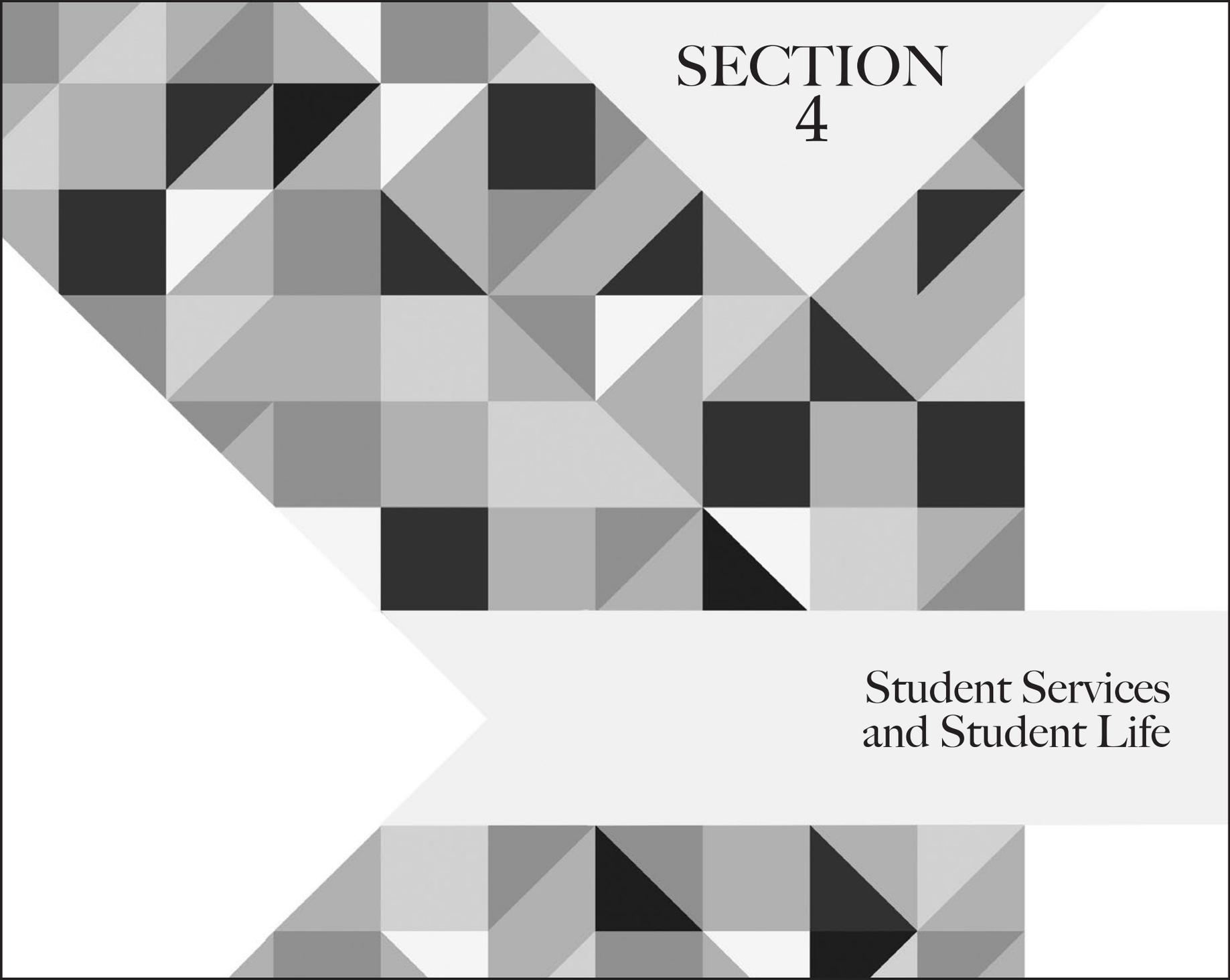
- A. A maximum of twenty-four units may be alleviated.
- B. Since completion of the work to be disregarded, the student's cumulative grade point average for all units completed at the time of adjustment must be at least 3.0 for 18 semester units, 2.5 for 24 semester units, or 2.0 for 30 units. The cumulative grade point average may include coursework completed at Mt. San Antonio College and/or 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.
- C. A time period of at least two years must have elapsed since the end of the term of substandard work to be disregarded.

- D. Academic renewal will apply only to substandard grades: D, F, and NP.
- E. The permanent academic record shall be annotated in such a manner that all work remains legible, insuring a true and complete academic history.
- F. 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.
- G. Students requesting academic renewal should consult 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 <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 <http://my.mtsac.edu>. (AP 5040)

Further information regarding transcript services is available at <http://www.mtsac.edu/students/admissions/transcripts.html>



SECTION
4

Student Services
and Student Life

Student Services and Student Life**STUDENT SERVICES**

Mt. San Antonio College provides a wide range of support services which are essential for success to assist a diverse student population in achieving their educational, career, personal and social goals.

Admissions and Records**Student Services Center, Ext. 4415**

<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:

1. 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.
2. Course Registration: All registration is conducted online via the web at <http://my.mtsac.edu>. Registration instructions can be found in the current Schedule of Classes or online at <http://my.mtsac.edu>.
3. 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.
4. 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 also available at my.mtsac.edu. To use this service, students must have their Mt. SAC Student username.

**The Aspire Program
Building 9D, Ext. 6396**

<http://www.mtsac.edu/aspire>

The Aspire Program is an academic student success program designed to enhance success among African-Americans and other students enrolled at Mt. San Antonio College. The program strives to achieve equity in academic success, access, retention, degree completion, and transfer.

The program aims to: develop a sense of community among African-American students, other students, faculty, staff and administrators; demonstrate culturally relevant connections between African-American students and the college; assist students in achieving academic success through progress monitoring, study groups, tutoring, counseling and advisement; and promote awareness of student services and leadership opportunities. The

Aspire Learning Community classes provide a combination of English, Reading, Math and/or Counseling courses for students seeking a unique learning experience and a strong sense of community.

Assessment Center**Student Services Center, Ext. 4265**

<http://www.mtsac.edu/assessment>

Students may complete required English, Reading, and Math placement testing in the Assessment Center. Assistance in reviewing course placement is also provided.

The Bridge Program**Building 9D, Ext. 5392**

<http://www.mtsac.edu/bridge>

The Bridge Program is a learning community designed to increase student academic and personal success through the structuring of a personalized learning environment.

Admission to the program is based on academic need. Students participating in Bridge are enrolled in linked classes that are taught in a cooperative environment between professors. In this group setting, students have an opportunity to learn about being successful college students and how to utilize college services. Students are supported by Bridge Program staff and counselors, financial aid advisors, as well as transfer and advising specialists.

The Bridge Program is the right choice for students who find themselves undecided on career choices, have apprehensions about the transition to college and would like to make new friends. Bridge students share particular educational goals, common interests and similar backgrounds.

As part of the Bridge Program, students can choose to be part of the Summer Bridge, English Bridge, Math Bridge and Reading Bridge.

Bursar's Office**Building 4, Lower Level, Ext. 4960**

<http://www.mtsac.edu/bursars>

The Bursar's Office is responsible for the collection of credit registration fees and other campus fees including parking permits, replacements, parking citation fees, enrollment verification and production cards. Student fees may be paid via the web at <http://my.mtsac.edu> or in person at the Bursar's Office.

**CalWORKs (California Work Opportunities
and Responsibility to Kids)****Student Services Center, Ext. 4755**

<http://www.mtsac.edu/calworks>

The CalWORKs Program at Mt. SAC is designed to provide educational support for single or married parents who are recipients of Temporary Assistance to Needy Families (TANF) benefits. In order to receive services, students must receive TANF benefits for themselves. The CalWORKs Office assists students in meeting their Welfare to Work 32/35 hour participation requirements while

achieving their personal and educational goals. A variety of support services are provided to facilitate students' achievement of a degree or certificate:

- Education planning
- Counseling
- Case management
- Tutoring
- Personal development workshops
- Job development/placement assistance
- Advocacy
- Liaison between student and GAIN Services Workers and Eligibility Worker at County Office
- Payment for required books and supplies
- Work-study*
- Childcare*

*Based upon adequate funding

For more information, visit www.mtsac.edu/students/calworks

**CARE (Cooperative Agencies Resources for Education)
Student Services Center, Ext. 4500**

<http://www.mtsac.edu/care>

CARE is a supplemental program for EOPS students who are single head of household parents receiving TANF benefits. The program provides additional assistance to students who are:

- Eligible for EOPS
- Enrolled in at least 12 units upon acceptance
- Currently receiving AFDC/TANF assistance, with at least one child under 13 years of age
- At least 18 years old, single head of household
- Have applied for financial aid
- Pursuing a program at Mt. SAC which will lead to a certificate, degree or transfer

Students who believe they qualify for the program should visit the EOPS Office.

Career and Transfer Services**Student Services Center, Ext. 4510**

Career and Transfer Services helps students get from Mt. SAC to the next step in their educational journey whether that is a career or transfer to a four-year university. Career and Transfer Services provides a variety of activities, events and resources to help students transfer to universities, solidify career goals, sharpen job acquisition skills, and acquire part- and full-time employment.

Career Services include:

- Job and internship referrals
- Career fairs
- Career acquisition skills workshops
- Mock interview sessions

- 1-on-1 assistance with resume preparation, interviewing techniques, and general job search

While Mt. SAC graduates may return to Career and Transfer Services for employment assistance, current students are strongly encouraged to visit Career and Transfer Services while still attending. For more information, please go to <http://careerservices.mtsac.edu>.

Transfer Services include:

- Library of career and college guidebooks and university catalogs
- Workshops on transfer topics
- University representative visits and appointments
- College fairs
- University tours
- Walk-in transfer advising
- Computers for career and transfer research, applications and more!

For more information, please go to <http://transfer.mtsac.edu>.

Counseling Center

Student Services Center, Ext. 4380

<http://www.mtsac.edu/counseling>

Students can take advantage of educational planning, career exploration and decision-making, and other services offered through the Counseling Center. Counselors are available to assist students who:

- are undecided about a major or career direction;
- need information about career and transfer options;
- are having difficulty in courses;
- need assistance with personal problems.

It is highly recommended that students see a counselor during their first semester at Mt. SAC to develop a student educational plan.

Counselors and educational advisors can also provide:

- information on course selection and planning for degree or certificate completion;
- information about major and transfer requirements to CSU, UC and private universities;
- general information about the College.

Disabled Student Programs & Services (DSPS)

Student Services Center, Ext. 4290

<http://www.mtsac.edu/dsps>

The DSPS office provides services to students who have professionally documented disabilities or medical conditions, and need special services to successfully attend classes at Mt. SAC. Students who suspect they might have a disability are welcome to apply for services and an eligibility determination will be made.

To take advantage of the wide array of special programs and services offered, written documentation of disability must be provided by a physician or appropriate professional; the disability must present a limitation to a successful education; the student must demonstrate the ability to benefit from

higher education; and self-management skills (mobility, eating and using restrooms without assistance) must be adequate, unless a personal care attendant is utilized. The College does not provide personal care attendants.

Participation in DSPS and all student disability-related information is confidential. Services offered are based on disability-related needs. Some of the services offered by DSPS:

- Access to a computer lab with adaptive hardware and software
- Sign language interpreters
- Notetakers in the classroom
- Tram service on campus
- Priority registration
- Classroom testing accommodations
- Specialized counseling and advising
- Academic and career strategies classes
- Print material in alternate formats (i.e. Braille, e-text)

Students with a doctor's verification which requires parking in zones designated as "handicapped parking," must display on their vehicles a "Disabled Person" placard or "DP" license plate from the State of California Department of Motor Vehicles. Students with a current "Disabled Person" permit and placard or a "DP" license plate are not required to purchase a student parking permit and are allowed to park in any parking space designated as "handicapped parking," any metered space (at no cost), or any time limited space (without having to observe the time limit specified). Students must ensure that the placard or license plate is displayed properly.

DSPS highly recommends that students visit the Department to determine if there are services that may be of assistance to them while attending Mt. San Antonio College.

Extended Opportunity Programs and Services (EOPS)

Student Services Center, Ext. 4500

<http://www.mtsac.edu/eops>

Extended Opportunity Programs and Services (EOPS) provides access to higher education for students with academic and financial disadvantages.

The services offered are:

- Counseling
- Educational Planning
- Instructional Development and Services
- Tutoring
- Book Service Program
- Financial Assistance

To be eligible for the EOPS program, a student must:

- Be enrolled as a full-time student (12 units or more)
- Have fewer than 40 degree applicable units
- Qualify to receive a Board of Governors Enrollment Fee Waiver under Method A, B or O EFC

- Be educationally disadvantaged
- Be an emancipated Foster Youth

Financial Aid

Student Services Center, Ext. 4450

<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, 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 two or more financial aid programs offered.

All students may be eligible for some form of assistance based on their financial need. The Financial Aid Office, located on the upper level of the Student Services Center building, 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. A FAFSA worksheet is available in the Financial Aid Office for students interested in filing online at www.fafsa.gov.

The information reported on the FAFSA may be verified by the Financial Aid Office using a parent's and/or student's Internal Revenue Services Forms 1040, 1040A or 1040EZ. 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:

1. Having a high school diploma or equivalent such as a GED.
2. Being a U.S. citizen or eligible non-citizen.
3. Maintaining satisfactory progress in accordance with the standards.
4. Not be in default on a federal loan or grant overpayment.
5. Be registered with the selective service, if required.
6. Have a valid social security number.

To be considered for financial aid, students must complete the Free Application for Federal Student Aid (FAFSA) or the renewal application. These applications are usually available beginning in January for the following academic year. If a student is interested in a State of California Grant, the FAFSA and a GPA verification form must be completed. The Cal Grant

Student Services and Student Life

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 <https://mygrantinfo.csac.ca.gov/logon.asp>

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

- Federal Perkins Loans
- Board of Governors Fee Waiver (BOGW)
- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- Federal Work-Study Program (FWS)
- Need-based scholarships
- State CAL Grants
- Chafee Grant (for Foster youth)
- Federal William D. Ford Direct Loan Program

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:

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

The California Community College Board of Governors Fee Waiver (BOGW) program is available to qualified California residents. Only the enrollment fee is waived, and the student is responsible for paying the additional fees assessed. There are three methods to qualify for a Board of Governors Fee Waiver: (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). In addition to the three methods, there are special classifications that qualify for an enrollment fee waiver, which is subject to certification and/or documentation. Refer to the BOGW Fee Waiver application for a list of these classifications. To apply, go to http://www.cccapply.org/bog_waiver/

In addition, the college administers a variety of scholarship programs. Information about the College Scholarship Program can be obtained in the

Financial Aid Office or visit <http://www.mtsac.edu/scholarships>.

ABILITY TO BENEFIT

Beginning on July 1, 2012, federal regulations will require all students applying for financial aid to have a high school diploma, GED or a certificate of high school proficiency. The Mt. SAC Assessment Center will no longer be offering the Ability To Benefit test to students. For further information regarding the federal government's Ability To Benefit regulations, contact the Financial Aid Office. Note: This rule change does not prevent students without a high school diploma, GED or certificate of high school proficiency to attend classes at Mt. SAC. This only affects students eligibility to receive financial aid.

California Dream Act

The California Dream Act of 2011 consists of two bills, Assembly Bill 130 (AB 130), signed into law by Governor Jerry Brown on June 25, 2011; and Assembly Bill 131 (AB 131) signed into law by Governor Brown on October 8, 2011. As a result of the California Dream Act, those students who are eligible for the non-resident tuition exemption (under Assembly Bill 540, or AB 540), but who are ineligible for federal financial aid are now eligible to receive grants and scholarships from the State of California and institutional sources, such as Board of Governor's Fee Waiver (BOG), Cal Grant, and/or institutional scholarships.

Under AB 540, a student who is without a valid immigration status may request exemption from paying nonresident tuition if the student:

Attended a California high school for 3 or more years, AND
Graduated from a California high school or passed the GED or California High School Proficiency Exam.

Students who wish to qualify as AB 540 students must complete and submit a California Nonresident Tuition Exemption Request (sometimes referred to as an AB 540 Affidavit) with required documentation to the Admissions and Records Office at Mt. SAC.

The California Student Aid Commission's Dream Act Application (<https://dream.csac.ca.gov/>) is used to determine the financial eligibility of students who meet the qualifications of AB 540, and who are without a valid immigration status. The application collects basic personal and income information to determine student eligibility for funding under AB 131. Apply between January 1 and March 2 of each year for priority consideration.

Students will need to complete the Dream Application every year to determine eligibility for state and institutional aid. Students should complete and submit Mt SAC's AB 540 Affidavit (California Non-Resident Tuition Exemption Request form) in order to begin a review of eligibility under AB 540.

**The International Student Center
Student Services Center, Ext. 5032**

<http://www.mtsac.edu/international/student-center.html>

The International Student Center, located on the upper level of the Student Ser-

vices Center (9B), is a place where F-1 students can connect with one another and the international community. Students will find comfortable spaces to network with friends, computer stations available for their academic needs as well as referrals to student services and resources. Students with questions related to the College or a personal need will find friendly staff available to assist.

**International Student Programs
Student Services Center, Ext. 4415**

<http://www.mtsac.edu/international>

Mt. San Antonio College annually welcomes hundreds of international students on F-1 Visas to pursue a higher education. International students must complete and submit additional application materials and pay non-resident fees to study at the College. Specialized counseling assistance is available. Staff in Admissions and Records are available to assist international students.

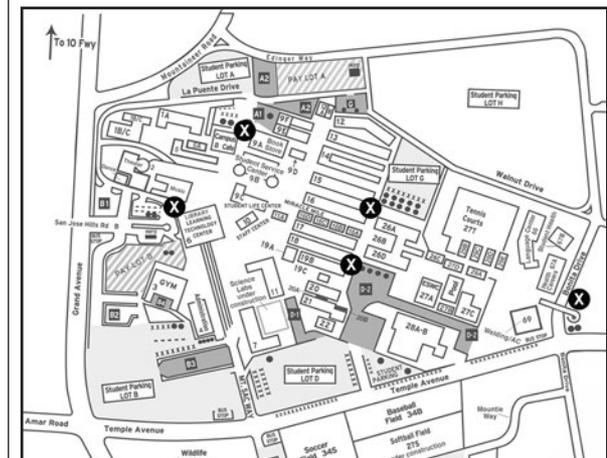
Public Safety Escort Service, Ext. 4233

<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 map below to identify Escort locations. Students may also request a Security Escort by calling (909) 274-4233.

Escort Location Map

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

**Student Health Services
Building 67B, Ext. 4400**

<http://www.mtsac.edu/students/healthcenter>

Medical, chiropractic, personal counseling, nursing and health education services are provided. Additional services include laboratory tests, tuberculosis screening,

limited prescription medication, immunizations, pregnancy testing and referrals. All credit students who are currently enrolled and attending classes are eligible. Part-time faculty are eligible for select services. Some fees may apply. Professional health services are provided primarily on an appointment basis. Same-day appointments are also available; call between 8:00 and 8:30 a.m. First aid services are provided for all students, employees and guests of the College.

Veterans Resource Center (VRC) Building 16C, Ext. 4520

<http://www.mtsac.edu/veterans/vrc.html>

The Veterans Resource Center (VRC) establishes an innovative, collaborative effort to ease the transition for student Veterans to Mt. SAC. Student VRC services include: a student Veterans lounge; student Veteran computer stations; one-on-one FAFSA assistance; one-on-one scholarship research/essay assistance; DSPS Instructional Specialist; Educational/Career Counseling; one-on-one VA educational benefits assistance; one-on-one my.mtsac portal navigation assistance; and on and off-campus service referrals.

Veterans Service Center Student Services Center, Ext. 4520

<http://www.mtsac.edu/veterans>

The Veterans Services Center, located on the upper level of the Student Services Center, provides assistance to Veterans and dependents seeking educational and/or vocational training under Title 38, United States Code. The College cooperates with the U.S. Department of Veterans Affairs (VA) and with the California Department of Rehabilitation in assisting Veterans with certification of benefit requests. The College maintains the Veterans Services Center to assist Veterans and/or dependents in all matters pertaining to Veterans educational benefits.

Veterans and dependents are required to comply with all applicable regulations that pertain to required attendance and progress that the student (Veteran or dependent) must meet in order to receive educational benefits under Title 38, United States Code. "W's," "NC," and "F" grades are considered punitive grades. Adds, Drops, Withdrawals, and last day of attendance must be reported at once. The law requires that educational assistance benefits to Veterans and other eligible persons be discontinued when the student ceases to make satisfactory progress toward completion of his or her training objective. Please refer to the Mt. San Antonio College Probation and Dismissal Policies in this Catalog. The Veteran or dependent has the responsibility to adhere to these standards of attendance and progress and to notify the Veterans Services Center of any change in status that would affect the collecting of Veterans educational benefits.

Veterans and/or dependents must submit a "Veteran's Request for Active Educational Benefits" form each semester to the Veterans Services Center in order to request the continuance of VA educational benefits while attending Mt. SAC. Those eligible for priority registration consideration must submit a

Discharge letter (DD Form 214 Member-4 or Service-2) to the Veterans Services Center. The VA requires all entering Veterans to be formally evaluated for military experience to prevent future interruption of educational benefits. All prior transcripts (College or Service) must be received and evaluated by the Mt. SAC Admissions and Records Office. Students must visit the Counseling Center for assistance in completing an educational plan.

For step-by-step instructions in claiming and utilizing educational benefits at Mt. SAC, Veterans and dependents should download the "Veterans Packet" and all required forms at www.mtsac.edu/students/veterans/

STUDENT LIFE

Student Life provides opportunities for participation in leadership programs, student government, student clubs, and other social, personal growth and development experiences.

Associated Students (A.S.) Student Government Building 9C, Ext. 4525

<http://as.mtsac.edu>

Associated Students serves as the representative voice for students on all College issues and provides students with an opportunity to develop leadership skills. There are seven A.S. executive officer positions and sixteen A.S. Senate positions available to students interested in becoming involved in making a positive difference on campus. The Senate allocates monies to support various College programs, events, and services. There are also opportunities for students to serve on College-wide committees to influence College policies and decision making. The SacBookRac sells A.S. discounted amusement park and movie tickets. Associated Students meetings are held every Tuesday in the Student Center, Building 9C, Room 5, from 3:00 p.m. - 5:00 p.m.

A.S. Student Activities Fee

The Student Activities Fee is an \$11 fee collected every Fall and Spring Semester to provide numerous programs and services on campus including book grants, scholarships, cultural programs, speakers, social activities, and discounted amusement park and movie tickets. This fee is optional. Waiving this fee will exclude the student from taking advantage of these benefits. Students can waive this fee by visiting the Bursar's Office. Refunds will only be issued during the first two weeks of the semester.

Student Representation Fee

The Student Representation Fee is a mandatory fee that is collected during fall and spring registration for the purpose of providing Mt. SAC students the means to state their positions and viewpoints before city, county, district, and state government agencies. 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, then the student must: 1) visit

the Student Life Office in building 9C to get the opt-out form; 2) complete the form and; 3) return it to the Bursar's Office prior to paying the college fees.

Student Clubs and Organizations Building 9C, Ext. 4525

More than 60 student clubs and organizations 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 student club and meets regularly to discuss club activities and formulate procedures to better serve the campus community. Join-A-Club is a three-day event at the beginning of each semester for students to learn more about co-curricular campus involvement opportunities. A current listing of student clubs and organizations is available online at <http://www.mtsac.edu/clubs>.

Student Life Office/Student Center Building 9C, Ext. 4525

<http://www.mtsac.edu/studentlife>

The Student Life Office is responsible for student involvement and leadership programs and serves as the hub for student activities at Mt. SAC. Information regarding the LEAD (Leadership Education and Development) Program, student leadership conferences, volunteer opportunities and other involvement opportunities are available in the Student Life Office. This office also handles lost and found items, approves and enforces all on-campus postings, and assists in contacting students in emergency situations. The Associated Students (AS) offices are located here.

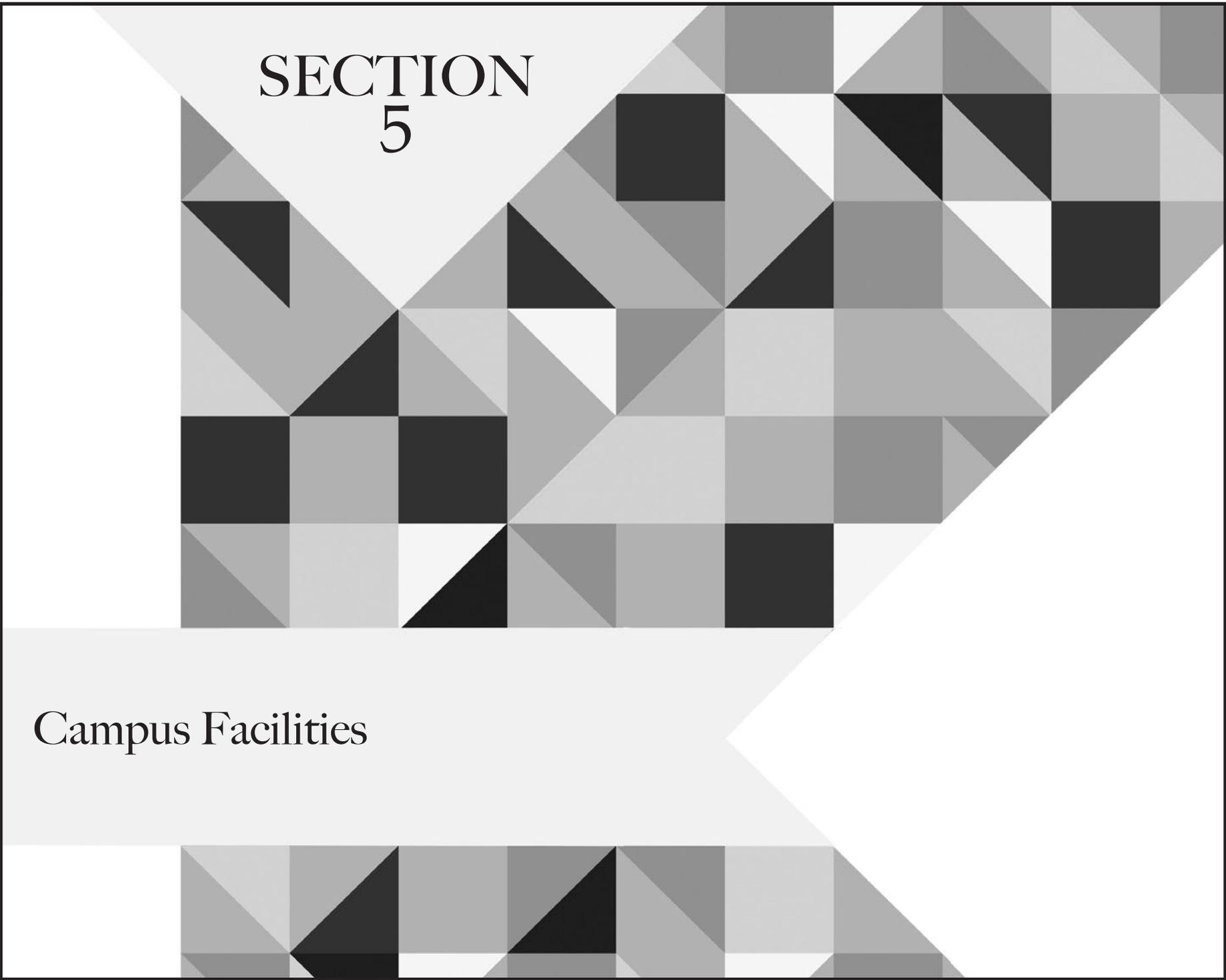
Students who are involved in co-curricular activities are encouraged to complete the Activities Transcript (available online), which complements their academic transcript and verifies the student's involvement in service and leadership activities outside of the classroom.

The Director of Student Life serves to counsel and discipline students based upon the College's Student Discipline Policy. Students are assisted in understanding their due process rights and grievance procedures. The office responds to disciplinary issues and advises faculty and staff on issues related to discipline. Students who have complaints regarding their final grades or their experiences on campus can receive assistance in the Student Life Office.

Student Life Center Building 9C, Ext. 5959

<http://www.mtsac.edu/studentlife/studentlifecenter.html>

The Student Life Center provides a relaxing area to lounge, watch TV, and play foosball, ping pong, a variety of board games, or video games. Students also have access to free wireless Internet. The Student Life Center creates an environment for students to socialize and connect with other students as well as serves as a meeting place for events, activities, clubs and student government. The Student Life Center is also the place to find information about off-campus housing.



SECTION
5

CAMPUS FACILITIES

Campus Facilities

CAMPUS FACILITIES**Art Gallery****Building 1B, Ext. 4328**

<http://www.mtsac.edu/artgallery>

The Mt. San Antonio College Art Gallery has a long history of outstanding Gallery Exhibitions highlighting prominent international and national artists as well as outstanding faculty and student artists.

The Gallery offers four to five exhibitions per year. Among these are the Faculty Exhibition featuring the works of Mt. San Antonio College faculty artists and the annual Student Exhibition featuring student work from the fine arts, animation, advertising design, illustration, and photography.

Athletic Facilities, Ext. 4630

Hilmer Lodge Stadium, a 13,500-seat football and track facility, is located in the southeast section of the College campus. This is the home of the world famous "Mt. SAC Relays." Other athletic facilities include tennis courts, volleyball courts, cross-country course, baseball field, softball field, soccer field, a 1,500-seat gymnasium, wrestling gym, strength-training facilities, an Olympic size swimming pool, and an Exercise Science/Wellness Center.

Bookstore (SacBookRac)**Building 9A, Ext. 4475**

<http://bookstore.mtsac.edu>

SacBookRac offers textbooks, school supplies, Mt. SAC apparel, general trade and paperback books, gift items, greeting cards, Metro and Foothill bus passes and houses the Mt. SAC photo ID area. SacBookRac also provides ordering and distribution of faculty caps and gowns.

Students are responsible for obtaining their own textbooks and supplies. Costs for books and supplies for a full-time student average \$300-\$600 per semester, depending upon the program of study. Students are encouraged to purchase books early, especially to save money by purchasing used books. Books are sold on a first-come, first-served basis. Students may order books online at www.sacbookrac.com. Orders can be picked up at the bookstore or shipped to the student's home.

Refund Policy

Refunds are allowed within a limited time period when classes are changed and officially dropped. The refund policy is posted and available in the bookstore and printed on a bookmark given at the time of purchase.

Child Development Center**Buildings 70-73, Ext. 4920**

<http://www.mtsac.edu/cdc>

Admission Policy

Childcare and education services for children from 3 months through 5 years of age are provided between the hours of 7:00 a.m. and 7:00 p.m., Monday through Thursday and 7:00 a.m. until 5 p.m. on Fridays for student-parents, staff and faculty, and community parents. The Child Development Center welcomes all children regardless of sex, ethnicity, religion, or physical handicap.

According to State Law, children must meet general health requirements to enroll/attend. Parents requesting funding assistance for full-time services must demonstrate a basic need for care.

Types of Funding Assistance Available**State Preschool Program**

State Preschool Program funding is available for eligible student-parents of 3 and 4 year old children (4 year-old children have priority). A minimum daily fee, established by the State, may apply.

General Childcare Funding

General Childcare funding is available for income and need eligible families. This funding applies to infants up to 3-year-olds and before/after school kindergarten. A minimum daily fee, established by the State, may apply.

Child Care Access Grant Funding

Student-parents who receive or are eligible to receive a Pell Grant may qualify for this childcare/early education funding. Funds are limited to Mt. SAC students only.

Alternative Payment Program (CalWORKS)

The Child Development Center accepts "Alternative Payments" or fees from community agencies and programs such as CalWORKS for childcare. Interested parents must inquire with their individual CalWORKS Eligibility Worker or GAIN Worker.

Fee Program

Families ineligible for childcare/early education subsidies may enroll in the Fee-based program. The fee schedule is available by contacting the Child Development Center at Ext. 4920

Enrollment

Formal application must be made in person at the Child Development Center. Final acceptance into the program will be determined when eligibility has been established, all paperwork has been completed, and all applicable fees are paid. State law requires that an orientation be completed.

For further information, contact the Center by phone or visit the website.

Farm**F Buildings, Ext. 4540**

The Farm is located in the northeast area of campus, near the intersection of Bonita and Walnut Drives. The Farm offers an unrivaled opportunity for student learning serving as a laboratory and supervised farm. Students interested in stock breeding, veterinary science, agri-business, horse production, field crop production, horticulture, or farm products gain valuable experience by working with their own animals and crops while attending Mt. SAC. Contact the Campus Events office at Ext. 4794 for information on guided tours.

Food Services

<http://www.mtsacdining.com>

The Food Services Department provides the campus community with a cafeteria, coffeehouse, and four convenience stores.

Campus Café**Building 8, Ext. 5284**

The Campus Café is located on the west side of campus next to the SacBookRac. Catering is available for small meetings and large banquets. *Subversions* — sub sandwiches, soups, wraps, healthy options, and daily specials.

Castillo's Mexican Grill — fresh tacos, burritos, and salads.

Simply to Go — made fresh "in-house" sandwiches, salads, wraps, healthy snacks, and cookies.

Chef's Corner — daily fresh breakfast and lunch menu.

Pizza Stop — individual pizzas, flatbread pizza, and fresh made pasta bowls.

Common Grounds featuring Starbucks — we proudly brew hot and cold coffee drinks, frappuccino, fresh baked muffins, scones, and brownies.

Campus Facilities

WOW at Mountie Grill

Building 19C, Ext. 4624

WOW Cafe and Wingery - breakfast, wings, chicken, hamburgers, salads and rice bowls.

Convenience Stores

All stores offer a variety of snack foods, beverages and school and test supplies.

Mountie Stop

Building 9A

Express Stop

Building 16A

Prime Stop

Building 61

Short Stop

Building 66

Vending Machines

Buildings 2, 3, 9C, 23, 26, 28, 30, 31, 40, 45, 47, 50G, 60, 67, 80

Performing Arts Center

Building 2, Ext. 2050

The Mt. San Antonio College Performing Arts Center is a 66,770 square foot facility that provides instructional and performance accommodations to the three main discipline areas of Theatre, Music, and Dance. The Performing Arts Center is designed as a technological, state-of-the-art instructional facility to prepare Mt. San Antonio College students for careers in the performing arts.

The Sophia B. Clarke Theater is a formal 415-seat, full proscenium theater that wraps the audience around a performance. By providing a circular form and box seats at the perimeter, audience intimacy with the stage is maximized. The stage and fly tower are at a professional scale and contain equipment equal to the finest state-of-the-art theaters both regionally and internationally.

The Music Recital Hall provides for intimate musical performances. The Recital Hall is a 250-seat space richly articulated with reflective surfaces of maple wood and acoustical plaster; it is acoustically shaped with a 43' high ceiling. Sound reflectors above the stage further support acoustical distribution.

The Studio Theater adjacent to the Clarke Theater is surrounded by a scene shop, costume shop, dressing rooms, and faculty offices. The 40' x 50' x 40' theater allows for total dramatic performance flexibility. An 18' lighting grid allows light and scene flexibility. The Studio Theater is such a flexible facility that it can accommodate most any seating and scene configuration.

The Dance Studio is a 56' x 85' x 30' high mirrored room that allows for a grand level of physical movement. With its ceiling and upper walls painted white and bathed in natural lighting, it is an appealing and brilliant space.

Each venue is designed to provide state-of-the-art acoustical quality and technical performance capabilities that put the Mt. SAC Performing Arts Center on a level with the finest theaters in the region.

Performing Arts Center Box Office

Box Office Phone: (909) 274-2050

Box Office Fax: (909) 274-2055

<https://tickets.mtsac.edu>

The Mt. San Antonio College Performing Arts Center Box Office is located in the Performing Arts Center Complex adjacent to the Sophia B. Clarke Theater. The current season of events is available on the Box Office website. Ticket orders are accepted online, by telephone or in person. Major credit cards are accepted. All sales are final. Ticket exchanges may be available depending upon the event.

Randall Planetarium

Building 26C, Ext. 4425

<http://www.mtsac.edu/instruction/sciences/planetarium/>

The Randall Planetarium offers instructional support for college classes as well as a wide variety of public programs on a regular basis. The Planetarium facility has a 35-foot-diameter hemispherical dome and seating for up to 75 people.

Wellness Center

Building 27A, North Door, Ext. 4625

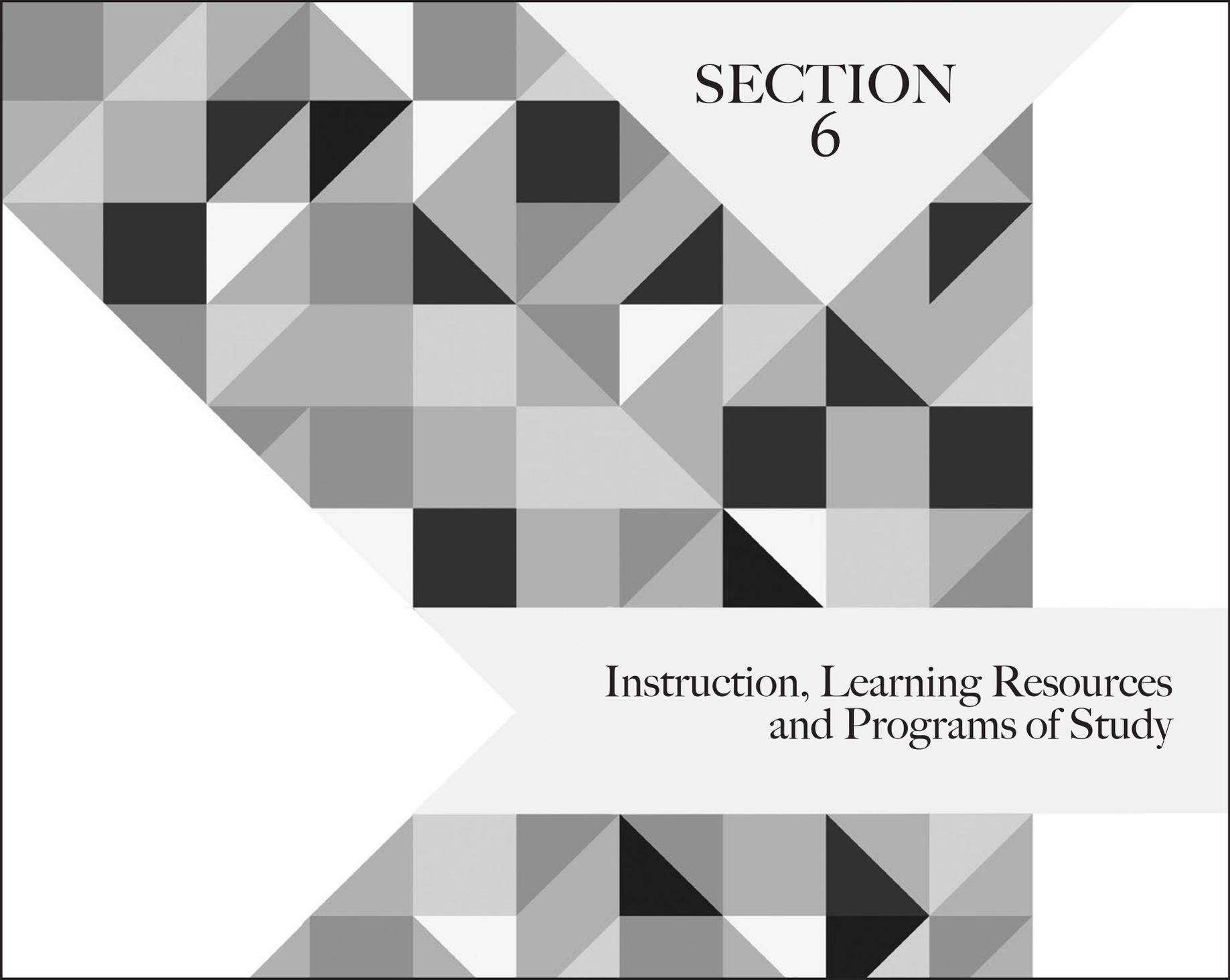
This modern, multi-dimensional facility offers health and lifestyle screening, health, fitness, and performance physical fitness assessments, all levels of aerobic exercise, circuit/strength training and cardiorespiratory exercise.

Programs and services include stress management, nutrition, diet/weight control, metabolic testing, athletic performance testing, individual health/fitness programming. Activities are offered for all age groups.

Offerings will be provided to graded students and for staff and faculty through the Employee Wellness Program. Please see **<http://www.mtsac.edu/wellness/>** for more information and course offerings.

Wildlife Sanctuary, Ext. 4425

This ten-acre parcel, located on the southwestern portion of the Mt. San Antonio College campus includes a stream, lake, pond, swamp, meadow, and woodland. The sanctuary has been set aside as a place where plants and animals exist in a natural balance. Paths through the sanctuary provide access for visitors. For guided tours, contact the Campus Events office at Ext. 4794.



SECTION
6

Instruction, Learning Resources
and Programs of Study

INSTRUCTION

The Office of Instruction provides a wide range of services essential to student success in an environment of academic excellence.

Language Learning Center (LLC)

Building 6, Room 264 South Entrance, Upper Level, (909) 274-4580

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 foreign languages.

Math Activities Resource Center (MARC)

Building 61 - Room 1318, Ext. 5014

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.

Transfer Math Activities Resource Center (T-MARC)

Building 61 - Room 1314, Ext. 5389

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.

Work Experience Education, Ext.4204

Occupational work experience education is supervised work activity extending classroom-based occupational learning at an on-the-job learning station (work site) related to the student's occupational goal. This is guided by a written agreement between the College, the work site, and the student, providing the learner with adequate equipment, materials, and facilities to support the learning objectives specified within the agreement.

Student Qualifications

Students participating in Work Experience Education must:

1. Have the approval of the assigned work experience professor.
2. Have an occupational or educational goal to which, in the opinion of the professor, the work experience chosen will contribute.
3. 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 permit continued eligibility for the program.
4. 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:

- a. Assist the student in identifying new or expanded on-the-job learning objectives.
- b. Assist in the evaluation of the student's identified on-the-job learning objectives.
- c. Validate hours worked.

Credits

For the satisfactory completion of work experience 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 experience education program shall assume and comply with the following responsibilities:

1. Unless otherwise determined, develop measurable learning objectives approved by the professor and work site supervisor.
2. If under the age of 18, obtain the written permission of their parents.
3. Faithfully discharge the duties of the on-the-job assignment.
4. Notify the professor of any work site problems or change in status of duties.
5. Try at all times to represent themselves and the College positively while at the work site.
6. 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.

The Writing Center

Building 26B - Room 1561A, Ext. 5325

The Writing Center offers free services to all students. The Center provides one-on-one tutoring in writing for any course at the College. CRLA certified tutors and at least one English professor is present at all times. In addition, the Writing Center offers workshops to help students with common writing issues, such as sentence level errors, thesis statements, essay planning and organization, and beginning college research. The Center also houses a computer lab that is available for student use to work on papers, conduct library and internet research, and develop grammar and writing skills using self-directed educational software. Professional software is loaded on all the computers to allow students to create presentations. Printing (black and white or color), scanning and technical assistance is also available.

LIBRARY AND LEARNING RESOURCES

Distance Learning Program, Ext.5658

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.

Learning Assistance Center

Building 6, South Entrance, Lower Level,

Learning Technology Center, Ext.4300

The Learning Assistance Center (LAC) helps students succeed in college. The LAC offers instruction to review pre-collegiate skills in math, reading, and writing. Courses in study techniques are also available. Tutorial Services in the Learning Assistance Center provides free tutoring to all Mt. San Antonio College students on a drop-in basis, in study groups, and by appointment. Tutors assist students with course work in most subject areas and with study skills. The Learning Lab computers and audio visual materials are available to all current registered Mt. SAC students. Students can use the Learning Lab for research, word processing, multimedia assignments, online course work, and to supplement classroom instruction.

Library

Building 6, North Entrance, Upper Level,

Learning Technology Center, Ext.4260

The Library offers students, faculty, and staff a wide variety of information resources for their research needs.

In addition to the thousands of books already in circulation, the Library is in the process of making hundreds of closed-captioned DVDs available for circulation as well, to allow students easier access to the Library's media collection. Beyond traditional resources such as books, journals, newspapers, videos, career guides, and college catalogs, researchers may also search numerous full-text article databases and access nearly 25,000 full-text books. Reserves allow faculty to provide continuous access to course materials free of charge to students.

The library faculty teach information competency through courses, customized classes, drop-in workshops and individualized instruction at the reference desk. The librarians at the library information desk can assist with all aspects of the research process from choosing a topic to searching for and evaluating information in print and electronic formats.

CREDIT PROGRAMS OF STUDY

Mt. San Antonio College currently offers 85 Associate and Transfer Degrees and 130 Certificates of Achievement and Skills Certificates in a wide range of academic, career and technical areas. 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.

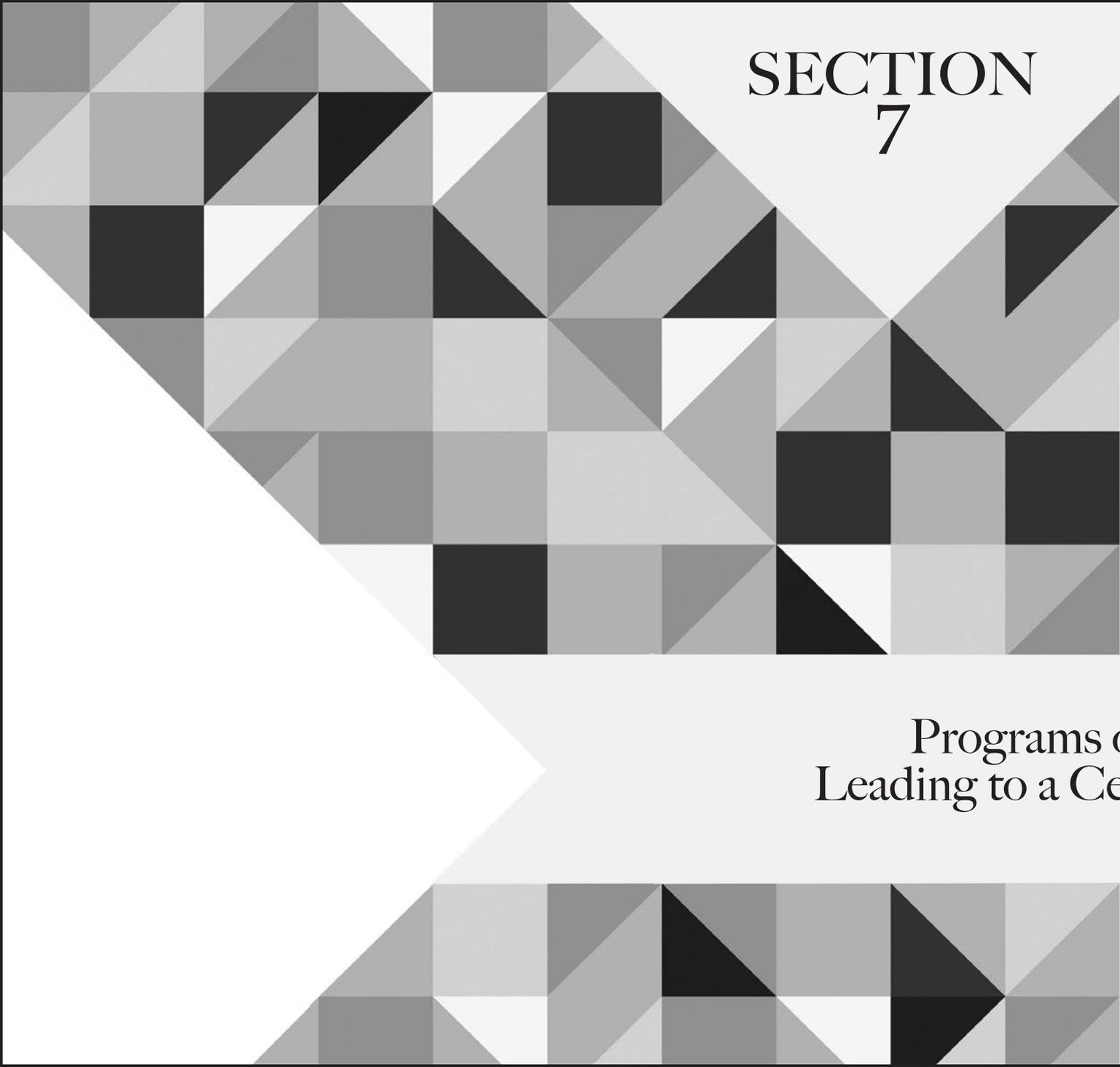
This table presents a current listing of Mt. SAC degrees and certificates. Detailed information regarding each credit program of study can be found in Section 7 and Section 8 of this catalog.

PROGRAM	TRANSFER DEGREE	ASSOCIATE DEGREE	CERTIFICATE OF ACHIEVEMENT	SKILLS CERTIFICATE	PROGRAM	TRANSFER DEGREE	ASSOCIATE DEGREE	CERTIFICATE OF ACHIEVEMENT	SKILLS CERTIFICATE	PROGRAM	TRANSFER DEGREE	ASSOCIATE DEGREE	CERTIFICATE OF ACHIEVEMENT	SKILLS CERTIFICATE
Accounting		X	X		Art					Introduction to Computer Information Technology				X
Bookkeeping				X	Art History	X				Java Programming				X
Computerized			X		Fine Arts		X			LINUX				X
Financial Planning			X		Gallery Design/Operation & Art Profession				X	Microcomputer Productivity Software				X
Managerial			X		Aviation Science		X			Network Security				X
Payroll				X	Building Automation		X	X		Networking				X
Administration of Justice	X				Business		X			Object-Oriented Design & Programming				X
Correctional Sciences		X	X		General		X			Programming in C++			X	
Law Enforcement		X	X		Human Resource Management		X	X	X	Programming in Visual Basic				X
Administrative Assistant		X	X	X	International		X	X	X	SQL				X
Agricultural Science					Management		X	X	X	Telecommunications				X
Agri-Technology		X			Marketing Management		X	X		Visual Basic Programming				X
Animal Science Fundamentals				X	Retail Management		X	X	X	Web Programming				X
Equipment Technology		X			Small Business Management		X	X	X	Windows Operating System Administration				X
Horse Ranch Management		X	X	X	Child Development		X			Construction Inspection		X	X	
Integrated Pest Management		X			Infant/Toddler Development			X		Consumer Relations				X
Livestock Management		X			Children's Program					Educational Paraprofessional		X		
Livestock Production Management				X	Administration			X		Electronics				
Nursery Management			X		General			X	X	Communications			X	
Pet Science		X	X		School Age Child-Specialization			X		Computer Systems Technology			X	
Registered Veterinary Technology		X			Teaching			X		Electronic Assembly & Fabrication				X
Air Conditioning & Refrigeration		X	X		Commercial Flight		X			Electronic Systems Technology			X	X
Airframe & Aircraft Powerplant Maintenance Technology		X			Communication Studies		X			Electronics & Computer			X	X
Aircraft Powerplant Maintenance Tech			X		Communication		X			- Engineering Technology		X	X	
Airframe Maintenance Tech			X		Computer Information Systems (CIS)					Industrial Systems Technology			X	
Alcohol/Drug Counseling		X	X		C++ Programming				X	Emergency Medical Services		X		
Animation		X			Computer & Networking Technology		X	X		Emergency Medical Technician-Paramedic			X	
3-D & CG Gaming			X		Computer Database Management Systems		X			Emergency Medical Technician EMT 90				X
Game & Interactive Multimedia Design			X	X	Computer Network Administration & Security Management		X			Emergency Medical Technician EMT 95				X
Tridigital			X	X	Computer Programming		X			English	X			
Applied Laboratory Science Technology (ALST)		X			Excel and Access				X					
Architectural Technology			X		Information & Operating Systems Security				X					
Design Concentration		X	X		Information Technology		X							
Technology Concentration		X	X											

CREDIT PROGRAMS OF STUDY (continued)

PROGRAM	TRANSFER DEGREE	ASSOCIATE DEGREE	CERTIFICATE OF ACHIEVEMENT	SKILLS CERTIFICATE	PROGRAM	TRANSFER DEGREE	ASSOCIATE DEGREE	CERTIFICATE OF ACHIEVEMENT	SKILLS CERTIFICATE	PROGRAM	TRANSFER DEGREE	ASSOCIATE DEGREE	CERTIFICATE OF ACHIEVEMENT	SKILLS CERTIFICATE
Fashion					Landscape					Paralegal/Legal Assistant		X		
Computer Aided Design				X	Design			X		Photography		X	X	
Design			X		Equipment Technology			X		Photography Digital Technician			X	
Design & Technologies		X			Interior Landscaping			X		Political Science	X			
Merchandising		X	X		Irrigation			X		Psychology	X			
Fire Technology		X	X		Landscape & Park Maintenance			X		Radio Broadcasting				
Geography	X				Ornamental Horticulture		X			Behind-the-Scenes		X	X	X
Graphic Design		X	X	X	Park & Sports Turf Management		X			On-the-Air		X	X	X
Histologic Technician Training		X			Park Management			X		Radiologic Technology		X		
History	X				Public Works/Landscape Management			X		Real Estate		X		
Hospitality & Restaurant Management		X			Sports Turf Management			X		Broker			X	
Catering				X	Tree Care & Maintenance			X		Sales				X
Culinary Arts				X	Language Arts		X			Respiratory Therapy		X		
Food Services				X	Manufacturing Technology		X	X		Sign Language/Interpreting		X	X	
Hospitality Management			X	X	Machine Operator				X	Social & Behavioral Sciences		X		
Restaurant Management				X	MasterCAM				X	Television				
Humanities		X			Mathematics	X	X			Crew			X	
Industrial Design Engineering		X	X		Mental Health Technology					Production		X		
Interior Design		X	X	X	- Psychiatric Technician		X	X		Theater Arts	X			
Kitchen & Bath		X	X		Psychiatric Technician to RN		X			Web Design			X	
Kinesiology & Wellness		X			Music	X	X			Welding				X
Athletic Trainer Aide I				X	Natural Sciences		X			Automotive Welding, Cutting & Modification			X	
Coaching				X	Nursing		X			Gas Tungsten Arc Welding			X	
Dance Teacher				X	Licensed Vocational Nurse 30 Unit Option				X	Licensed			X	
Fitness Specialist/Personal Trainer				X	Career Mobility Track					Semiautomatic Arc Welding		X	X	
Physical Education		X			Licensed Vocational Nurse to RN		X							
Pilates Professional Teacher Training					Nutrition				X					
Phase I: Mat and Reformer				X										

Transfer degrees are Associate in Arts for Transfer degrees and Associate in Science for Transfer degrees.
Associate degrees are Associate in Science degrees and Associate in Arts degrees in Liberal Arts and Sciences with Emphases.
Certificates of Achievement are certificates of at least 18 units.
Skills Certificates are certificates of less than 18 units.



SECTION
7

Programs of Study
Leading to a Certificate

Programs of Study Leading to a Certificate

PROGRAMS OF STUDY LEADING TO A CERTIFICATE

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

- “Skills Certificates” are lower-Unit certificates 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 ladder-track 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 which are part of a ladder-track are identified throughout this section by a ladder icon (≡).
- “Certificates of Achievement” are awarded for completion of an approved program of study meeting certain requirements of the California Community College Chancellor’s Office in terms of total Unit values and other criteria. 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 that 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 Section 11 - Continuing Education.

SKILLS CERTIFICATES

Accounting – Bookkeeping	34	Domestic Violence Certification	39
Accounting – Payroll	34	Electronic Assembly and Fabrication	39
Administrative Assistant – Level I	34	Electronic Systems Technology – Level I	39
Animal Science Fundamentals	34	Emergency Medical Technician EMT 90	40
Animation - Game & Interactive Multimedia Design I	34	Emergency Medical Technician EMT 95	40
Animation - Tradigital Level I	34	Fashion Design – Computer-Aided	40
Athletic Trainer Aide I	34	Fitness Specialist/Personal Trainer	40
Business: Human Resource Management – Level I	35	Gallery Design/Operation and Art Profession	41
Business: International – Level I	35	Graphic Design Level I	41
Business: Management – Level I	35	Horse Ranch Management – Level I Hospitality: Catering	41
Business: Retail Management – Level I	35	Hospitality: Food Services	41
Business: Small Business Management – Level I	35	Hospitality: Hospitality Management – Level I	41
Children’s Program Certificate: General – Level I	35	Hospitality: Restaurant Management – Level I	41
CIS Professional Certificate in C++ Programming	35	Hospitality: Restaurant Management – Level II	41
CIS Professional Certificate in Excel and Access ...	36	Information and Operating Systems Security	42
CIS Professional Certificate in Java Programming	36	Interior Design: Level I	42
CIS Professional Certificate in LINUX	36	Introduction to Computer Information Technology	42
CIS Professional Certificate in Network Security	36	Livestock Production Management	42
CIS Professional Certificate in Networking	37	LVN 30-Unit Option – Career Mobility Track	42
CIS Professional Certificate in Object-Oriented Design & Programming	37	Machine Operator	43
CIS Professional Certificate in SQL	37	MasterCAM	43
CIS Professional Certificate in Telecommunications	37	Microcomputer Productivity Software	43
CIS Professional Certificate in Visual Basic Programming	37	Nutrition	44
CIS Professional Certificate in Web Programming	38	Pilates Professional Teacher Training Phase I: Mat and Reformer	44
CIS Professional Certificate in Windows Operating System Administration	38	Programming in Visual Basic	44
Coaching	38	Radio Broadcasting: Behind-the-Scenes – Level I	44
Consumer Relations	38	Radio Broadcasting: On-Air – Level I	44
Culinary Arts	38	Real Estate Sales Certificate	44
Dance Teacher	38	Welding	45

CERTIFICATES OF ACHIEVEMENT

Accounting	45	Children's Program Certificate:	
Accounting – Computerized	45	General – Level III	52
Accounting – Financial Planning	45	Children's Program Certificate: Teaching.....	52
Accounting – Managerial	45	Computer and Networking	
Administrative Assistant Level II	46	Technology – Level I.....	52
Administrative Assistant Level III	46	Computer and Networking	
Air Conditioning and Refrigeration	46	Technology – Level II.....	53
Aircraft Powerplant Maintenance		Computer Systems Technology.....	53
Technology – Day.....	46	Construction Inspection	53
Aircraft Powerplant Maintenance		Electronic Systems Technology – Level II.....	53
Technology – Evening.....	46	Electronics and Computer	
Airframe Maintenance Technology – Day	47	– Engineering Technology.....	54
Airframe Maintenance Technology – Evening	47	Electronics Communications.....	54
Alcohol/Drug Counseling	47	Electronics Technology.....	54
Animation – 3-D and CG Gaming	48	Electronics: Industrial Systems.....	54
Animation – Game & Interactive		Emergency Medical	
Multimedia Design II	48	Technician – Paramedic (EMT-P)	54
Animation – Tradigital Level II	48	Fashion Design – Level I.....	56
Architectural Technology – Level I	48	Fashion Design – Level II.....	56
Architectural Design Concentration Level II	48	Fashion Merchandising – Level I.....	56
Architectural Design Concentration Level III	48	Fashion Merchandising – Level II.....	56
Architectural Technology Concentration Level II .	49	Fire Technology	56
Architectural Technology Concentration Level III	49	Graphic Design – Level II.....	56
Building Automation	49	Horse Ranch Management – Level II.....	57
Business: Human Resource		Horticulture Science.....	57
Management – Level II.....	49	Hospitality: Hospitality	
Business: Human Resource		Management – Level II.....	57
Management – Level III.....	49	Industrial Design Engineering – Level I.....	57
Business: International – Level II	50	Industrial Design Engineering – Level II.....	57
Business: International – Level III	50	Industrial Design Engineering – Level III.....	57
Business: Management – Level II	50	Infant/Toddler Development.....	58
Business: Management – Level III	50	Interior Design Kitchen and Bath Specialization..	58
Business: Retail Management – Level II	50	Interior Design: Level II	58
Business: Retail Management – Level III	51	Interior Design: Level III	58
Business: Small Business		Interior Landscaping	59
Management – Level II.....	51	Landscape and Park Maintenance.....	59
Business: Small Business		Landscape Construction	59
Management – Level III.....	51	Landscape Design – Level I.....	59
Children's Program Certificate: Administration ...	51	Landscape Equipment Technology	59
Children's Program Certificate:		Landscape Irrigation	59
General – Level II.....	52	Law Enforcement	59
		Manufacturing Technology.....	60

CERTIFICATES OF ACHIEVEMENT (CONTINUED)

Marketing Management	60	School Age Child – Specialization	63
Mental Health Technology		Sign Language/Interpreting.....	63
– Psychiatric Technician	60	Sports Turf Management.....	63
Nursery Management	61	Television Crew	64
Park Management	61	Tree Care and Maintenance	64
Pet Science	61	Web Design.....	64
Photography - Level I	61	Welder - Automotive Welding,	
Photography - Level II	61	Cutting & Modification.....	64
Photography Digital Technician	62	Welder - Gas Tungsten Arc Welding.....	64
Programming in C++	62	Welder - Licensed.....	64
Public Works/Landscape Management	62	Welding - Semiautomatic Arc Welding.....	64
Radio Broadcasting: Behind the Scenes	62		
Radio Broadcasting: On-the-Air - Level III	62		
Real Estate Broker Certificate	51		

Programs of Study Leading to a Certificate

SKILLS CERTIFICATES

Accounting - Bookkeeping

Business Division

Certificate E0504

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:

BUSA 7	Principles of Accounting - Financial	5.0
	<i>or</i>	
BUSA 72	Bookkeeping - Accounting	5.0
BUSA 75	Using Microcomputers in Financial Accounting	1.0
BUSA 76	Using Microcomputers in Managerial Accounting	1.0
	<i>or</i>	
BUSA 68	Business Mathematics	3.0
	Total Units	7.0 - 9.0

Accounting - Payroll

Business Division

Certificate E0505

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:

BUSA 7	Principles of Accounting - Financial	5.0
	<i>or</i>	
BUSA 72	Bookkeeping - Accounting	5.0
BUSA 70	Payroll and Tax Accounting	3.0
BUSA 75	Using Microcomputers in Financial Accounting	1.0
BUSA 76	Using Microcomputers in Managerial Accounting	1.0
	<i>or</i>	
BUSA 68	Business Mathematics	3.0
	Total Units	10.0 - 12.0

Administrative Assistant - Level I

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:

CISB 10	Office Skills	3.0
CISB 15	Microcomputer Applications	3.5
CISB 31	Microsoft Word	3.0
	Total Units	9.5

≡ Administrative Assistant Level II (L0594), Level III (T0517)

Animal Science Fundamentals

Natural Sciences Division

Certificate E0360

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:

AGAN 1	Animal Science	3.0
AGAN 2	Animal Nutrition	3.0
AGAN 51	Animal Handling and Restraint	3.0
AGAN 94	Animal Breeding	3.0
AGLI 96	Animal Sanitation and Disease Control	3.0
	Total Units	15.0

Animation - Game & Interactive Multimedia Design I

Arts Division

Certificate E0339

This multi-level certificate program offers skills needed for creative careers that integrate animation with gaming, video, audio, graphics, and special effects for the Web, broadcast, film, presentation, or mobile content. The Animation - Game & Interactive Multimedia Level I Certificate offers an early exit point of 12 Units and provides the skills necessary for entry-level employment as a junior web animator or animation designer, 2D

Game Design Assistant, or junior game designer.

Required Courses:

ANIM 100	Digital Paint and Ink	3.0
	<i>or</i>	
ARTC 100	Graphic Design I	3.0
ANIM 131	Introduction to Gaming	3.0
ANIM 172	Motion Graphics, Compositing and Visual Effects	3.0
ANIM 175	Web Animation With Flash	3.0
	Total Units	12.0

Recommended Elective:

ANIM 137A Work Experience in New Digital Media 1.0

≡ Animation-Game & Interactive Multimedia Design II (L0340)

Animation - Tradigital Level I

Arts Division

Certificate E0337

This multi-level certificate program provides skills based on the principles of storytelling and animation using both traditional and digital media. These skills lead to employment opportunities as animators, character designers, and storyboard artists for television, film, Web, mobile media, and gaming. The Animation - Tradigital Level I Certificate offers an early exit point of 15 Units and provides the skills necessary for entry-level employment in the areas of production assistant or junior storyboard artist.

Required Courses:

ANIM 101A	Drawing - Gesture and Figure	3.0
ANIM 108	Principles of Animation	3.0
ANIM 111A	Animal Drawing	1.5
ANIM 115	Storyboarding	3.0
ANIM 116	Character Development	1.5
ANIM 104	Drawing Fundamentals	3.0

or

ARTD 15A	Drawing: Beginning	3.0
	Total Units	15.0

≡ Animation-Tradigital Level II (L0338)

Architecture Foundational Skills

Technology and Health Division

Certificate E0387

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:

ARCH 101	Design I - Elements of Design	4.0
ARCH 141	Design Drawing and Communication	4.0
ARCH 121	CADD and Digital Media Level I	4.0
	Total Units	12.0

Athletic Trainer Aide I

Kinesiology & Athletics Division

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:

KIN 3	First Aid and CPR	3.0
	<i>or</i>	
KIN 5	Advanced First Aid/ CPR/Emergency Response	3.0
KIN 19	Introduction to Care/Prevention of Activity/Sports -Related Injuries	3.0
KIN 34	Fitness for Living	3.0
KIN 92	Work Experience - Athletic Training	2.0 - 3.0
	Total Units	11.0 - 12.0

Business: Human Resource Management – Level I

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:

BUSM 20	Principles of Business	3.0
BUSM 61	Business Organization and Management	3.0
BUSM 62	Human Resource Management	3.0
Total Units		9.0

Special Information:

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

≡ Business: Human Resources Management Level II (L0534), Level III (L0535)

Business: International - Level I

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:

BUSM 20	Principles of Business	3.0
BUSM 51	Principles of International Business	3.0
BUSS 36	Principles of Marketing	3.0
Total Units		9.0

Special Information:

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

≡ Business: International Level II (L0597), Level III (L0528)

Business: Management - Level I

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:

BUSM 20	Principles of Business	3.0
BUSM 61	Business Organization and Management	3.0
BUSS 36	Principles of Marketing	3.0
Total Units		9.0

Special Information:

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

≡ Business: Management Level II (L0586), Level III (T0526)

Business: Retail Management - Level I

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:

BUSO 25	Business Communications	3.0
CISB 15	Microcomputer Applications	3.5
FASH 62	Retail Buying and Merchandising	3.0

or

BUSS 50	Retail Store Management and Merchandising	3.0
Total Units		9.5

Special Information:

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

≡ Business: Retail Management Level II (L0591), Level III (T0521)

Business: Small Business Management - Level I

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:

BUSM 20	Principles of Business	3.0
BUSM 66	Small Business Management	3.0
BUSS 36	Principles of Marketing	3.0
Total Units		9.0

Special Information:

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

≡ Business: Small Business Management Level II (L0588), Level III (T0590)

Children's Program Certificate: General - Level I

Business Division Certificate E1326

The Children's Program Certificate: General - Level I 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:

CHLD 1	Child, Family, School and Community	3.0
CHLD 5	Principles and Practices in Child Development Programs	3.0
CHLD 6	Survey of Child Development Curriculum	3.0
CHLD 11	Child and Adolescent Development	3.0
Total Units		12.0

≡ Children's Program Certificate General Level II (L1328), Level III (L1327)

CIS Professional Certificate in C++ Programming

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

Programs of Study Leading to a Certificate

completion of this certificate include programming for standalone applications, games and databases.

Required Courses:

CISP 10	Principles of Object-Oriented Design	2.0
CISP 31	Programming in C++	3.0
CISP 31L	Programming in C++ Laboratory	0.5
CISP 34	Advanced C++ Programming	3.0
CISP 34L	Advanced C++ Programming Laboratory	0.5

PLUS

CISD 11	Database Management - Microsoft Access	3.0
CISD 11L	Database Management - Microsoft Access Lab	0.5

or

CISD 21	Database Management - Microsoft SQL Server	3.0
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CISD 21L	Database Management - Microsoft SQL Server Laboratory	0.5
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or

CISD 31	Database Management - Oracle	3.0
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CISD 31L	Database Management - Oracle Laboratory	0.5
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Total Units

12.5

CIS Professional Certificate in Excel and Access

Business Division

Certificate E0370

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:

CISB 21	Microsoft Excel	3.0
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CISD 11	Database Management - Microsoft Access	3.0
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CISD 11L	Database Management - Microsoft Access Lab	0.5
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CISD 14	VBA for Excel and Access	3.0
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CISD 14L	VBA for Excel and Access Lab	0.5
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CISD 40	Database Design	3.0
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Total Units

13.0

CIS Professional Certificate in Java Programming

Business Division

Certificate E0700

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. Student 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:

CISP 10	Principles of Object-Oriented Design	2.0
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CISP 21	Programming in Java	3.0
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CISP 21L	Programming in Java Laboratory	0.5
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CISP 24	Advanced Java Programming	3.0
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CISP 24L	Advanced Java Laboratory	0.5
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CISD 11	Database Management - Microsoft Access	3.0
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CISD 11L	Database Management - Microsoft Access Lab	0.5
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or

CISD 21	Database Management - Microsoft SQL Server	3.0
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CISD 21L	Database Management - Microsoft SQL Server Laboratory	0.5
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or

CISD 31	Database Management - Oracle	3.0
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CISD 31L	Database Management - Oracle Laboratory	0.5
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Total Units

12.5

CIS Professional Certificate in LINUX

Business Division

Certificate E0796

The CIS Certificate in Linux prepares student 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:

CISN 31	Linux Operating System	3.0
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CISN 31L	Linux Operating System Laboratory	0.5
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CISN 34	Linux Networking and Security	3.0
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CISN 34L	Linux Networking and Security Laboratory	0.5
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CISW 31	Secure Web Servers	3.0
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CISW 31L	Secure Web Servers Laboratory	0.5
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Total Units

10.5

CIS Professional Certificate in Network Security

Business Division

Certificate E0721

The CIS Professional Certificate 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:

CISS 21	Network Vulnerabilities and Countermeasures	3.0
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CISS 21L	Network Vulnerabilities and Countermeasures Lab	0.5
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CISS 23	Network Analysis, Intrusion Detection/Prevention Systems	3.0
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CISS 23L	Network Analysis, Intrusion Detection/Prevention Systems Lab	0.5
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CISS 25	Network Security and Firewalls	3.0
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CISS 25L	Network Security and Firewalls Lab	0.5
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CISS 27	Defending Computer Systems	1.0
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Total Units

11.5

CIS Professional Certificate in Networking

Business Division

Certificate E0716

The CIS Professional Certificate 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. Student 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:

CISN 11	Telecommunications/Networking	3.0
CISN 11L	Telecommunications/Networking Lab	0.5
CISN 24	Window Server Network and Security Administration	3.0
CISN 24L	Window Server Network and Security Administration Lab	0.5
CISN 34	Linux Networking and Security	3.0
CISN 34L	Linux Networking and Security Laboratory	0.5
CISN 51	Cisco CCNA Networking and Routing	3.0
CISN 51L	Cisco CCNA Networking and Routing Laboratory	0.5
	Total Units	14.0

CIS Professional Certificate in Object-Oriented Design & Programming

Business Division

Certificate E0723

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 the following three programming language concentrations: Visual Basic.NET, 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 (2 Units):

CISP 10	Principles of Object-Oriented Design	2.0
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Plus one of the following three programming tracks (7 Units):

Visual Basic.NET:

CISP 11	Programming in Visual Basic	3.0
CISP 11L	Programming in Visual Basic Laboratory	0.5
CISP 14	Advanced Visual Basic .NET	3.0
CISP 14L	Advanced Visual Basic.NET Laboratory	0.5

Java:

CISP 21	Programming in Java	3.0
CISP 21L	Programming in Java Laboratory	0.5
CISP 24	Advanced Java Programming	3.0
CISP 24L	Advanced Java Laboratory	0.5

C++:

CISP 31	Programming in C++	3.0
CISP 31L	Programming in C++ Laboratory	0.5
CISP 34	Advanced C++ Programming	3.0
CISP 34L	Advanced C++ Programming Laboratory	0.5

	Total Units	9.0
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CIS Professional Certificate in SQL

Business Division

Certificate E0730

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:

CISD 21	Database Management - Microsoft SQL Server	3.0
CISD 21L	Database Management - Microsoft SQL Server Laboratory	0.5
CISD 31	Database Management - Oracle	3.0
CISD 31L	Database Management - Oracle Laboratory	0.5
CISD 40	Database Design	3.0
	Total Units	10.0

CIS Professional Certificate in Telecommunications

Business Division

Certificate E0718

The CIS Professional Certificate 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:

CISN 11	Telecommunications/Networking	3.0
CISN 11L	Telecommunications/Networking Lab	0.5
CISN 24	Window Server Network and Security Administration	3.0
CISN 24L	Window Server Network and Security Administration Lab	0.5
CISN 51	Cisco CCNA Networking and Routing	3.0
CISN 51L	Cisco CCNA Networking and Routing Laboratory	0.5
	Total Units	10.5

CIS Professional Certificate in Visual Basic Programming

Business Division

Certificate E0719

The CIS Professional Certificate in Visual Basic Programming is designed to prepare students for a career in computer programming. The certificate offers a balanced set of classes that provides students client, server and database programming skills required by industry. Emphasis is placed on object-oriented programming applications, web based applications and implementing ASP.NET, ADO.NET and .NET Framework for reusable software components. Students will demonstrate the ability to design and implement a Visual Basic application that contains the client interface, the server implementation and the database. Opportunities available after the completion of this certificate include programming for systems, mobile applications, integration of systems and web applications.

Students will demonstrate the ability to design and implement a Visual Basic application that contains the client interface, the server implementation and the database. Opportunities available after the completion of this certificate include programming for systems, mobile applications, integration of systems and web applications.

Required Courses:

CISP 10	Principles of Object-Oriented Design	2.0
CISP 11	Programming in Visual Basic	3.0
CISP 11L	Programming in Visual Basic Laboratory	0.5
CISP 14	Advanced Visual Basic .NET	3.0
CISP 14L	Advanced Visual Basic.NET Laboratory	0.5
CISD 11	Database Management - Microsoft Access	3.0

Programs of Study Leading to a Certificate

CISD 11L	Database Management - Microsoft Access Lab	0.5
	<i>or</i>	
CISD 21	Database Management - Microsoft SQL Server	3.0
CISD 21L	Database Management - Microsoft SQL Server Laboratory	0.5
	<i>or</i>	
CISD 31	Database Management - Oracle	3.0
CISD 31L	Database Management - Oracle Laboratory	0.5
	Total Units	12.5

CIS Professional Certificate in Web Programming

Business Division Certificate E0713

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:

CISW 17	HTML, CSS & JavaScript Programming	3.0
CISW 31	Secure Web Servers	3.0
CISW 31L	Secure Web Servers Laboratory	0.5
	<i>and</i>	

Select one combination of lecture-lab courses (3.5 Units)

CISW 21	Secure Web Programming with ASP.NET	3.0
CISW 21L	Secure Web Programming with ASP.NET Laboratory	0.5
	<i>or</i>	
CISW 24	Secure Server Side Web Programming	3.0
CISW 24L	Secure Server Side Web Programming Laboratory	0.5
	Total Units	10.0

CIS Professional Certificate in Windows Operating System Administration

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:

CISN 21	Windows Operating System	3.0
CISN 24	Window Server Network and Security Administration	3.0
CISN 24L	Window Server Network and Security Administration Lab	0.5
	Total Units	6.5

Coaching

Kinesiology, Athletics and Dance Division 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:

KIN 13	Sports Officiating	3.0
KIN 34	Fitness for Living	3.0
KIN 44	Theory of Coaching	3.0
KIN 81	Work Experience for Coaching	2.0
	Total Units	11.0

Exit Requirement: First Aid and CPR Certification

Consumer Relations

Business Division Certificate B0326

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:

FCS 41	Life Management	3.0
FCS 80	Personal Financial Planning	3.0
	<i>or</i>	
BUSA 71	Personal Financial Planning	3.0
FCS 51	Consumer Skills, Issues, and Strategies	3.0
BUSO 25	Business Communications	3.0
BUSO 26	Oral Communications for Business	3.0
	Total Units	15.0

Culinary Arts

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 the Food Protection Manager Certification from the National Restaurant Association upon passing the ServSafe Exam.

Required Courses:

HRM 52	Food Safety and Sanitation	1.5
HRM 54	Basic Cooking Techniques	3.0
HRM 81	Garde Manger	3.0
HRM 82	Baking and Pastry	3.0
HRM 83	International Cuisines	3.0

Plus one (1) of the following: (3 Units)

NF 10	Nutrition for Personal Health and Wellness	3.0
NF 20	Principles of Foods	3.0
NF 25	Essentials of Nutrition	3.0

or

NF 25H	Essentials of Nutrition - Honors	3.0
	Total Units	16.5

Dance Teacher

Kinesiology, Athletics and Dance Division Certificate E0313

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:

DNCE 2B	Ballet II	0.5
DNCE 4	Choreography	0.5

DNCE 12B	Modern II	0.5
DNCE 14B	Jazz II	0.5
DNCE 24	Dance Production	1.0
DNCE 33	Improvisation	0.5
DNCE 35	Repertory	2.0
DNCE 39A	Alignment and Correctives I	0.5
DN-T 20	History and Appreciation of Dance	3.0
DN-T 38	Dance Teaching Methods	3.0
KIN 24	Applied Kinesiology	2.0
Total Units		14.0

**Domestic Violence Certification
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:

AD 4	Issues in Domestic Violence	3.0
Total Units		3.0

Electronic Assembly and Fabrication

**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 tech-

nology (SMT) skills are taught with a culmination in the IPC7711/IPC7721 rework and repair of electronic assemblies certification. Recertification is required every two years.

Required Courses:

ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 50B	Electronic Circuits (AC)	4.0
<i>or</i>		
EST 50	Electrical Fundamentals for Cable Installations	4.0
ELEC 61	Electronic Assembly and Fabrication	3.0
ELEC 62	Advanced Surface Mount Assembly and Rework	2.0
Total Units		13.0

Electronic Systems Technology - Level I

**Technology and Health Division
Certificate E0990**

This is a fast-track certificate program within the fields of information and electronic technology. These fields are growing at rapid rates. The program provides job skills in the areas of low voltage cable and wire installations used in the telephone industry, computer networks (business and home), home theater, home automation, and home security systems (integrated home systems). Typical job titles in these areas are data or cable technician, low-voltage wiring technician, home theatre installer, consumer electronics service technician and security system installer. The program prepares the student for the California State Contractors C-7 Low Voltage Systems license. The program encompasses a total of 27-29.5 Units comprising two levels of certification. The Level I certification (15-15.5 Units) develops skills in electrical fundamentals, fabrication techniques, cabling and wiring standards for voice, video and data, and basic computer skills in word processing, spreadsheets, database and the Internet. Level II certification (12-14 Units) adds customer relations and advanced skills in the installation, calibration, setup, maintenance, and troubleshooting of home theater systems, home automation, and home security systems. A course on preparing for the C-7 license or troubleshooting digital TV with LCD, plasma, and DLP video displays is included.

Required Courses:

ELEC 11	Technical Applications in Microcomputers	3.0
<i>or</i>		
CISB 15	Microcomputer Applications	3.5
EST 50	Electrical Fundamentals for Cable Installations	4.0
EST 52	Fabrication Techniques for Cable Installations	4.0
EST 54	Cabling and Wiring Standards	4.0
Total Units		15.0 - 15.5

Emergency Medical Technician EMT 90

**Technology and Health Division
Certificate E0378**

Approved by the Los Angeles County and State Departments of Health. Emphasizes the development of skills to recognize symptoms of illnesses and injuries as well as the proper procedures of pre-hospital emergency care. Awards an EMT Course Completion Certificate necessary for many jobs in emergency care and is prerequisite for entry into a Paramedic program or most fire department jobs.

Required Courses:

EMT 90	Emergency Medical Technician	8.0
EMT 90-A	Introduction to EMS System	2.0
Total Units		10.0

Special Information:

To remain in the program, student must maintain a grade of "C" or better in the course. EMT 90-A is a mandatory pre-requisite to EMT 90.

Completion of the required course, which includes both written and practical qualifying examinations, will award the student an EMT Course Completion Certificate. Students are then eligible for certification by taking and passing the National Registry EMT certifying exam. This course is a prerequisite for the Paramedic Program and is required by most fire departments before the student may be hired as a firefighter.

Application Requirements and Selection Procedures

Application Requirements:

- a) Applicant must be 18 years of age upon entrance into the course.

- b) High school graduate or equivalent.
- c) File a College application and be accepted as a student at Mt. San Antonio College.
- d) A physical examination, proof of certain immunizations, current certification in CPR, and a criminal background check are required of all students prior to entrance into the clinical setting. Forms and information will be provided upon entry into the course.

Selection Procedure:

The course is open to all students who meet the application requirements. All applicants are required to meet the Essential Functions in the Emergency Medical 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 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 device)
- 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 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

Programs of Study Leading to a Certificate

- Handle emergency or crisis situations
- Subject to many interruptions
- Requires decisions/actions related to end of life issues
- Exposure to products containing latex

English Language Skills:
Although proficiency in English is not a criterion for admission into the EMT program, students must be able to speak, write and read English to ensure patient safety and to complete classes successfully.

Emergency Medical Technician EMT 95

Technology and Health Division Certificate E0367

Approved by the Los Angeles County and State Departments of Health. Emphasizes the development of skills to recognize symptoms of illnesses and injuries as well as the proper procedures of pre-hospital emergency care. Awards an EMT Course Completion Certificate necessary for many jobs in emergency care and is prerequisite for entry into a Paramedic program or most fire department jobs.

Required Courses:

EMT 95	EMT for Fire Technology	8.0
Total Units		8.0

Special Information:

To remain in the program, student must maintain a grade of "C" or better in the course.

Completion of the required course, which includes both written and practical qualifying examinations, will award the student an EMT Course Completion Certificate. Students are then eligible for certification by taking and passing the National Registry EMT certifying exam. This course is a prerequisite for the Paramedic Program and is required by most fire departments before the student may be hired as a firefighter.

Application Requirements and Selection Procedures

Application Requirements:

- Applicant must be 18 years of age upon entrance into the course.
- High school graduate or equivalent.

- File a College application and be accepted as a student at Mt. San Antonio College.
- A physical examination including drug screen, proof of certain immunizations, current certification in CPR, and a criminal background check are required of all students prior to entrance into the clinical setting. Forms and information will be provided upon entry into the course.
- Advised to take either Fire 1 or Fire 13 prior to entry into EMT 95.

Selection Procedure:

The course is open to all students who meet the application requirements. All applicants are required to meet the Essential Functions in the Emergency Medical 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 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 device)
- 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 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
- Exposure to products containing latex

English Language Skills:

Although proficiency in English is not a criterion for admission into the EMT program, students must be able to speak, write and read English to ensure patient safety and to complete classes successfully.

Fashion Computer Aided Design

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. In addition, students become proficient in creating technical drawings and retail planograms using CAD software. Students prepare for careers in apparel manufacturing, production, technical design, and visual merchandising.

Required Courses:

FASH 15	Aesthetic Design in Fashion	3.0
FASH 23	Patternmaking II	3.0
FASH 24	Fashion Patternmaking by Computer	3.0
FASH 25	Fashion Computer-Assisted Drawing	3.0
FASH 66	Visual Merchandising Display	3.0
Total Units		15.0

Fire Officer Certification

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:

FIRE 100	Fire Prevention 1: Company Officer's Fire & Life Safety Inspections	1.5
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FIRE 101	Command 1A: Structure Fire Command Operations for Company Officers	1.5
FIRE 102	Fire Command 1B: Incident Management for Company Officers	1.5
FIRE 103	Command 1C: Wildland Urban Interface Operations for Company Officer	1.5
FIRE 104	Training Instructor 1A: Cognitive Lesson Delivery	1.5
FIRE 105	Training Instructor 1B: Psychomotor Lesson Delivery	1.5
FIRE 106	Fire Investigation 1A: Fire Origin and Cause Determination	1.5
FIRE 107	Fire Management 1: Management/Supervision for Company Officers	1.5
FIRE 108	ICS 300: Advance Incident Command	1.0
Total Units		13.0

Fitness Specialist/Personal Trainer Kinesiology, Athletics and Dance Division 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:

NF 10	Nutrition for Personal Health and Wellness	3.0
KIN 15	Administration of Fitness Programs	2.0
KIN 24	Applied Kinesiology	2.0
KIN 38	Physiology of Exercise for Fitness	3.0
KIN 39	Techniques of Fitness Testing	2.0
KIN 40	Techniques of Teaching Cardiovascular Exercise	2.0
KIN 41	Techniques of Teaching Weight Training	2.0
KIN 85	Fitness Specialist Work Experience	1.0
Total Units		17.0

Recommended Electives:

DNCE 39A	Alignment and Correctives I	0.5
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Gallery Design/Operation and Art Profession

Arts Division

Certificate E1020

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:

ARTG 20	Art, Artists and Society	3.0
ARTG 21A	Introduction to Exhibition Production	3.0
ARTG 21B	Intermediate Exhibition Production	3.0
<i>The following course to be taken twice - once as an off-campus experience and once as an on-campus experience (2 Units)</i>		
ARTG 22A	Exhibition Design and Art Gallery Operation Work Experience	1.0
ARTC 100	Graphic Design I	3.0

PLUS select one (1) course from:

AHIS 5	History of Western Art: Renaissance Through Modern	3.0
AHIS 6	History of Modern Art	3.0
Total Units		17.0

Game Programming Development

Business Division

Certificate E0380

This curriculum is designed for returning CIS professionals with several years experience or current students who have completed several CIS courses. This certificate will give students skills that are necessary to obtain jobs in game programming. Students will learn different software packages for developing games as well as general programming skills.

Required Courses:

CISP 10	Principles of Object-Oriented Design	2.0
CISP 31	Programming in C++	3.0
CISP 31L	Programming in C++ Laboratory	0.5
CISP 61	Introduction to Game Programming	3.0
CISP 61L	Introduction to Game Programming Laboratory	0.5

CISP 62	Introduction to OpenGL	3.0
CISP 62L	Introduction to OpenGL Laboratory	0.5
Total Units		12.5

Graphic Design Level I

Arts Division

Certificate E0341

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:

ARTC 100	Graphic Design I	3.0
ARTC 120	Graphic Design II	3.0
ARTC 140	Graphic Design III	3.0
ARTC 200	Web Design	3.0
PHOT 5	Digital Cameras and Composition	1.0
ARTD 20	Design: Two-Dimensional	3.0
Total Units		16.0

≡ Graphic Design Level II (T0369)

Horse Ranch Management - Level I

Natural Sciences Division

Certificate E0361

This certificate program is designed to give students basic skills for employment on horse ranches and in agriculture sales and services. All courses are applicable for degree requirements in Horse Ranch Management and Livestock Management.

Required Courses:

AGAN 2	Animal Nutrition	3.0
AGLI 16	Horse Production and Management	4.0
AGLI 18	Horse Ranch Management	4.0
Total Units		11.0

Hospitality: Event Planning and Catering

Business Division

Certificate E0379

The Catering Certificate prepares students for entry-level positions in catering companies, banquets facilities, hotels, convention centers, fair grounds and event planning companies. 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:

HRM 52	Food Safety and Sanitation	1.5
HRM 54	Basic Cooking Techniques	3.0
HRM 61	Menu Planning	3.0
HRM 62	Event Planning and Catering	3.0
Total Units		10.5

Hospitality: Food Services

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:

HRM 51	Introduction to Hospitality	3.0
HRM 52	Food Safety and Sanitation	1.5
HRM 53	Dining Room Service Management	3.0
Total Units		7.5

Hospitality: Hospitality Management - Level I

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:

HRM 51	Introduction to Hospitality	3.0
HRM 53	Dining Room Service Management	3.0
HRM 70	Introduction to Lodging	3.0
HRM 91	Hospitality Work Experience	1.0
Total Units		10.0

≡ Hospitality: Hospitality Management Level II (L1325)

Hospitality: Restaurant Management - Level I

Business Division

Certificate E1333

The Hospitality: Restaurant Management - Level I Certificate prepares the holder for an entry-level position within a restaurant.

Required Courses:

HRM 51	Introduction to Hospitality	3.0
HRM 52	Food Safety and Sanitation	1.5
HRM 53	Dining Room Service Management	3.0
HRM 91	Hospitality Work Experience	1.0
Total Units		8.5

≡ Hospitality: Restaurant Management Level II (E0343)

Programs of Study Leading to a Certificate

Hospitality: Restaurant Management - Level II

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:

HRM 51	Introduction to Hospitality	3.0
HRM 52	Food Safety and Sanitation	1.5
HRM 53	Dining Room Service Management	3.0
HRM 54	Basic Cooking Techniques	3.0
HRM 57	Hospitality Cost Control	3.0
HRM 61	Menu Planning	3.0
HRM 91	Hospitality Work Experience	1.0
Total Units		17.5

Information and Operating Systems Security

Business Division Certificate E0731

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 compliment other network security certificates and/or degrees within the CIS program.

Required Courses:

CISS 11	Practical Computer Security	2.0
CISS 13	Principles of Information Systems Security	4.0
CISS 15	Operating Systems Security	3.0
Total Units		9.0

Interior Design: Level I

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:

ID 10	Introduction to Interior Design	2.0
ID 10L	Introduction to Interior Design Laboratory 1	1.0
ID 12	Materials and Products for Interior Design	3.0
ID 14	History of Furniture and Decorative Arts	3.0
Total Units		9.0

≠ Interior Design Level II (T0304), Level III (T0305)

Introduction to Computer Information Technology

Business Division Certificate E0712

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 demon-

strate 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:

CISB 11	Computer Information Systems	3.5
CISB 15	Microcomputer Applications	3.5
Total Units		7.0

Livestock Production Management

Natural Sciences Division Certificate E0363

This certificate 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:

AGLI 14	Swine Production	3.0
AGLI 17	Sheep Production	3.0
AGLI 30	Beef Production	3.0
AGLI 34	Livestock Judging and Selection	2.0
AGLI 97	Artificial Insemination of Livestock	2.0
Total Units		13.0

LVN 30-Unit Option – Career Mobility Track

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:

1. Human Anatomy, including a laboratory component, a minimum of four (4) semester units.
2. Human Physiology, including a laboratory component, a minimum of four (4) semester units.
3. Microbiology, including a laboratory component, a minimum of four (4) semester units.

Non-course requirements:

1. 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.
2. A cumulative grade point average (GPA) of 2.5 for all college coursework completed.
3. Eligibility for Math 51
4. High school graduation or GED or academic degree from an accredited college/university in the United States.
5. Possess a current, active California Licensed Vocational Nurse license.
6. A physical examination, including specific immunizations is required of all candidates prior to the beginning of nursing classes.
7. Current Healthcare Provider CPR certification
8. Criminal background check and drug screening must be completed prior to any patient contact
9. 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:

NURS 5	Psychiatric Nursing	3.0
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5.0

NURS 9	Leadership in Nursing	1.0
NURS 10	Medical-Surgical Nursing: Integration/Regulation	4.0
NURS 11	Preceptorship in Nursing	2.0
Total Units		15.0

PSYC 1A must be completed prior to entrance into NURS 5: Psychiatric 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.

1. Once a student has completed all course prerequisites, they may request an appointment with a counselor or educational advisor.
2. Students who have completed coursework at other colleges must bring the following information to their eligibility appointment:
 - a. Official transcripts of all college work completed at all colleges.
 - b. If the prerequisite courses were completed at another college, a course description and a copy of the course syllabus.
 - c. 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).
 - d. Due to specific college deadlines for International Student application, please inform the Counseling/Educational Advisor that this applies to you.
 - e. 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 be-

ginning 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.

Machine Operator

Technology and Health Division Certificate E0956

This certificate provides a foundation of basic skills for employment in a variety of entry-level manufacturing positions.

Required Courses:

MFG 10	Mathematics & Blueprint Reading for Manufacturing	3.0
MFG 11	Manufacturing Processes I	2.0
MFG 12	Manufacturing Processes II	2.0
MFG 38	MasterCAM I	2.0
MFG 85	Manual Computerized Numerical Control (CNC) Programming	2.0

Total Units 11.0

MasterCAM

Technology and Health Division Certificate E0927

This certificate provides a strong background in MasterCAM 2-D, 3-D, and Solids packages along with the necessary machine shop theory and practice to input sound functional data into the CAD/CAM system.

Required Courses:

MFG 11	Manufacturing Processes I	2.0
MFG 38	MasterCAM I	2.0
MFG 38B	MasterCAM II	2.0
MFG 85	Manual Computerized Numerical Control (CNC) Programming	2.0

Total Units 8.0

Microcomputer Productivity Software

Business Division Certificate E0336

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:

CISB 15	Microcomputer Applications	3.5
CISB 21	Microsoft Excel	3.0
CISB 51	Microsoft PowerPoint	3.0
CISD 11	Database Management - Microsoft Access	3.0
CISD 11L	Database Management - Microsoft Access Lab	0.5
CISN 21	Windows Operating Software	4.0

Total Units 17.0

Programs of Study Leading to a Certificate

Nutrition

Business Division

Certificate E0353

This certificate is designed to give students basic knowledge and skills in nutrition science, food science, food preparation, and food safety and sanitation.

These core courses provide the necessary skills for those seeking entry-level employment as nutrition assistants or dietary service workers in hospital or school food service or with community agencies such as The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and Head Start.

Required Courses:

HRM 52	Food Safety and Sanitation	1.5
NF 1	Introduction to Nutrition as a Career	1.5
NF 20	Principles of Foods	3.0
NF 25	Essentials of Nutrition	3.0

or

NF 25H	Essentials of Nutrition - Honors	3.0
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Total Units

9.0

Recommended Elective

NF 91	Work Experience in Nutrition and Dietetics	1.0 - 3.0
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Pilates Professional Teacher

Training Phase I: Mat and Reformer

Kinesiology, Athletics and Dance Division
Certificate E0315

The Pilates Professional Teacher Training Certificate prepares students for careers as Pilate 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 curriculum meets the standards of the Pilates Method Alliance and includes lecture, self-study, and teaching hours. Phase I covers Pilates theory and the Mat and Reformer repertoire of exercises.

Required Courses:

DN-T 27	Theory and Principles of Pilates	3.0
DN-T 28	Functional Anatomy for Pilates	2.0
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	3.0

KIN 3	First Aid and CPR	3.0
KIN 24	Applied Kinesiology	2.0
Plus select two (2) courses from:		
DNCE 39B	Alignment and Correctives II	0.5
DNCE 40	Conditioning Through Dance	0.5
KINI 50A	Yoga	0.5
Total Units		17.0

Programming In Visual Basic

Business Division

Certificate E0335

The Programming in Visual Basic Certificate is designed to prepare students for a career in computer programming. The certificate offers a balanced set of classes that provides students the client, server and database programming skills required by industry.

Emphasis is placed on object-oriented programming applications, web based applications, and implementing ASP.NET, ADO.NET and .NET Framework for reusable software components. Students will demonstrate the ability to design and implement a Visual Basic application that contains the client interface, the server implementation and the database. Opportunities available after the completion of this certificate include programming for systems, mobile applications, integration of systems and web applications.

Required Courses:

CISB 11	Computer Information Systems	3.5
CISD 11	Database Management - Microsoft Access	3.0
CISD 11L	Database Management - Microsoft Access Lab	0.5
CISM 11	Systems Analysis and Design	3.5
CISP 11	Programming in Visual Basic	3.0
CISP 11L	Programming in Visual Basic Laboratory	0.5
CISP 14	Advanced Visual Basic .NET	3.0
CISP 14L	Advanced Visual Basic.NET Laboratory	0.5
Total Units		17.5

Radio Broadcasting:

Behind-the-Scenes - Level I

Arts Division

Certificate E0372

This multi-level certificate program prepares students to enter the field of broadcasting in a behind-the-scenes capacity. The Level I Radio Broadcasting Behind-the-Scenes Certificate provides an overview of the fundamental skills essential to the field as well as the business and legal aspects of the industry.

Required Courses:

R-TV 01	Introduction to Electronic Media	3.0
R-TV 09	Broadcast Sales and Promotion	3.0
R-TV 10	Radio Programming and Producer Techniques	3.0
R-TV 11A	Beginning Radio Production	3.0
R-TV 15	Broadcast Law and Business Practices	3.0
Total Units		15.0

≡ Radio Broadcasting: Behind-the-Scenes (T0606)

Radio Broadcasting:

On-Air - Level I

Arts Division

Certificate E0371

This multi-level certificate program prepares students to enter the field of on-air radio broadcasting and related areas. The Level I Radio Broadcasting On-Air Certificate provides an overview of fundamental skills essential to the field as well as the business and legal aspects of the industry.

Required Courses:

R-TV 01	Introduction to Electronic Media	3.0
R-TV 02	On-Air Personality Development	3.0
R-TV 05	Radio-TV Newswriting	3.0
R-TV 11A	Beginning Radio Production	3.0
R-TV 15	Broadcast Law and Business Practices	3.0
Total Units		15.0

≡ Radio Broadcasting: On-Air Level III (L0350)

Real Estate Sales Certificate

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:

BUSR 50	Real Estate Principles	3.0
BUSR 52	Real Estate Practice	3.0

Plus select one (1) course from: (3-5 Units)

BUSA 7	Principles of Accounting - Financial	5.0
BUSA 11	Fundamentals of Accounting	3.0
BUSC 1A	Principles of Economics - Macroeconomics	3.0
BUSL 18	Business Law	3.0
BUSR 51	Legal Aspects of Real Estate	3.0
BUSR 53	Real Estate Finance	3.0
BUSR 55	Real Estate Economics	3.0
BUSR 57	Income Tax Aspects of Real Estate Investments	3.0
BUSR 59	Real Estate Property Management	3.0
BUSR 60	Real Estate Investment Planning	3.0
BUSR 62	Mortgage Loan Brokering and Lending	3.0
BUSR 76	Escrow Procedures I	3.0
BUSR 81	Appraisal: Principles and Procedures	3.5
PLGL 40	Landlord-Tenant Law	3.0

Total Units **9.0 - 11.0**

Welding

**Technology and Health Division
Certificate E0919**

This program is designed to prepare the student for employment in the broad field of welding and (1) leads to occupations in manufacturing and repair; and (2) 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:

WELD 40	Introduction to Welding	2.0
WELD 70A	Beginning Arc Welding	3.0
WELD 70B	Intermediate Arc Welding	3.0

Total Units 8.0

Recommended Electives:

WELD 60	Print Reading and Computations for Welders	3.0
WELD 70C	Certification for Welders	3.0

Note: Any higher level welding courses may be substituted for WELD 70A.

CERTIFICATES OF ACHIEVEMENT

**Accounting
Business Division
Certificate L0374**

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, financial analysis, etc.

Required Courses:

BUSA 7	Principles of Accounting - Financial	5.0
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BUSA 8	Principles of Accounting - Managerial	5.0
BUSA 21	Cost Accounting	4.5

or

BUSA 58	Federal Income Tax Law	3.0
BUSA 52	Intermediate Accounting	3.0
BUSA 75	Using Microcomputers in Financial Accounting	1.0
BUSA 76	Using Microcomputers in Managerial Accounting	1.0
BUSM 20	Principles of Business	3.0

Total Units 21.0 - 22.5

**Accounting - Computerized
Business Division
Certificate L0503**

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:

BUSA 7	Principles of Accounting - Financial	5.0
or		
BUSA 72	Bookkeeping - Accounting	5.0
BUSA 75	Using Microcomputers in Financial Accounting	1.0
BUSA 76	Using Microcomputers in Managerial Accounting	1.0
or		
BUSA 68	Business Mathematics	3.0
CISB 15	Microcomputer Applications	3.5

PLUS select a minimum of 7.5 Units from the following:

Note: CISD 11 & CISD 11L must be taken together

CISB 11	Computer Information Systems	3.5
CISB 16	Macintosh Applications	2.0
CISB 21	Microsoft Excel	3.0
CISB 31	Microsoft Word	3.0
CISB 51	Microsoft PowerPoint	3.0
CISD 11	Database Management - Microsoft Access	3.0
CISD 11L	Database Management - Microsoft Access Lab	0.5
CIS 11	Practical Computer Security	2.0

Total Units 18.0 - 20.0

**Accounting - Financial Planning
Business Division
Certificate L0599**

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:

BUSA 7	Principles of Accounting - Financial	5.0
BUSA 8	Principles of Accounting - Managerial	5.0
BUSA 58	Federal Income Tax Law	3.0
BUSA 71	Personal Financial Planning	3.0
BUSA 75	Using Microcomputers in Financial Accounting	1.0
BUSA 76	Using Microcomputers in Managerial Accounting	1.0

Total Units 18.0

**Accounting - Managerial
Business Division
Certificate L0533**

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:

BUSA 7	Principles of Accounting - Financial	5.0
BUSA 8	Principles of Accounting - Managerial	5.0
BUSA 21	Cost Accounting	4.5
BUSA 52	Intermediate Accounting	3.0

or

BUSA 58	Federal Income Tax Law	3.0
BUSA 76	Using Microcomputers in Managerial Accounting	1.0

Total Units 18.5

**Administrative Assistant - Level II
Business Division
Certificate L0594**

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:

Completion of the Administrative Assistant - Level 1 coursework as follows: (9.5 Units)

CISB 10	Office Skills	3.0
CISB 15	Microcomputer Applications	3.5
CISB 31	Microsoft Word	3.0

PLUS the level II coursework as follows: (9 Units)

BUSO 25	Business Communications	3.0
CISB 21	Microsoft Excel	3.0
CISB 51	Microsoft PowerPoint	3.0

Total Units 18.5

Programs of Study Leading to a Certificate

**Administrative Assistant - Level III
Business Division
Certificate L0382**

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

Required Courses:

Completion of the Administrative Assistant - Level I coursework as follows: (9.5 Units)

CISB 10	Office Skills	3.0
CISB 15	Microcomputer Applications	3.5
CISB 31	Microsoft Word	3.0

Completion of the Administrative Assistant - Level II coursework as follows: (9 Units)

BUSO 25	Business Communications	3.0
CISB 21	Microsoft Excel	3.0
CISB 51	Microsoft PowerPoint	3.0

PLUS the level III coursework as follows:

CISB 16	Macintosh Applications	2.0
BUSO 26	Oral Communications for Business	3.0

and

Select one (1) course or any one (1) combination lecture-lab course from the following:

CISD 11	Database Management - Microsoft Access	3.0
CISD 11L	Database Management - Microsoft Access Laboratory	0.5
	or	
CISN 21	Windows Operating System	3.0
	or	
CISS 11	Practical Computer Security	2.0
	or	
CISW 15	Web Site Development	3.5
	Total Units	25.5 - 27.5

**Air Conditioning and Refrigeration
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:

AIRC 10	Technical Mathematics in Air Conditioning and Refrigeration	2.0
AIRC 11	Welding for Air Conditioning and Refrigeration	2.0
AIRC 12	Air Conditioning Codes and Standards	3.0
AIRC 20	Refrigeration Fundamentals	4.0
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5.0
AIRC 26	Gas Heating Fundamentals	2.0
AIRC 30	Heat Load Calculations & Design	4.0
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4.0
AIRC 32A	Air Properties and Measurement	1.5
AIRC 34	Advanced Mechanical Refrigeration	4.0
	Total Units	31.5

**Aircraft Powerplant Maintenance
Technology - Day
Certificate T0982**

Technology and Health Division

This program prepares students to enter employment as a certified powerplant technician 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 or evening 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 65B are equivalent to evening program courses AIRM 95A, 95B, 96A, 96B, 97A, 97B, 98A, and 98B. Day program courses AIRM 66A and 66B are equivalent to evening program courses AIRM 90A, 90B, 91A, 91B, 92A, 92B, 93A, and 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:

AIRM 65A	Aircraft Powerplant Maintenance Technology	13.0
AIRM 65B	Aircraft Powerplant Maintenance Technology: Reciprocating and Turbine	13.0
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 71	Aviation Maintenance Science	6.0
AIRM 72	Aircraft Materials and Processes	1.5
AIRM 73	Aircraft Welding	1.5
	Total Units	41.0

Recommended Electives:

AIRM 74	Aircraft Maintenance Technology - Work Experience	2.0
AIRM 80	Lab Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4.0

**Aircraft Powerplant Maintenance
Technology - Evening
Certificate T0952**

Technology and Health Division

This program prepares students to enter employment as a certified powerplant technician 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 or evening 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 65B

are equivalent to evening program courses AIRM 95A, 95B, 96A, 96B, 97A, 97B, 98A, and 98B. Day program courses AIRM 66A and 66B are equivalent to evening program courses AIRM 90A, 90B, 91A, 91B, 92A, 92B, 93A, and 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:

AIRM 70A	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 71	Aviation Maintenance Science	6.0
AIRM 72	Aircraft Materials and Processes	1.5
AIRM 73	Aircraft Welding	1.5
AIRM 95A	Aircraft Powerplant Maintenance Technology	3.0
AIRM 95B	Aircraft Powerplant Maintenance Technology: Reciprocating Engines	3.0
AIRM 96A	Aircraft Powerplant Maintenance Technology: Turbine Engines	3.0
AIRM 96B	Aircraft Powerplant Maintenance Technology: Propellers	3.0
AIRM 97A	Aircraft Powerplant Maintenance Technology: Instrumentation	3.0
AIRM 97B	Aircraft Powerplant Maintenance Technology: Fuel Meter Systems	3.0
AIRM 98A	Aircraft Powerplant Maintenance Technology: Ignition Systems	3.0
AIRM 98B	Aircraft Powerplant Maintenance Technology: Lubricating Systems	3.0
	Total Units	39.0

Recommended Electives:

AIRM 74	Aircraft Maintenance Technology - Work Experience	2.0
AIRM 80	Lab Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4.0

Airframe Maintenance Technology - Day Certificate T0991

Technology and Health Division

This program prepares students to enter employment as a certified airframe technician 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 or evening program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 66A and 66B are equivalent to evening program courses AIRM 90A, 90B, 91A, 91B, 92A, 92B, 93A, and 93B.

Successful completion of this program enables students to take the FAA examinations 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:

AIRM 66A	Aircraft Airframe Maintenance Structures	13.0
AIRM 66B	Airframe Maintenance Technology	13.0
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 71	Aviation Maintenance Science	6.0
AIRM 72	Aircraft Materials and Processes	1.5
AIRM 73	Aircraft Welding	1.5
	Total Units	41.0

Recommended Electives

AIRM 74	Aircraft Maintenance Technology - Work Experience	2.0
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AIRM 80	Lab Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4.0

Airframe Maintenance Technology - Evening Certificate T0981

Technology and Health Division

This program prepares students to enter employment as a certified airframe technician 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 or evening program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 66A and 66B are equivalent to evening program courses AIRM 90A, 90B, 91A, 91B, 92A, 92B, 93A, and 93B.

Successful completion of this program enables students to take the FAA examinations 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:

AIRM 70A	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 71	Aviation Maintenance Science	6.0
AIRM 72	Aircraft Materials and Processes	1.5
AIRM 73	Aircraft Welding	1.5
AIRM 90A	Airframe Maintenance Technology	3.0
AIRM 90B	Airframe Maintenance Technology: Structure and Design	3.0

AIRM 91A	Airframe Maintenance Technology	3.0
AIRM 91B	Airframe Maintenance Technology: Aluminum Repair	3.0
AIRM 92A	Airframe Maintenance Technology: Hydraulics & Pneu	3.0
AIRM 92B	Airframe Maintenance Technology	3.0
AIRM 93A	Airframe Maintenance Technology: Systems	3.0
AIRM 93B	Airframe Maintenance Technology: Fire Suppression	3.0

Total Units 39.0

Recommended Electives

AIRM 74	Aircraft Maintenance Technology - Work Experience	2.0
AIRM 80	Lab Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4.0

Alcohol/Drug Counseling Technology and Health Division Certificate T2101

Upon completion of the required courses with a grade of "C" or better, a Certificate in Alcohol/Drug Studies will be awarded by the Technology and Health Division.

Required Courses:

AD 1	Alcohol/Drug Dependency	3.0
AD 2	Physiological Effects of Alcohol/Drugs	3.0
AD 3	Chemical Dependency: Intervention, Treatment and Recovery	3.0
AD 4	Issues in Domestic Violence	3.0
AD 5	Chemical Dependency: Prevention and Education	1.5
AD 6	Dual Diagnosis	3.0
AD 8	Group Process and Leadership	3.0
AD 9	Family Counseling	3.0
AD 10	Client Record and Documentation	1.5
AD 11	Techniques of Intervention and Referral	3.0

Required skill courses:

AD 13	Internship/Seminar	4.0
AD 14	Advanced Internship/Seminar	4.0

Required field work courses:

AD 13	Internship/Seminar	4.0
AD 14	Advanced Internship/Seminar	4.0

Select two (2) courses from:

CHLD 10	Child Growth and Lifespan Development	3.0
	<i>or</i>	
CHLD 10H	Child Growth and Lifespan Development - Honors	3.0
PSYC 1A	Introduction to Psychology	3.0
	<i>or</i>	
PSYC 1AH	Introduction to Psychology - Honors	3.0
PSYC 19	Abnormal Psychology	3.0
SOC 1	Sociology	3.0

	<i>or</i>	
SOC 1H	Sociology - Honors	3.0
SOC 14	Marriage and the Family	3.0
	<i>or</i>	
SOC 14H	Marriage and the Family - Honors	3.0
SOC 15	Child Development	3.0

Total Units 41.0

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.

Programs of Study Leading to a Certificate

Animation – 3D and CG Gaming Arts Division Certificate T0302

The Animation – 3D and CG Gaming Certificate provides training in 3D animation including character modeling, character rigging, lighting, texture, environment and visual effects that lead to creative careers in film, television and the video game industry.

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 which are essential for today's careers in animation.

Required Courses:

ANIM 101A	Drawing - Gesture and Figure	3.0
ANIM 104	Drawing Fundamentals	3.0
ANIM 108	Principles of Animation	3.0
ANIM 115	Storyboarding	3.0
ANIM 116	Character Development	1.5
ANIM 130	Introduction to 3D Modeling	3.0
ANIM 131	Introduction to Gaming	3.0
ANIM 132	Intermediate 3D Modeling	3.0
ANIM 136	Animation Environment and Level Design	3.0
ANIM 145	Advanced 3-D Modeling	3.0
ANIM 148	Demo-Reel	3.0
ARTC 100	Graphic Design I	3.0

Required Electives

Select one (1) of the following: (3 Units)

ANIM 146	Advanced 3-D Animation	3.0
ANIM 149	3-D Character Rigging	3.0

Total Units 37.5

Recommended Electives

ANIM 109	Advanced Principles of Animation	3.0
ANIM 137A	Work Experience in New Digital Media	1.0
ANIM 172	Motion Graphics, Compositing and Visual Effects	3.0
ANIM 175	Web Animation With Flash	3.0
ARTC 290	Portfolio	3.0
ARTD 17A	Drawing: Life	3.0
ARTD 20	Design: Two-Dimensional	3.0
PHOT 10	Basic Digital and Film Photography	3.0

Animation – Game & Interactive Multimedia Design II

Arts Division

Certificate L0340

This multi-level certificate program offers skills needed for creative careers that integrate animation with gaming, video, audio, graphics, and special effects for the Web, broadcast, film, presentation, or mobile content. The Animation - Game & Interactive Multimedia Design Level II certificate provides additional expertise for employment opportunities in areas of game design, digital animation, motion graphics, and special effects.

Required Courses:

Completion of Animation - Game & Interactive Multimedia Design Level I coursework (12 Units)

ANIM 100	Digital Paint and Ink	3.0
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or

ARTC 100	Graphic Design I	3.0
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ANIM 131	Introduction to Gaming	3.0
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ANIM 172	Motion Graphics, Compositing and Visual Effects	3.0
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ANIM 175	Web Animation With Flash	3.0
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ANIM 141	2D Game Level Design	3.0
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ANIM 148	Demo Reel	3.0
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or

ARTC 290	Portfolio	3.0
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ANIM 151	Game Prototype Production	3.0
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Total Units 21.0

Recommended Elective:

ANIM 137A	Work Experience in New Digital Media	1.0
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Animation - Tradigital Level II

Arts Division

Certificate L0338

This multi-level certificate program provides skills based on the principles of storytelling and animation using both traditional and digital media. This Animation - Tradigital Level II certificate provides additional expertise leading to employment opportunities as animators, character designers, and storyboard artists for television, film, Web, mobile media, and gaming.

Required Courses:

Completion of the Animation - Tradigital Level I coursework (15 Units)

ANIM 101A	Drawing - Gesture and Figure	3.0
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ANIM 108	Principles of Animation	3.0
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ANIM 111A	Animal Drawing	1.5
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ANIM 115	Storyboarding	3.0
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ANIM 116	Character Development	1.5
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ANIM 104	Drawing Fundamentals	3.0
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or

ARTD 15A	Drawing: Beginning	3.0
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PLUS the following Level II coursework (9 Units)

ANIM 175	Web Animation with Flash	3.0
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ANIM 100	Digital Paint and Ink	3.0
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or

ARTC 100	Graphic Design I	3.0
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ARC 290	Portfolio	3.0
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or

ANIM 148	Demo Reel	3.0
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Total Units 24.0

Recommended Electives:

ANIM 137A	Work Experience in New Digital Media	1.0
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ARTD 17A	Drawing: Life	3.0
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ARTD 16	Drawing: Perspective	3.0
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Architectural Design

Concentration Level I

Technology and Health Division

Certificate L0384

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:

ARCH 101	Design I - Elements of Design	4.0
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ARCH 141	Architectural Drawing	4.0
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ARCH 121	CADD and Digital Design Media Level I	4.0
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PLUS the following courses: (8 Units)

ARCH 102	Design II - Architectural Design	4.0
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ARCH 122	Architectural Presentations	4.0
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Total Units 20.0

Specific Information:

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

Architectural Design

Concentration Level II

Technology and Health Division

Certificate T0385

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:

Completion of the Architectural Technology

Level I coursework (20 Units)

ARCH 101	Design I Elements of Design	4.0
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ARCH 102	Design II Architectural Design	4.0
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ARCH 121	CADD and Digital Media Level I	4.0
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ARCH 122	Architectural Presentations	4.0
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ARCH 141	Design Drawing and Communication	4.0
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Plus the following courses: (11 Units)

ARCH 142	Architectural Materials and Specifications	4.0
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ARCH 201	Design III Environmental Design	4.0
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ARCH 250	World Architecture I	3.0
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Total Units 31.0

Architectural Design Concentration Level III 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: Completion of the Architectural Technology Design Concentration Level I and Level II coursework: (31 Units)

ARCH 101	Design I Elements of Design	4.0
ARCH 121	CADD and Digital Media Level I	4.0
ARCH 141	Design Drawing and Communication	4.0
ARCH 102	Design II Architectural Design	4.0
ARCH 122	Architectural Presentations	4.0
ARCH 142	Architectural Materials and Specifications	4.0
ARCH 250	World Architecture I	3.0
ARCH 201	Design III Environmental Design	4.0
PLUS the following courses: (10 Units)		
ARCH 202	Design IV Advanced Project	4.0
ARCH 221	Architectural Illustration	3.0
ARCH 251	World Architecture II	3.0
Total Units		41.0

Architectural Technology Concentration Level I Technology and Health Division Certificate L0388

This Level I Technology Concentration Certificate focuses upon the preparation of architectural construction documents, with emphasis on computer-aided design (CAD) applications. Regulatory requirements and an overview of construction practices are also included. The student will prepare a portfolio of CAD documentation, including 2-D and 3-D projections. The Level I Technology Concentration Certificate prepares students for employment as a beginning CAD draftsman or production specialist.

Required Courses Completion of the Architecture Foundational Skills Certificate

ARCH 101	Design I - Elements of Design	4.0
ARCH 121	CADD and Digital Media Level I	4.0
ARCH 141	Design Drawing and Communication	4.0

and PLUS the following courses: (16 units)

ARCH 142	Architectural Materials and Specifications	4.0
ARCH 145	Building and Zoning Codes	3.0
ARCH 147	Architectural CAD and BIM	3.0
ARCH 247	Architectural CAD Working Drawings	3.0
INSP 70	Elements of Construction	3.0
Total Units		28.0

Architectural Technology Concentration Level II Technology and Health Division Certificate T0389

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

Required Courses: Architectural Technology Concentration Level I coursework (28 Units)

ARCH 101	Design I - Elements of Design	4.0
ARCH 121	CADD and Digital Media Level I	4.0
ARCH 141	Design Drawing and Communication	4.0
ARCH 142	Architectural Materials and Specifications	4.0
ARCH 147	Architectural CAD and BIM	3.0
ARCH 145	Building and Zoning Codes	3.0
ARCH 247	Architectural CAD Working Drawings	3.0
INSP 70	Elements of Construction	3.0

and PLUS the following courses: (9 Units)

ARCH 146	Architectural Drawings and Fabrications	3.0
EDT 26	Civil Engineering Technology and CAD	3.0

INSP 71	Construction Estimating	3.0
Total Units		37.0

Building Automation 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:

AIRC 20	Refrigeration Fundamentals	4.0
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5.0
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4.0
AIRC 34	Advanced Mechanical Refrigeration	4.0
AIRC 61	Building Automation Fundamentals	2.5
AIRC 65	Building Automation Networks and Programming	3.0
AIRC 67	Energy Management	4.0
ELEC 11	Technical Applications in Microcomputers	3.0
CISW 41	XML Secure Programming	3.0
CNET 56	Computer Networks	4.0
Total Units		36.5

Business: Human Resource Management - Level II Business Division Certificate L0534

This certificate builds upon the Level I Certificate to provide students with specific knowledge of human resource management functions. HR law, compensation 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: Completion of the Business: Human Resource Management - Level I coursework (9 Units) Level I as follows: (9 Units)

BUSM 20	Principles of Business	3.0
BUSM 61	Business Organization and Management	3.0
BUSM 62	Human Resource Management	3.0
PLUS the Level II courses as follows: (9 Units)		
ANTH 22	General Cultural Anthropology	3.0
BUSM 60	Human Relations in Business	3.0
BUSO 25	Business Communications	3.0
Total Units		18.0

Special Information:

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

Business: Human Resource Management - Level III Business Division Certificate L0535

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: Completion of Business: Human Resource Management - Level I and Level II coursework. Level I as follows: (9 Units)

BUSM 20	Principles of Business	3.0
BUSM 61	Business Organization and Management	3.0
BUSM 62	Human Resource Management	3.0
Level II as follows: (9 Units)		
ANTH 22	General Cultural Anthropology	3.0
BUSM 60	Human Relations in Business	3.0
BUSO 25	Business Communications	3.0
Plus the Level III courses as follows: (6.5 Units)		
BUSA 70	Payroll and Tax Accounting	3.0
CISB 15	Microcomputer Applications	3.5
Total Units		24.5

Programs of Study Leading to a Certificate

Special Information:

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

Business: International - Level II

Business Division

Certificate L0597

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:

Completion of the Business: International - Level I coursework as follows: (9 Units)

BUSM 20	Principles of Business	3.0
BUSM 51	Principles of International Business	3.0
BUSS 36	Principles of Marketing	3.0

Plus Level II as follows: (6 Units)

BUSM 61	Business Organization and Management	3.0
BUSM 66	Small Business Management	3.0

PLUS Select one (1) course from: (4 Units)

CHIN 1	Elementary Chinese	4.0
FRCH 1	Elementary French	4.0
GERM 1	Elementary German	4.0
ITAL 1	Elementary Italian	4.0
JAPN 1	Elementary Japanese	4.0
SPAN 1	Elementary Spanish	4.0

Total Units 19.0

Special Information:

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

Business: International - Level III

Business Division

Certificate L0528

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. Completion of the Business: International - Level I and II coursework (19 Units) as follows:

Required Courses:

Level I as follows: (9 Units)

BUSM 20	Principles of Business	3.0
BUSM 51	Principles of International Business	3.0
BUSS 36	Principles of Marketing	3.0

Level II as follows: (6 Units)

BUSM 61	Business Organization and Management	3.0
BUSM 66	Small Business Management	3.0

PLUS Select one (1) course from: (4 Units)

CHIN 1	Elementary Chinese	4.0
FRCH 1	Elementary French	4.0
GERM 1	Elementary German	4.0
ITAL 1	Elementary Italian	4.0
JAPN 1	Elementary Japanese	4.0
SPAN 1	Elementary Spanish	4.0

PLUS Additional required courses: Level III as follows: (9 Units)

BUSL 20	International Business Law	3.0
BUSM 50	World Culture: A Business Perspective	3.0

or

ANTH 22	General Cultural Anthropology	3.0
BUSM 52	Principles of Exporting and Importing	3.0

Total Units 28.0

Recommended Electives:

BUSM 81	Work Experience in Business	1.0
BUSM 85	Special Issues in Business	2.0
BUSS 85	Special Issues in Marketing	2.0

Special Information:

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

Business: Management - Level II

Business Division

Certificate L0586

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:

Completion of Business: Management - Level I coursework as follows: (9 Units)

BUSM 20	Principles of Business	3.0
BUSM 61	Business Organization and Management	3.0

BUSS 36	Principles of Marketing	3.0
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Plus the Level II courses as follows: (9.5 Units)

BUSM 60	Human Relations in Business	3.0
BUSM 62	Human Resource Management	3.0
CISB 15	Microcomputer Applications	3.5

Total Units 18.5

Special Information:

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

Business: Management - Level III

Business Division

Certificate T0526

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:

Completion of Business: Management - Level I coursework as follows: (9 Units)

BUSM 20	Principles of Business	3.0
BUSM 61	Business Organization and Management	3.0

BUSS 36	Principles of Marketing	3.0
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Completion of the Business: Management - Level II coursework as follows: (9.5 Units)

BUSM 60	Human Relations in Business	3.0
BUSM 62	Human Resource Management	3.0
CISB 15	Microcomputer Applications	3.5

Plus the Level III courses as follows: (11 Units)

BUSA 7	Principles of Accounting - Financial	5.0
BUSM 10	Principles of Continuous Quality Improvement	3.0
BUSM 51	Principles of International Business	3.0

Total Units 29.5

Special Information:

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

Business: Retail Management - Level II

Business Division

Certificate L0591

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:

Completion of the Retail Management - Level I coursework as follows: (9.5 Units)

BUSO 25	Business Communications	3.0
BUSS 50	Retail Store Management and Merchandising	3.0

or

FASH 62	Retail Buying and Merchandising	3.0
CISB 15	Microcomputer Applications	3.5

Plus the Level II courses as follows: (12 Units)

BUSA 11	Fundamentals of Accounting	3.0
BUSM 61	Business Organization and Management	3.0
BUSM 62	Human Resource Management	3.0
BUSS 36	Principles of Marketing	3.0
	Total Units	21.5

Special Information:
Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business: Retail Management - Level III

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:

Completion of the Retail Management - Level I coursework as follows: (9.5 Units)

BUSO 25	Business Communications	3.0
BUSS 50	Retail Store Management and Merchandising	3.0

or

FASH 62	Retail Buying and Merchandising	3.0
CISB 15	Microcomputer Applications	3.5

Completion of the Retail Management - Level II coursework as follows: (12 Units)

BUSA 11	Fundamentals of Accounting	3.0
BUSM 61	Business Organization and Management	3.0
BUSM 62	Human Resource Management	3.0
BUSS 36	Principles of Marketing	3.0

Plus the Level III courses as follows: (11 Units)

BUSA 7	Principles of Accounting - Financial	5.0
BUSM 60	Human Relations in Business	3.0

BUSO 26	Oral Communications for Business	3.0
	Total Units	32.5

Special Information:

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

Business: Small Business Management - Level II

Business Division Certificate L0588

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:

Completion of Business: Small Business Management - Level I coursework as follows: (9 Units)

BUSM 20	Principles of Business	3.0
BUSM 66	Small Business Management	3.0
BUSS 36	Principles of Marketing	3.0

Plus the Level II courses as follows: (9 Units)

BUSM 60	Human Relations in Business	3.0
BUSM 61	Business Organization and Management	3.0

BUSM 62	Human Resource Management	3.0
	Total Units	18.0

Special Information:

Special Information: Students receiving financial aid need to declare the Level II Certificate as their goal to meet Financial Aid requirements.

Business: Small Business Management - Level III

Business Division Certificate T0590

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:

Completion of Business: Small Business Management - Level I coursework as follows: (9 Units)

BUSM 20	Principles of Business	3.0
BUSM 66	Small Business Management	3.0
BUSS 36	Principles of Marketing	3.0

Completion of Business: Small Business Management - Level II coursework as follows: (9 Units)

BUSM 60	Human Relations in Business	3.0
BUSM 61	Business Organization and Management	3.0

Plus the Level III courses as follows: (11.5 Units)

BUSA 7	Principles of Accounting - Financial	5.0
BUSM 10	Principles of Continuous Quality Improvement	3.0

CISB 15	Microcomputer Applications	3.5
	Total Units	29.5

Special Information:

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

Children's Program Certificate: Administration

Business Division Certificate T1313

The Children's Program Certificate: Administration Specialization is designed for the student who desires general knowledge about Early Childhood Development and skills in administering programs for young children. This certificate meets or exceeds Title 22 education requirements for Center Director. Direct experience with children is highly recommended to complete preparation to be an effective administrator.

Required Courses

Completion of Children's Program Certificate: General - Level II as follows: (19 Units)

CHLD 1	Child, Family, School and Community	3.0
CHLD 5	Principles and Practices in Child Development Programs	3.0

CHLD 6	Survey of Child Development Curriculum	3.0
CHLD 10	Child Growth and Lifespan Development	3.0

or

CHLD 10H	Child Growth and Lifespan Development - Honors	3.0
CHLD 64	Health, Safety and Nutrition of Young Children	3.0

CHLD 68	Children With Special Needs	3.0
CHLD 84	Guidance and Discipline in Child Development Settings	1.0

PLUS Select three (3) courses from: (9 Units)

CHLD 61	Language Arts and Art Media for Young Children	3.0
CHLD 62	Music and Motor Development for Young Children	3.0

CHLD 63	Creative Scienicing and Math for Young Children	3.0
CHLD 73	Infant/Toddler Care and Development	3.0

PLUS Additional required courses: (11 Units)

CHLD 50	Teaching in a Diverse Society	3.0
CHLD 71A	Administration of Child Development Programs	3.0

CHLD 71B	Management/Marketing/Personnel for ECD Programs	3.0
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Programs of Study Leading to a Certificate

CHLD 75	Supervising Adults in Early Childhood Settings	2.0
PLUS Select four (4) Units from: <i>Note: Your four (4) Unit selection should not include any course you have previously taken.</i>		
BUSM 66	Small Business Management	3.0
CHLD 72	Teacher, Parent, and Child Relationships	3.0
CHLD 73	Infant/Toddler Care and Development	3.0
CHLD 82	Advocacy in Child Development	1.0
CHLD 83	Current Issues in Child Development	1.0
Total Units		43.0

Children's Program Certificate: General - Level II

Business Division Certificate L1328

The Children's Program Certificate: General Level II enhances the student's knowledge beyond Level I, providing additional skills and knowledge working with children. This certificate focuses on safe and healthy environments, working appropriately with children with special needs and the use of appropriate discipline techniques. Completion may lead to salary increase based on Units earned.

Required Courses:

Completion of Children's Program Certificate:

General - Level I coursework: (12 Units)

CHLD 1	Child, Family, School and Community	3.0
CHLD 5	Principles and Practices in Child Development Programs	3.0
CHLD 6	Survey of Child Development Curriculum	3.0
CHLD 11	Child and Adolescent Development	3.0

Plus the Level II courses as follows: (7 Units)

CHLD 64	Health, Safety and Nutrition of Young Children	3.0
CHLD 68	Children With Special Needs	3.0
CHLD 84	Guidance and Discipline in Child Development Settings	1.0
Total Units		19.0

Children's Program Certificate: General - Level III

Business Division Certificate L1327

The Children's Program Certificate: General Level III 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:

Completion of Children's Program Certificate:

General - Level I and Level II coursework (19 Units)

CHLD 1	Child, Family, School and Community	3.0
CHLD 5	Principles and Practices in Child Development Programs	3.0
CHLD 6	Survey of Child Development Curriculum	3.0
CHLD 11	Child and Adolescent Development	3.0
CHLD 64	Health, Safety and Nutrition of Young Children	3.0
CHLD 68	Children With Special Needs	3.0
CHLD 84	Guidance and Discipline in Child Development Settings	1.0

PLUS Select three (3) Level III courses from: (9 Units)

CHLD 50	Teaching in a Diverse Society	3.0
CHLD 61	Language Arts and Art Media for Young Children	3.0
CHLD 62	Music and Motor Development for Young Children	3.0
CHLD 63	Creative Sciencing and Math for Young Children	3.0
CHLD 73	Infant/Toddler Care and Development	3.0

Total Units 28.0

Children's Program Certificate: Teaching

Business Division Certificate T1312

The Children's Program Certificate: Teaching specialization is designed for the student who desires knowledge about Early Childhood Development and skills for teaching young children. This certificate contains two laboratory and one fieldwork component emphasizing working with children. This certificate exceeds Title 22 education requirements for fully qualified teachers. With 175 days of experience and the completion of 16 specified G.E. Areas A, B, C, and D, this certificate meets Title 5 education requirements for a fully qualified teacher.

Required Courses:

CHLD 1	Child, Family, School and Community	3.0
CHLD 5	Principles and Practices in Child Development Programs	3.0
CHLD 6	Introduction to Child Development Curriculum	3.0
CHLD 11	Child and Adolescent Development	3.0
CHLD 50	Teaching in a Diverse Society	3.0
CHLD 64	Health, Safety and Nutrition of Children	3.0
CHLD 66	Early Childhood Development Observation and Assessment	2.0
CHLD 66L	Early Childhood Development Observation and Assessment Laboratory	1.0
CHLD 67	Early Childhood Education Practicum	2.0
CHLD 67L	Early Childhood Education Practicum Laboratory	1.0
CHLD 68	Children With Special Needs	3.0
CHLD 69	Early Childhood Development Field Work Seminar	2.0
CHLD 75	Supervising Adults in Early Childhood Settings	2.0
CHLD 84	Guidance and Discipline in Child Development Settings	1.0
CHLD 91	Early Childhood Development Field Work	1.0

Required Electives

Select two (2) courses from: (6 Units)

CHLD 51	Early Literacy in Child Development	3.0
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CHLD 61	Language Arts and Art Media for Young Children	3.0
CHLD 62	Music and Motor Development for Young Children	3.0
CHLD 63	Creative Sciencing and Math for Young Children	3.0
Total Units		39.0

Computer and Networking Technology - Level I

Technology and Health Division Certificate L0795

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:

CNET 50	PC Servicing	4.0
CNET 52	PC Operating Systems	4.0
CNET 54	PC Troubleshooting	4.0
CNET 60	A+ Certification Preparation	2.0
ELEC 11	Technical Applications in Microcomputers	3.0
or		
CISB 15	Microcomputer Applications	3.5
ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 50B	Electronic Circuits (AC)	4.0
ELEC 56	Digital Electronics	4.0
Total Units		29.0 - 29.5

Computer and Networking Technology - Level II

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:

Completion of the Computer and Networking Technology - Level I coursework as follows: (29.0-29.5 Units)

CNET 50	PC Servicing	4.0
CNET 52	PC Operating Systems	4.0
CNET 54	PC Troubleshooting	4.0
CNET 60	A+ Certification Preparation	2.0
ELEC 11	Technical Applications in Microcomputers	3.0
or		
CISB 15	Microcomputer Applications	3.5
ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 50B	Electronic Circuits (AC)	4.0
ELEC 56	Digital Electronics	4.0

Plus the Level II courses as follows: (12 Units)

CNET 56	Computer Networks	4.0
CNET 62	Network+ Certification Preparation	2.0
CNET 64	Server+ Certification Preparation	2.0
CNET 66	Security+ Certification Preparation	2.0

TECH 60	Customer Relations for the Technician	2.0
Total Units		41.0 - 41.5

Recommended Electives

ELEC 51	Semiconductor Devices and Circuits	4.0
ELEC 74	Microcontroller Systems	4.0
EST 54	Cabling and Wiring Standards	4.0

Computer Systems Technology

Technology and Health Division Certificate L0924

In addition to courses in electronics fundamentals, the Computer Systems Technology certificate encompasses advanced coursework in computer 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. 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:

ELEC 11	Technical Applications in Microcomputers	3.0
ELEC 12	Computer Simulation and Troubleshooting	2.0
ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 50B	Electronic Circuits (AC)	4.0
ELEC 51	Semiconductor Devices and Circuits	4.0
ELEC 56	Digital Electronics	4.0
ELEC 61	Electronic Assembly and Fabrication	3.0
ELEC 74	Microcontroller Systems	4.0
TECH 60	Customer Relations for the Technician	2.0

Total Units		30.0
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Construction Inspection

Technology and Health Division Certificate L0920

This program is intended to prepare students for employment following completion of courses. Students desiring a Bachelor's Degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses

Required Courses:

ARCH 142	Architectural Materials and Specifications	4.0
ARCH 145	Building and Zoning Codes	3.0
INSP 17	Legal Aspects/Construct	3.0
INSP 70	Elements of Construction	3.0
INSP 71	Construction Estimating	3.0
INSP 87	Fund Construct Inspect	3.0
MATH 51	Elementary Algebra	4.0
Total Units		23.0

Recommended Electives:

ARCH 141	Architectural Drawing	4.0
ARCH 146	Architectural Drawings and Fabrications	3.0
EDT 26	Civil Engineering Technology and CAD	3.0
INSP 67	Reading Construction Drawings	3.0

Dance Teacher

Kinesiology and Athletics Division Certificate L0355

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:

DN-T 20	History and Appreciation of Dance	3.0
DN-T 38	Dance Teaching Methods	3.0
DNCE 2B	Ballet II	0.5
DNCE 4	Choreography	0.5
DNCE 11A	Social Dance Forms I	0.5
<i>(DNCE 11A: 0.5-1.0 course, 1 unit required)</i>		
DNCE 12B	Modern II .50	
<i>(DNCE 12B: 0.5-1.0 unit course, 1 unit required)</i>		

DNCE 14B	Jazz II	0.5
<i>(DNCE 14B: 0.5-1.0 unit course, 1 unit required)</i>		

DNCE 18A	Tap I	0.5
DNCE 24	Dance Production	1.0
<i>(DNCE 24: 1.0-2.0 unit course, 2 units required)</i>		

DNCE 32	Commercial Dance	0.5
DNCE 33	Improvisation	0.5
DNCE 34	Dance Directives	0.5
DNCE 35	Repertory	2.0
DNCE 39A	Alignment and Correctives I	0.5
KIN 24	Applied Kinesiology	2.0
Total Units		18.5

Electronic Systems Technology - Level II

Technology and Health Division Certificate L0928

The Level II certification (14 Units) adds customer relations skills and the installation, calibration, setup maintenance and troubleshooting of home theater, home automation, and home security systems. Either a course on preparing for the C-7 license or troubleshooting digital TV with LCD, plasma and DLP video displays is included.

Required Courses:

ELEC 11	Technical Applications in Microcomputers	3.0
or		
CISB 15	Microcomputer Applications	3.5
EST 50	Electrical Fundamentals for Cable Installations	4.0
EST 52	Fabrication Techniques for Cable Installations	4.0
EST 54	Cabling and Wiring Standards	4.0
EST 56	Home Theater, Home Integration, & Home Security Systems	4.0
EST 62	Electronic Troubleshooting - I	4.0
EST 64	Electronic Troubleshooting - II	4.0
TECH 60	Customer Relations for the Technician	2.0
Total Units		29.0 - 29.5

Recommended Electives:

ELEC 61	Electronic Assembly and Fabrication	3.0
ELEC 62	Advanced Surface Mount Assembly and Rework	2.0

Programs of Study Leading to a Certificate

**Electronics and Computer
- Engineering Technology****Technology and Health Division
Certificate T0906**

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.).

Required Courses:

ELEC 11	Technical Applications in Microcomputers	3.0
ELEC 12	Computer Simulation and Troubleshooting	2.0
ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 50B	Electronic Circuits (AC)	4.0
ELEC 51	Semiconductor Devices and Circuits	4.0
ELEC 53	Communication Systems	4.0
ELEC 54A	Industrial Electronics	4.0
ELEC 54B	Industrial Electronic Systems	3.0

ELEC 55	Microwave Communications	4.0
ELEC 56	Digital Electronics	4.0
ELEC 61	Electronic Assembly and Fabrication	3.0
ELEC 74	Microcontroller Systems	4.0
TECH 60	Customer Relations for the Technician	2.0
Total Units		45.0

Recommended Electives:

CISP 11	Programming in Visual Basic	3.0
ELEC 62	Advanced Surface Mount Assembly and Rework	2.0
ELEC 76	FCC General Radiotelephone Operator License Preparation	2.0
PHYS 2AG	General Physics	4.0

Electronics Communications**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.

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:

ELEC 11	Technical Applications in Microcomputers	3.0
ELEC 12	Computer Simulation and Troubleshooting	2.0

ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 50B	Electronic Circuits (AC)	4.0
ELEC 51	Semiconductor Devices and Circuits	4.0
ELEC 53	Communication Systems	4.0
ELEC 55	Microwave Communications	4.0
ELEC 56	Digital Electronics	4.0
ELEC 61	Electronic Assembly and Fabrication	3.0
TECH 60	Customer Relations for the Technician	2.0
Total Units		34.0

Electronics Technology**Technology and Health Division
Certificate L0905**

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:

ELEC 11	Technical Applications in Microcomputers	3.0
ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 50B	Electronic Circuits (AC)	4.0
ELEC 51	Semiconductor Devices and Circuits	4.0
ELEC 56	Digital Electronics	4.0
ELEC 61	Electronic Assembly and Fabrication	3.0
TECH 60	Customer Relations for the Technician	2.0
Total Units		24.0

Electronics: Industrial Systems**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:

ELEC 11	Technical Applications in Microcomputers	3.0
ELEC 12	Computer Simulation and Troubleshooting	2.0
ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 50B	Electronic Circuits (AC)	4.0
ELEC 51	Semiconductor Devices and Circuits	4.0
ELEC 54A	Industrial Electronics	4.0
ELEC 54B	Industrial Electronic Systems	3.0
ELEC 56	Digital Electronics	4.0
ELEC 61	Electronic Assembly and Fabrication	3.0
TECH 60	Customer Relations for the Technician	2.0
Total Units		33.0

**Emergency Medical Technician
- Paramedic (EMT-P)****Technology and Health Division
Certificate T1281**

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:

EMS 10	Anatomy and Physiology for Paramedics	2.0
EMS 20	Emergency Cardiac Care for Paramedics	1.5
EMS 30	Pharmacology for Paramedics	2.5
EMS 40	Cardiology for Paramedics	5.0
EMS 50	Paramedic Skills Competency	5.0
EMS 60	EMS Theory for Paramedics	8.5
EMS 70	Paramedic Clinical Internship	4.0
EMS 80	Paramedic Field Externship	9.5

Total Units 38.0

Recommended Electives:

ADJU 1	The Administration of Justice System	3.0
FIRE 1	Fire Protection Organization	3.0
PSYC 1A	Introduction to Psychology	3.0
<i>or</i>		
PSYC 1AH	Introduction to Psychology - Honors	3.0
SOC 1	Sociology	3.0
<i>or</i>		
SOC 1H	Sociology - Honors	3.0

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, per state regulations. 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 Emergency Medical Technician - Paramedic (EMT-P) program. Students are then eligible for licensure by taking and passing both the National Registry Exam and County Paramedic accreditation exam.

EMT 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 re-enter the Paramedic program at Mt. SAC.

Application Requirements:

In addition to meeting the Mt. San Antonio College's academic standards for admission, applicants must be in good standing and satisfy the following requirements:

- 1) Be an EMT-I, currently certified in California.
- 2) 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-I (approximately 1,200 hours) within the last 2 years.
- 3) File a College application and be accepted as a student at Mt. San Antonio College.
- 4) Submit an application for the Paramedic Program to the Health Science Programs Office (909) 274-7500, Ext. 4750. All applications are dated upon receipt in the Health Science Programs Office. The Paramedic Program begins three (3) times per year, in August, January and May and runs for 29 weeks.
- 5) Take the Assessment of Written English, the Math Placement Test and Degrees of Reading Power test at least 10 working days before the start of the pre-courses EMS 1 and EMS 2. Placement examinations will be individually assessed to determine eligibility for the pre-courses. The placement tests are administered by the Assessment Center, located in the Student Services Center.
- 6) Successful completion of EMS 1, *Paramedic Fundamentals and Selection* and EMS 2, *Preparation for Paramedic Program*.

7) Forward two (2) official transcripts of all coursework completed (high school, EMT - I, Fire Science and college work other than Mt. San Antonio College courses). One transcript must be sent to the Health Science Programs Office; the other to the Admissions and Records Office. For students who possess a college degree, the English placement examination is not required. However, it will be necessary for students to obtain two (2) official copies of the college transcript showing the degree issued. One official transcript must be sent to the Health Science Programs Office; the other to the Admissions and Records Office.
NOTE: If the course(s) were taken and/or the degree obtained at Mt. San Antonio College, it is not necessary to request transcripts.

EXAMPLE:

Mt. San Antonio College
Technology and Health Division
1100 North Grand Avenue
Walnut CA 91789-1399.

8) A physical examination, proof of certain immunizations and a criminal background check 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. In addition, drug testing may be required as part of the physical examination and/or requested by the college or its agents.

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
- Handle emergency or crisis situations
- 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
- Exposure 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 to ensure safety for themselves and others.

Programs of Study Leading to a Certificate

Fashion Design - Level I

Business Division

Certificate L1397

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:

FASH 10	Clothing Construction I	3.0
FASH 12	Clothing Construction II	3.0
FASH 17	Textiles	3.0
FASH 21	Patternmaking I	3.0
FASH 24	Fashion Patternmaking by Computer	3.0
FASH 25	Fashion Computer-Assisted Drawing	3.0
Total Units		18.0

Fashion Design Level II (L0377)

Fashion Design - Level II

Business Division

Certificate L0377

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. Students will have a strategic view of historic costume research, and textile attributes and characteristics. Students will be exposed to additional categories and classifications of apparel and will further research and design products for divergent target markets. Students will prepare professional portfolios to strengthen career perspectives. Completion of the Fashion Design: Level II Certificate will lead to new opportunities and provide students with a solid foundation upon which to build a career.

Required Courses:

Completion of the Fashion Design Level I coursework: (18 Units)

FASH 10	Clothing Construction I	3.0
FASH 12	Clothing Construction II	3.0

FASH 17	Textiles	3.0
FASH 21	Patternmaking I	3.0
FASH 24	Fashion Patternmaking by Computer	3.0
FASH 25	Fashion Computer-Assisted Drawing	3.0
Plus the Level II coursework as follows: (6 Units)		
FASH 22	Fashion Design By Draping	3.0
FASH 23	Patternmaking II	3.0
Total Units		24.0

Fashion Merchandising - Level I

Business Division

Certificate L0314

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:

FASH 8	Introduction to Fashion	3.0
FASH 17	Textiles	3.0
FASH 25	Fashion Computer-Assisted Drawing	3.0
FASH 59	Fashion Retailing	3.0
FASH 62	Retail Buying and Merchandising	3.0
FASH 63	Fashion Promotion	3.0
Total Units		18.0

Fashion Merchandising - Level II

Business Division

Certificate L1303

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:

Completion of the Fashion Merchandising - Level I coursework as follows: (18 Units)

FASH 8	Introduction to Fashion	3.0
FASH 10	Clothing Construction I	3.0
FASH 15	Aesthetic Design in Fashion	3.0
FASH 17	Textiles	3.0
FASH 25	Fashion Computer-Assisted Drawing	3.0
FASH 30	Fashion Design and Product Development I	3.0

Plus the Level II coursework as follows: (12 Units)

FASH 9	History of Costume and Fashion	3.0
FASH 62	Retail Buying and Merchandising	3.0
<i>or</i>		
BUSS 50	Retail Store Management and Merchandising	3.0
FASH 63	Fashion Promotion	3.0
<i>or</i>		
BUSS 33	Advertising and Promotion	3.0
FASH 66	Visual Merchandising Display	3.0
Total Units		30.0

Recommended Electives:

FASH 81	Work Experience in Fashion Merchandising and Retail	1.0
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Fire Technology

Technology and Health Division
Certificate L2105

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:

FIRE 1	Fire Protection Organization	3.0
FIRE 2	Fire Prevention Technology	3.0
FIRE 3	Fire Protection Equipment and Systems	3.0
FIRE 4	Building Construction for Fire Protection	3.0

FIRE 5	Fire Behavior and Combustion	3.0
FIRE 13	Principles of Fire and Emergency Services Safety and Survival	3.0

PLUS select two (2) courses from:

FIRE 6	Hazardous Materials/ICS	3.0
FIRE 7	Fire Fighting Tactics and Strategy	3.0
FIRE 8	Fire Company Organization and Management	3.0
FIRE 9	Fire Hydraulics	3.0
FIRE 10	Arson and Fire Investigation	3.0
FIRE 11	Fire Apparatus and Equipment	3.0
FIRE 12	Wildland Fire Control	4.5
FIRE 86	Basic Fire Academy	14.5
KINF 53	Physical Training for the Basic Fire Academy	2.5

Total Units 23.5 - 37.0

Recommended Electives:

KINF 51	Agility Testing Preparation for Administration of Justice and Fire Technology	1.0
KINF 52	Fitness and Conditioning for Administration of Justice, Fire Technology, and Forestry	1.0

Graphic Design Level II

Arts Division

Certificate T0369

This multi-level certificate program is designed to prepare students for careers in the Graphic Design field of Communication Art. Students are given a balanced blend of creative, design, and technology skills necessary to develop successful graphic design for print, web, and other media channels. This Graphic Design Level II certificate offers additional expertise necessary for employment opportunities in the field of Graphic Design. The production software reflects industry standards and course content is driven by industry needs.

Required Courses:

Completion of the Graphic Design Level I coursework: (16 Units)

ARTC 100	Graphic Design I	3.0
ARTC 120	Graphic Design II	3.0
ARTC 140	Graphic Design III	3.0
ARTC 200	Web Design	3.0
ARTD 20	Design: Two-Dimensional	3.0

PHOT 5 Digital Cameras and Composition 1.0
and

PLUS the following courses and one required elective: (15 units)

ARTC 160 Typography 3.0
ARTC 290 Portfolio 3.0
ARTC 220 Graphic Design IV 3.0
ARTC 272 Motion Graphics, Compositing and Visual Effects 3.0
ARTC 280 Commercial Art Studio 3.0

Required Electives:

Select (1) course from the following group: (3 units)

ANIM 104 Drawing Fundamentals (3.00 units)
ANIM 130 Introduction to 3-D Computer Animation 3.0
ARTD 21 Design: Color and Composition 3.0
ARTD 15A Drawing: Beginning 3.0
ARTC 165 Illustration 3.0

Total Units 34.0

Recommended Elective:

ARTC 299 Graphic Design Internship 1.0

Horse Ranch Management - Level II

Natural Sciences Division Certificate L0376

The Horse Ranch Management - Level II certificate will provide students with intermediate skills that will lead to a career in the equine industry. These courses will concentrate on care and maintenance, basic anatomy and physiology of horses, and breeding procedures. This certificate may aid in the student's search for an entry level position at a horse facility.

Required Courses:

AGAG 59 Work Experience in Agriculture 1.0
AGAN 2 Animal Nutrition 3.0
AGAN 94 Animal Breeding 3.0
AGLI 16 Horse Production and Management 4.0
AGLI 18 Horse Ranch Management 4.0
AGLI 96 Animal Sanitation and Disease Control 3.0

Total Units 18.0

Horticulture Science

Natural Sciences Division Certificate L0394

This certificate is designed to give students basic knowledge and skills pertaining to horticulture science.

Required Courses:

AGOR 1 Horticultural Science 3.0
AGOR 24 Integrated Pest Management 3.0
AGOR 29 Ornamental Plants - Herbaceous 3.0
AGOR 30 Ornamental Plants - Trees and Woody Shrubs 3.0
AGOR 39 Turf Grass Production and Management 3.0
AGOR 50 Soil Science and Management 3.0

Total Units 18.0

Hospitality: Hospitality Management - Level II

Business Division Certificate L1325

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:

HRM 51 Introduction to Hospitality 3.0
HRM 53 Dining Room Service Management 3.0
HRM 56 Hospitality Supervision 3.0
HRM 64 Hospitality Financial Accounting 3.0
HRM 66 Hospitality Law 3.0
HRM 70 Introduction to Lodging 3.0
HRM 91 Hospitality Work Experience 1.0

Total Units 19.0

Industrial Design Engineering - Level I

Technology and Health Division Certificate L0327

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:

IDE 110 Design Foundation-Visual Literacy 3.0
IDE 120 Introduction to CAD 3.0
IDE 130 Shop Processes 3.0
IDE 150 Design Foundations 3.0
IDE 160 Intermediate CAD 3.0
IDE 170 Introduction to Prototyping 3.0

Total Units 18.0

Recommended Electives:

ELEC 50A Electronic Circuits - Direct Current (DC) 4.0
ELEC 81 Laboratory Studies in Electronics Technology 1.0
MATH 51 Elementary Algebra 4.0
PHYS 1 Physics 4.0
WELD 30 Metal Sculpture 2.0
WELD 40 Introduction to Welding 2.0

Industrial Design Engineering - Level II

Technology and Health Division Certificate L0329

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:

IDE 110 Design Foundation-Visual Literacy 3.0
IDE 120 Introduction to CAD 3.0
IDE 130 Shop Processes 3.0

IDE 150 Design Foundations 3.0
IDE 160 Intermediate CAD 3.0
IDE 170 Introduction to Prototyping 3.0
IDE 210 Advanced Media 3.0
IDE 220 Advanced CAD 3.0
IDE 230 Introduction to Mechanical Principles 3.0

Total Units 27.0

Recommended Electives:

ELEC 50A Electronic Circuits - Direct Current (DC) 4.0
ELEC 81 Laboratory Studies in Electronics Technology 1.0
MATH 51 Elementary Algebra 4.0
PHYS 1 Physics 4.0
WELD 30 Metal Sculpture 2.0
WELD 40 Introduction to Welding 2.0

Industrial Design Engineering - Level III

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:

IDE 110 Design Foundation-Visual Literacy 3.0
IDE 120 Introduction to CAD 3.0
IDE 130 Shop Processes 3.0
IDE 150 Design Foundations 3.0
IDE 160 Intermediate CAD 3.0
IDE 170 Introduction to Prototyping 3.0
IDE 210 Advanced Media 3.0
IDE 220 Advanced CAD 3.0
IDE 230 Introduction to Mechanical Principles 3.0

Programs of Study Leading to a Certificate

IDE 250	Product Design and Viability	6.0
IDE 270	Manufacturing Processes and Materials	3.0
Total Units		36.0

Recommended Electives:

ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 81	Laboratory Studies in Electronics Technology	1.0
MATH 51	Elementary Algebra	4.0
PHYS 1	Physics	4.0
WELD 30	Metal Sculpture	2.0
WELD 40	Introduction to Welding	2.0

Infant/Toddler Development

Business Division

Certificate T1318

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:

CHLD 1	Child, Family, School and Community	3.0
CHLD 5	Principles and Practices in Child Development Programs	3.0
CHLD 6	Survey of Child Development Curriculum	3.0
CHLD 11	Child and Adolescent Development	3.0
CHLD 73	Infant/Toddler Care and Development	3.0
CHLD 85	Infants At Risk	3.0

PLUS Select four (4) courses from: (12 Units)

CHLD 50	Teaching in a Diverse Society	3.0
CHLD 61	Language Arts and Art Media for Young Children	3.0
CHLD 62	Music and Motor Development for Young Children	3.0
CHLD 64	Health, Safety and Nutrition of Young Children	3.0

CHLD 72	Teacher, Parent, and Child Relationships	3.0
Total Units		30.0

Interior Design Kitchen and Bath Specialization

**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:

Completion of the Interior Design: Level I coursework: (9 Units)

ID 10	Introduction to Interior Design	2.0
ID 10L	Introduction to Interior Design Laboratory	1.0
ID 12	Materials and Products for Interior Design	3.0
ID 14	History of Furniture and Decorative Arts	3.0

Completion of the Interior Design: Level II coursework: (24 Units)

ID 20	Color and Design Theory I	3.0
ID 21	Color and Design Theory II	3.0
ID 22	Design Drawing for Interior Design	3.0
ID 23	Computer Aided Drawing for Interior Design I	3.0
ID 25	Space Planning for Interior Design I	3.0
ID 26	Space Planning for Interior Design II	3.0
ID 27	Rapid Visualization	3.0
ID 29	Interior Design Studio I	3.0

Completion of the Interior Design: Level III coursework: (17 Units)

ID 31	Building Systems for Interior Design	3.0
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ID 32	Lighting Design and Theory for Interior Design	3.0
ID 34	Computer Aided Drawing for Interior Design II	3.0

ID 37	Business Practices for Interior Design	3.0
ID 38	Internship in Interior Design <i>(ID 38: 1 - 3 Unit course, 2 Units required)</i>	1.0

ID 39	Interior Design Studio II	3.0
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PLUS completion of required courses for Kitchen and Bath Specialization: (9 Units)

ID 40	Kitchen and Bath Studio I	3.0
ID 41	Kitchen and Bath Studio II	3.0
ID 48	Internship in Kitchen and Bath <i>(ID 48: 1 - 3 Unit course, 3 Units required)</i>	1.0
Total Units		59.0

Recommended Electives:

ID 50	Interior Design Specialized Studio	3.0
ID 52	Independent Studies in Interior Design	1.0

Interior Design: Level II

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:

Completion of the Interior Design: Level I coursework: (9 Units)

ID 10	Introduction to Interior Design	2.0
ID 10L	Introduction to Interior Design Laboratory	1.0

ID 12	Materials and Products for Interior Design	3.0
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ID 14	History of Furniture and Decorative Arts	3.0
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PLUS completion of Level II coursework as follows: (24 Units)

ID 20	Color and Design Theory I	3.0
ID 21	Color and Design Theory II	3.0
ID 22	Design Drawing for Interior Design	3.0
ID 23	Computer Aided Drawing for Interior Design I	3.0

ID 25	Space Planning for Interior Design I	3.0
ID 26	Space Planning for Interior Design II	3.0

ID 27	Rapid Visualization	3.0
ID 29	Interior Design Studio I	3.0

Total Units 33.0

Recommended Electives:

ID 50	Interior Design Specialized Studio	3.0
ID 52	Independent Studies in Interior Design	1.0

Interior Design: Level III

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:

Completion of the Interior Design: Level I coursework: (9 Units)

ID 10	Introduction to Interior Design	2.0
ID 10L	Introduction to Interior Design Laboratory	1.0

ID 12	Materials and Products for Interior Design	3.0
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ID 14	History of Furniture and Decorative Arts	3.0
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PLUS completion of the Interior Design: Level II coursework: (24 Units)

ID 20	Color and Design Theory I	3.0
ID 21	Color and Design Theory II	3.0
ID 22	Design Drawing for Interior Design	3.0

ID 23	Computer Aided Drawing for Interior Design I	3.0
ID 25	Space Planning for Interior Design I	3.0
ID 26	Space Planning for Interior Design II	3.0
ID 27	Rapid Visualization	3.0
ID 29	Interior Design Studio I	3.0

PLUS completion of the required Interior Design: Level III coursework as follows: (17 Units)

ID 31	Building Systems for Interior Design	3.0
ID 32	Lighting Design and Theory for Interior Design	3.0
ID 34	Computer Aided Drawing for Interior Design II	3.0
<i>or</i>		
ID 37	Business Practices for Interior Design	3.0
ID 36	Portfolio Development for Interior Design	3.0
ID 38	Internship in Interior Design (ID 38: 1 - 3 Unit course, 2 Units required)	1.0
ID 39	Interior Design Studio II	3.0
Total Units		50.0

Recommended Electives:

ID 50	Interior Design Specialized Studio	3.0
ID 52	Independent Studies in Interior Design I	1.0

Interior Landscaping

Natural Sciences Division Certificate L0106

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:

AGOR 1	Horticultural Science	3.0
AGOR 15	Interior Landscaping	3.0
AGOR 24	Integrated Pest Management	3.0
AGOR 29	Ornamental Plants - Herbaceous	3.0
AGOR 32	Landscaping and Nursery Management	3.0
AGOR 64	Landscape Irrigation - Drip and Low Volume	3.0
Total Units		18.0

Landscape and Park Maintenance

Natural Sciences Division Certificate L0357

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:

AGOR 1	Horticultural Science	3.0
AGOR 24	Integrated Pest Management	3.0
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0
AGOR 51	Tractor and Landscape Equipment Operations	3.0
AGOR 63	Landscape Irrigation Systems Management	3.0
AGOR 75	Urban Arboriculture	3.0
Total Units		18.0

Landscape Construction

Natural Sciences Division Certificate L0393

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:

AGOR 51	Tractor and Landscape Equipment Operations	3.0
AGOR 62	Landscape Irrigation - Design and Installation	3.0
AGOR 63	Landscape Irrigation Systems Management	3.0
AGOR 71	Landscape Construction Fundamentals	3.0
AGOR 72	Landscape Hardscape Applications	3.0
AGOR 73	Landscaping Laws, Contracting, and Estimating	3.0
Total Units		18.0

Landscape Design – Level I

Natural Sciences Division Certificate L0368

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:

AGOR 1	Horticultural Science	3.0
AGOR 13	Landscape Design	3.0
AGOR 29	Ornamental Plants - Herbaceous	3.0
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0
AGOR 50	Soil Science and Management	3.0
AGOR 71	Landscape Construction Fundamentals	3.0
Total Units		18.0

Landscape Equipment Technology

Natural Sciences Division Certificate L0358

This certificate program is designed to give students basic skills to seek employment in equipment repair at golf courses, rental yards, and small equipment repair shops. All courses are applicable to the Equipment Technology Degree.

Required Courses:

AGOR 52	Hydraulics	3.0
AGOR 53	Small Engine Repair I	3.0
AGOR 54	Small Engine Repair II	3.0
AGOR 55	Diesel Engine Repair	3.0
AGOR 56	Engine Diagnostics	3.0
AGOR 57	Power Train Repair	3.0
Total Units		18.0

Landscape Irrigation

Natural Sciences Division Certificate L0110

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 require-

ments in Ornamental Horticulture, Parks and Sports, Turf Management, and Integrated Pest Management.

Required Courses:

AGOR 1	Horticultural Science	3.0
AGOR 51	Tractor and Landscape Equipment Operations	3.0
AGOR 62	Landscape Irrigation - Design and Installation	3.0
AGOR 63	Landscape Irrigation Systems Management	3.0
AGOR 64	Landscape Irrigation - Drip and Low Volume	3.0
AGOR 71	Landscape Construction Fundamentals	3.0
Total Units		18.0

Law Enforcement

Technology and Health Division Certificate T2102

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.

Required Courses:

ADJU 1	The Administration of Justice System	3.0
ADJU 2	Principles and Procedures of the Justice System	3.0
ADJU 3	Concepts of Criminal Law	3.0
ADJU 4	Legal Aspects of Evidence	3.0
ADJU 5	Community Relations	3.0
ADJU 68	Administration of Justice Report Writing	3.0

PLUS Select four (4) courses from: (12 Units)

ADJU 6	Concepts of Enforcement Services	3.0
ADJU 13	Concepts of Traffic Services	3.0
ADJU 20	Principles of Investigation	3.0
ADJU 38	Narcotics Investigation	3.0
ADJU 59	Gangs and Corrections	3.0
ADJU 74	Vice Control	3.0
Total Units		30.0

Recommended Electives:

KINF 51	Agility Testing Preparation for Administration of Justice and Fire Technology	1.0
KINF 52	Fitness and Conditioning for Administration of Justice, Fire Technology, and Forestry	1.0

Programs of Study Leading to a Certificate

Manufacturing Technology

Technology and Health Division

Certificate T0918

The primary purpose of this program is to emphasize the manipulative skills required to enter the field of machine metal worker, machine operator, production machinist, mechanical technician, or machinist.

Required Courses:

EDT 16	Basic CAD and Computer Applications	4.0
EDT 18	Engineering CAD Applications	4.0
MFG 10	Mathematics & Blueprint Reading for Manufacturing	3.0
MFG 11	Manufacturing Processes I	2.0
MFG 12	Manufacturing Processes II	2.0
MFG 38	MasterCAM I	2.0
MFG 38B	MasterCAM II	2.0
MFG 85	Manual Computerized Numerical Control (CNC) Programming	2.0
WELD 40	Introduction to Welding	2.0
Total Units		23.0

Marketing Management

Business Division

Certificate L0510

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:

BUSM 20	Principles of Business	3.0
BUSM 61	Business Organization and Management	3.0
BUSS 35	Professional Selling	3.0
BUSS 36	Principles of Marketing	3.0
BUSS 50	Retail Store Management and Merchandising	3.0
BUSS 79	Work Experience in Marketing Management	1.0
BUSS 85	Special Issues in Marketing	2.0
CISB 15	Microcomputer Applications	3.5
Total Units		21.5

Mental Health Technology

- Psychiatric Technician

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:

MENT 40	Introduction to Interviewing and Counseling	3.0
MENT 56	Medical-Surgical Nursing for Psychiatric Technicians	9.0
MENT 56L	Medical-Surgical Clinical Experience	4.0
MENT 58D	Advanced Medical-Surgical Nursing and Pharmacology for PT	4.0
MENT 58L	Advanced Medical-Surgical Nursing for Psychiatric Technicians Clinical	1.5
MENT 70	Introduction to Psychiatric Technology	1.5
MENT 70L	Intro Psyc Tech Clinical	2.0
MENT 72	Nursing Care of the Developmentally Disabled Person	7.0
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	6.0
PSYC 1A	Introduction to Psychology	3.0
or		
PSYC 1AH	Introduction to Psychology – Honors	3.0
Total Units		52.0

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.

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:
 a) 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.)

b) Be 18 years of age.

c) File a college application and be accepted as a student at Mt. San Antonio College.

d) Submit an application for the Mental Health/ Psychiatric Technician Program to the Technology and Health Division Office (909) 274-7500, ext. 4750. All applications are dated upon receipt in the Technology and Health Division Office. A program begins each fall and spring semester.

e) Take the required English Placement Test (AWE). Eligibility for ENGL 68 is advised. If you have already taken a college placement exam within the past two years at another school, arrange to have your test scores forwarded to the Technology and Health Division Office. (If you were tested at Mt. San Antonio College, the office will obtain the test scores as long as an "Application for Admission" is on file with the Admissions and Records Office.) Testing is administered by the Assessment Center, located in the Student Services Center. Arrangements should be made with them to schedule a day and time to take the English Placement Test, if required. The Assessment Center is open Monday through Friday. You may contact them at (909) 274-7500, ext.4265.

f) Forward two official transcripts of all coursework completed (high school, nursing school, and other than Mt. San Antonio college courses.) One transcript must be sent to the Technology and Health Division Office and the other to the Admissions and Records Office.

g) For students who possess a college degree, the English Placement Test is not required. However, it will be necessary for a student to obtain two official copies of the college transcript showing the degree issued. One transcript must be sent to the Technology and Health Division Office and the other to the Admissions and Records Office.

NOTE: Concerning Entrance Requirements 'e' and 'f', if the courses were taken and/or the degree obtained at Mt. San Antonio College, it is not necessary to request transcripts.

Indicate in the mailing address the program for which your transcript is being sent to the Technology and Health Division Office.

EXAMPLE:

Mt. San Antonio College
 Technology and Health Division
 Psychiatric Technician Program
 1100 North Grand Avenue
 Walnut, CA 91789-1399

h) A physical examination, including specific immunizations, 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 and malpractice insurance are required of all candidates upon acceptance.

i) Certain convictions may prevent a candidate from being licensed as a Psychiatric Technician.

j) All students will be required to pass a background check prior to entering the clinical education phase.

Selection Procedure:

In determining eligibility of an applicant, consideration will be given to satisfactory scores on the English Placement Test. The College will make every effort to notify the applicant of acceptance by mail no less than two months prior to the beginning of a program. all applicants are required to meet the 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 for extremely heaving 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 device)
- 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 a 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
- Exposure to products containing latex

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 complete classes successfully and to ensure patient safety.

Nursery Management

**Natural Sciences Division
Certificate L0107**

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:

AGOR 1	Horticultural Science	3.0
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AGOR 2	Plant Propagation/Greenhouse Management	3.0
AGOR 29	Ornamental Plants - Herbaceous	3.0
AGOR 32	Landscaping and Nursery Management	3.0
AGOR 50	Soil Science and Management	3.0
AGOR 64	Landscape Irrigation - Drip and Low Volume	3.0
Total Units		18.0

Park Management

**Natural Sciences Division
Certificate L0365**

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:

AGOR 4	Park Management	3.0
AGOR 5	Park Facilities	3.0
AGOR 51	Tractor and Landscape Equipment Operations	3.0
AGOR 62	Landscape Irrigation - Design and Installation	3.0
AGOR 63	Landscape Irrigation Systems Management	3.0
AGOR 75	Urban Arboriculture	3.0
Total Units		18.0

Pet Science

**Natural Sciences Division
Certificate T0104**

This certificate program is designed to give students basic skills in production and marketing of pets at the wholesale and retail level. All courses are applicable for degree requirements.

Required Courses:

AGAN 1	Animal Science	3.0
AGAN 2	Animal Nutrition	3.0
AGAN 51	Animal Handling and Restraint	3.0
AGAN 94	Animal Breeding	3.0
AGLI 96	Animal Sanitation and Disease Control	3.0
AGPE 70	Pet Shop Management	3.0
AGPE 71	Canine Management	3.0

AGPE 72	Feline Management	3.0
AGPE 73	Tropical and Coldwater Fish Management	2.0
AGPE 74	Reptile Management	2.0
AGPE 76	Aviculture - Cage and Aviary Birds	3.0
BUSM 66	Small Business Management	3.0
Total Units		34.0

Photography - Level I

Arts Division

Certificate L0348

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:

ARTC 100	Graphic Design I	3.0
<i>or</i>		
PHOT 9	Digital Image Editing for Photographers	3.0
PHOT 10	Basic Digital and Film Photography	3.0
PHOT 11	Intermediate Photography	4.0
PHOT 14	Commercial Lighting	3.0
PHOT 12	Photographic Alternatives	3.0
<i>or</i>		
PHOT 16	Fashion Photography	3.0
<i>or</i>		
PHOT 18	Portraiture and Wedding Photography	3.0
PHOT 20	Color Photography	3.0
Totals Units		19.0

Photography - Level II

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:

Completion of the Photography Level I coursework: (19 Units)

ARTC 100	Graphic Design I	3.0
<i>or</i>		

PHOT 9	Digital Image Editing for Photographers	3.0
PHOT 10	Basic Digital and Film Photography	3.0
PHOT 11	Intermediate Photography	4.0
PHOT 14	Commercial Lighting	3.0
PHOT 12	Photographic Alternatives	3.0
<i>or</i>		
PHOT 16	Fashion Photography	3.0
<i>or</i>		
PHOT 18	Portraiture and Wedding Photography	3.0
PHOT 20	Color Photography	3.0

Plus: Level II coursework (16 Units)

PHOT 1A	Laboratory Studies: Beginning Black and White Photography	1.0
<i>or</i>		
PHOT 1B	Laboratory Studies: Advanced Black and White Photography	1.0
<i>or</i>		
PHOT 1C	Laboratory Studies: Studio Photography	1.0
<i>or</i>		
PHOT 1D	Laboratory Studies Computer Applications in Photography	1.0
PHOT 17	Photocommunication	3.0
<i>or</i>		
PHOT 26	Video for Photographers	3.0
PHOT 19	Digital Color Management	3.0
<i>or</i>		
PHOT 24	Advanced Digital Image Editing for Photographers	3.0
PHOT 28	Photography Portfolio Development	3.0
<i>or</i>		
ARTC 290	Portfolio	3.0
PHOT 29	Studio Business Practices for Commercial Artists	3.0
PHOT 30	Advertising Photography	3.0
Totals Units		35.0

Recommended Electives:

AHIS 1	Understanding the Visual Arts	3.0
<i>or</i>		
ARTB 1	Understanding the Visual Arts	3.0
PHOT 15	History of Photography	3.0

Programs of Study Leading to a Certificate

Photography Digital Technician**Arts Division****Certificate L0351**

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:

ARTC 100	Graphic Design I	3.0
	<i>or</i>	
PHOT 9	Digital Image Editing for Photographers	3.0
PHOT 10	Basic Digital and Film Photography	3.0
PHOT 11	Intermediate Photography	4.0
PHOT 14	Commercial Lighting	3.0
PHOT 19	Digital Color Management	3.0
PHOT 20	Color Photography	3.0
PHOT 24	Advanced Digital Image Editing for Photographers	3.0

Total Units 22.0

Recommended Elective:

PHOT 29	Studio Business Practices for Commercial Artists	3.0
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Programming In C++**Business Division****Certificate L0794**

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:

CISB 11	Computer Information Systems	3.5
CISD 11	Database Management	3.0
	- Microsoft Access	
CISD 11L	Database Management	0.5
	- Microsoft Access Lab	
CISM 11	Systems Analysis and Design	3.5
CISN 21	Windows Operating System	3.0
CISP 31	Programming in C++	3.0
CISP 31L	Programming in C++ Laboratory	0.5
CISP 34	Advanced C++ Programming	3.0
CISP 34L	Advanced C++ Programming Laboratory	0.5
	Total Units	20.5

Public Works/Landscape Management**Natural Sciences Division****Certificate B0120**

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:

Offered at Citrus College

PUB 150	Public Works I	3.0
PUB 158	Municipal and Urban Tree Care	3.0

Offered at Mt. San Antonio College:

AGOR 1	Horticultural Science	3.0
AGOR 39	Turf Grass Production and Management	3.0
	Total Units	12.0

Radio Broadcasting: Behind-the-Scenes**Arts Division****Certificate L0391**

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:

R-TV 01	Introduction to Electronic Media	3.0
R-TV 10	Radio Programming and Producer Techniques	3.0
R-TV 11A	Beginning Radio Production	3.0
R-TV 11B	Advanced Radio Production	3.0
R-TV 15	Broadcast Law and Business Practices	3.0
R-TV 96A	Campus Radio Station Lab: Studio Procedures and Equipment Operations	1.0
R-TV 96B	Campus Radio Station Lab: Disc Jockey & News Anchor/Reporter Skills	1.0
R-TV 96C	Campus Radio Station Lab: Hosting and Management Skills	1.0
R-TV 97A	Radio/Entertainment Industry Seminar	1.0
R-TV 97B	Radio/Entertainment Industry Work Experience	1.0

Required Electives**Select 3 units from the following courses**

R-TV 05	Radio-TV Newswriting	3.0
R-TV 09	Broadcast Sales and Promotion	3.0
R-TV 17	Internet Radio and Podcasting	3.0
R-TV 31	History of Radio DJs	3.0
R-TV 32	Radio - TV Internet Applications	3.0
R-TV 35	Pop Culture in the Media	3.0
R-TV 99	Radio/TV Special Projects	2.0
R-TV 101	Work Experience in Broadcast Entertainment	1.0
	Total Units	23.0

Radio Broadcasting: On-the-Air**Arts Division****Certificate L0350**

The Radio Broadcasting On-air Certificate of Achievement provides additional expertise in a selected variety of on-air specialties. Students gain practical hands-on experience in the industry through an off-campus internship at a station, studio or other broadcasting facility.

Required Courses:**Completion of the following Level II course-work: (23.0 Units)**

R-TV 01	Introduction to Electronic Media	3.0
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R-TV 02	On-Air Personality Development	3.0
R-TV 05	Radio-TV Newswriting	3.0
R-TV 07A	Beginning Commercial Voice-Overs	3.0
R-TV 11A	Beginning Radio Production	3.0
R-TV 15	Broadcast Law and Business Practices	3.0
R-TV 96A	Campus Radio Station Lab: Studio Procedures and Equipment Operations	1.0
R-TV 97B	Radio/Entertainment Industry Work Experience	1.0
R-TV 96C	Campus Radio Station Lab: Hosting and Management Skills	1.0
R-TV 97A	Radio/Entertainment Industry Seminar	1.0
R-TV 97B	Radio/Entertainment Industry Work Experience	1.0

Required Electives**Plus a minimum of 3 units from the following courses: (3 Units)**

R-TV 03	Sportscasting and Reporting	1.5
R-TV 04	Broadcast News Field Reporting	3.0
R-TV 06	Broadcast Traffic Reporting	1.5
R-TV 09	Broadcast Sales and Promotion	3.0
R-TV 10	Radio Programming and Producer Techniques	3.0
R-TV 11B	Advanced Radio Production	3.0
R-TV 17	Internet Radio and Podcasting	3.0
R-TV 31	History of Radio DJs	3.0
R-TV 32	Radio - TV Internet Applications	3.0
R-TV 35	Pop Culture in the Media	3.0
R-TV 99	Radio/TV Special Projects	2.0
R-TV 101	Work Experience in Broadcast Entertainment	1.0

Total Units 26.0

Real Estate Broker Certificate**Business Division****Certificate L0352**

Prior to taking the California Real Estate Broker's License Exam, the applicant must have completed five (5) required courses: Legal Aspects of Real Estate (BUSR 51), Real Estate Practice (BUSR 52), Real Estate Finance (BUSR 53), Real Estate Appraisal (BUSR 81) and either Real Estate Economics (BUSR 55) or Fundamentals of Accounting (BUSA 11). In addition, the applicant must

take three (3) additional courses approved by the California Department of Real Estate: Real Estate Principles (BUSR 50), Income Tax Aspects of Real Estate (BUSR 57), Real Estate Property Management (BUSR 59), Real Estate Investment Planning (BUSR 60), Mortgage Loan Brokering and Lending (BUSR 62), Escrow Procedures I (BUSR 76), Business Law (BUSL 18), Landlord/Tenant Law (PLGL 40), Real Estate Economics (BUSR 55) if not taken in the mandatory category above or Fundamentals of Accounting (BUSA 11) not taken in the mandatory category above for a total of eight (8) 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:

BUSR 51	Legal Aspects of Real Estate	3.0
BUSR 52	Real Estate Practice	3.0
BUSR 53	Real Estate Finance	3.0
BUSR 55	Real Estate Economics	3.0

or

BUSR 81	Appraisal: Principles and Procedures	3.5
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or

BUSA 11	Fundamentals of Accounting	3.0
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PLUS select three (3) courses from the following (9 Units)

BUSL 18	Business Law	3.0
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or

BUSL 18H	Business Law - Honors	3.0
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BUSR 50	Real Estate Principles	3.0
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BUSR 57	Income Tax Aspects of Real Estate Investments	3.0
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BUSR 59	Real Estate Property Management	3.0
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BUSR 60	Real Estate Investment Planning	3.0
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BUSR 62	Mortgage Loan Brokering and Lending	3.0
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BUSR 76	Escrow Procedures I	3.0
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PLGL 40	Landlord-Tenant Law	3.0
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AND any of the following courses if NOT taken above

BUSA 11	Fundamentals of Accounting	3.0
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BUSR 55	Real Estate Economics	3.0
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Total Units 21.0 - 21.5

School Age Child - Specialization

Business Division

Certificate T1314

The School Age Child-Specialization Certificate provides specialized skills and knowledge for working with school age children. This certificate exceeds the Title 22 requirements for a fully qualified teacher in school age programs. This skill set also prepares the student for positions as elementary tutors or classroom aides in public school districts.

Required Courses:

CHLD 1	Child, Family, School and Community	3.0
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CHLD 5	Principles and Practices in Child Development Programs	3.0
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CHLD 6	Survey of Child Development Curriculum	3.0
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CHLD 10	Child Growth and Lifespan Development	3.0
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or

CHLD 10H	Child Growth and Lifespan Development - Honors	3.0
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or

CHLD 11	Child and Adolescent Development	3.0
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CHLD 50	Teaching in a Diverse Society	3.0
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CHLD 51	Early Literacy in Child Development	3.0
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CHLD 62	Music and Motor Development for Young Children	3.0
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CHLD 64	Health, Safety and Nutrition of Children	3.0
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CHLD 74	Program Planning for the School Age Child	3.0
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Required Electives:

PLUS Select one (1) course:

LERN 49	Math Skills Review	3.0
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or

MATH 50	Pre-Algebra	3.0
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PLUS Select one (1) course:

ENGL 64	Writing Effective Sentences	1.0
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ENGL 65	Grammar Review	1.0
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LIT 40	Children's Literature	3.0
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Total Units 31.0 - 33.0

Sign Language/Interpreting

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, cruise ship 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, American Sign Language 4, (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

Required Courses:

SIGN 105	American Sign Language 5	4.0
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SIGN 108	Fingerspelling	2.0
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SIGN 201	Introduction to Deaf Studies	3.0
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SIGN 202	American Deaf Culture	3.0
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SIGN 210	American Sign Language Structure	3.0
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SIGN 220	Translation: American Sign Language/English	3.0
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SIGN 223	Principles of Interpreting	3.0
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SIGN 225	Ethical Decision Making for Interpreters	2.0
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SIGN 227	Cognitive Processing for Interpreters	4.0
SIGN 231	Interpreting	4.0
SIGN 232	Advanced Interpreting	4.0
SIGN 239	Applied Interpreting	2.0

Required Electives

Select three (3) courses from: (5-5.5 Units)

SIGN 240	Vocabulary Building for Interpreters	2.0
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SIGN 250	Interpreting with Classifiers	1.5
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SIGN 260	Video Interpreting	1.5
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SIGN 299	Special Projects	2.0
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in Sign Language/Interpreting
Total Units 42.0 - 42.5

Sports Turf Management

Natural Sciences Division

Certificate L0112

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:

AGOR 24	Integrated Pest Management	3.0
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AGOR 39	Turf Grass Production and Management	3.0
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AGOR 40	Sports Turf Management	3.0
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AGOR 50	Soil Science and Management	3.0
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AGOR 62	Landscape Irrigation - Design and Installation	3.0
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AGOR 63	Landscape Irrigation Systems Management	3.0
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Total Units 18.0

Programs of Study Leading to a Certificate

Television Crew

Arts Division

Certificate L0354

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:

R-TV 19A Beginning Video Production 3.0

Select 16 units from the following courses:

R-TV 19B Advanced Video Production 3.0

R-TV 20 Television News Production 3.0

R-TV 21 Remote Multicamera Production 3.0

R-TV 22 Editing for Film and Television 3.0

R-TV 23 Reality Show Production 3.0

R-TV 100 Work Experience in Film and TV 1.0

Total Units 19.0

Tree Care and Maintenance

Natural Sciences Division

Certificate L0111

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:

AGOR 1 Horticultural Science 3.0

AGOR 24 Integrated Pest Management 3.0

AGOR 30 Ornamental Plants - Trees and Woody Shrubs 3.0

AGOR 50 Soil Science and Management 3.0

AGOR 51 Tractor and Landscape Equipment Operations 3.0

AGOR 75 Urban Arboriculture 3.0

Total Units 18.0

Web Design

Arts Division

Certificate L0618

This program is designed to provide students with a combination of design and technical skills necessary for entry-level employment as a Web page designer.

Required Courses:

ANIM 172 Motion Graphics, Compositing and Visual Effects 3.0

ARTC 100 Graphic Design I 3.0

ARTC 120 Graphic Design II 3.0

ARTC 160 Typography 3.0

ARTC 200 Web Design 3.0

ARTC 220 Graphic Design IV 3.0

ARTD 20 Design: Two-Dimensional 3.0

Total Units 21.0

Welder - Automotive Welding, Cutting & Modification

Technology and Health Division

Certificate T0931

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:

WELD 40 Introduction to Welding 2.0

WELD 50 Oxyacetylene Welding 2.0

WELD 51 Basic Electric Arc Welding 2.0

WELD 53A Welding Metallurgy 3.0

WELD 60 Print Reading and Computations for Welders 3.0

WELD 70A Beginning Arc Welding 3.0

WELD 70B Intermediate Arc Welding 3.0

WELD 70C Certification for Welders 3.0

WELD 80 Construction Fabrication and Welding 3.0

WELD 81 Pipe and Tube Welding 3.0

WELD 91 Automotive Welding, Cutting and Modification 1.0

Total Units 28.0

Note: Any higher level welding courses may be substituted for WELD 40

Welder - Gas Tungsten Arc Welding

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:

WELD 40 Introduction to Welding 2.0

WELD 50 Oxyacetylene Welding 2.0

WELD 51 Basic Electric Arc Welding 2.0

WELD 53A Welding Metallurgy 3.0

WELD 60 Print Reading and Computations for Welders 3.0

WELD 70A Beginning Arc Welding 3.0

WELD 70B Intermediate Arc Welding 3.0

WELD 70C Certification for Welders 3.0

WELD 80 Construction Fabrication and Welding 3.0

WELD 81 Pipe and Tube Welding 3.0

WELD 90A Gas Tungsten Arc Welding 3.0

Total Units 30.0

Note: Any higher level welding courses may be substituted for WELD 40.

Welder - Licensed

Technology and Health Division

Certificate L0930

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 and 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:

WELD 40 Introduction to Welding 2.0

WELD 50 Oxyacetylene Welding 2.0

WELD 51 Basic Electric Arc Welding 2.0

WELD 53A Welding Metallurgy 3.0

WELD 60 Print Reading and Computations for Welders 3.0

WELD 70A Beginning Arc Welding 3.0

WELD 70B Intermediate Arc Welding 3.0

WELD 70C Certification for Welders 3.0

WELD 80 Construction Fabrication and Welding 3.0

WELD 81 Pipe and Tube Welding 3.0

Total Units 27.0

Note: Any higher level welding courses may be substituted for WELD 40.

Welding - Semiautomatic Arc Welding

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:

WELD 40 Introduction to Welding 2.0

WELD 50 Oxyacetylene Welding 2.0

WELD 51 Basic Electric Arc Welding 2.0

WELD 53A Welding Metallurgy 3.0

WELD 60 Print Reading and Computations for Welders 3.0

WELD 70A Beginning Arc Welding 3.0

WELD 70B Intermediate Arc Welding 3.0

WELD 70C Certification for Welders 3.0

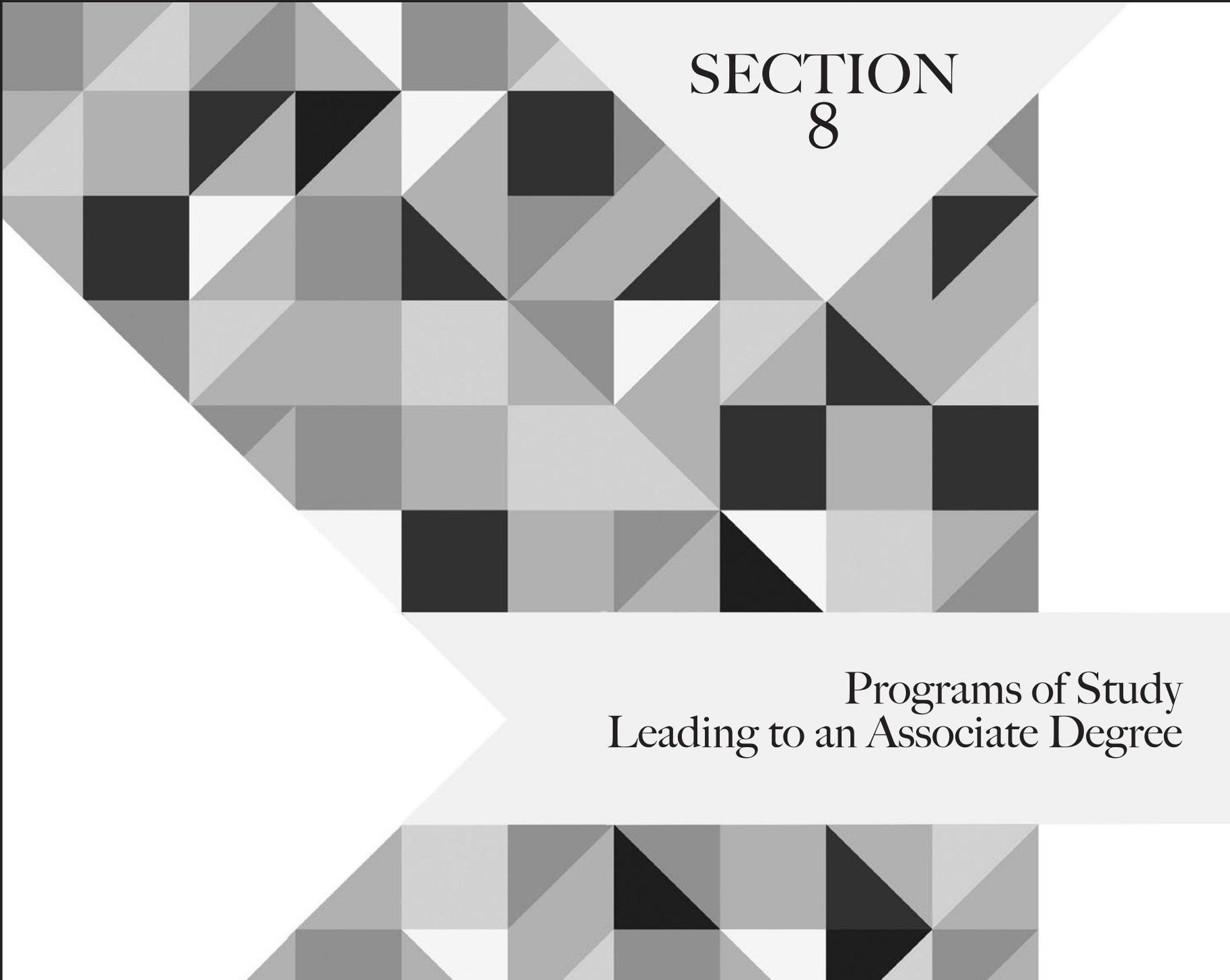
WELD 80 Construction Fabrication and Welding 3.0

WELD 81 Pipe and Tube Welding 3.0

WELD 90B Semiautomatic Arc Welding Process 3.0

Total Units 30.0

Note: Any higher level welding courses may be substituted for WELD 40.



SECTION
8

Programs of Study
Leading to an Associate Degree

PROGRAMS OF STUDY LEADING TO AN ASSOCIATE 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.

GENERAL REQUIREMENTS FOR AN ASSOCIATE DEGREE

Application for Graduation

The Application for Graduation is the student's notification to Admissions and Records that he or she 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 at www.mtsac.edu/students/admissions/gradp.html. 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 semester. 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 both an Associate in Science degree and an Associate in Arts degree with the 60 Units required for an Associate degree if they have met the requirements for both within the 60 Units of earned credit. Each additional degree requires 18 Units of course work beyond the 60 Units required for the first degree(s), and must include the satisfactory completion of all the required courses in the additional major. Students awarded 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 in either of two ways:

1. 12 Units in residence and enrollment in the last semester, *or*
2. 45 Units in residence if the last semester is not at Mt. SAC.

GENERAL EDUCATION REQUIREMENTS

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:

1. Require post-secondary level skills in reading, writing, quantitative reasoning, and critical thinking.

NOTE: All courses used for the A.A. degree majors may be double counted toward the Mt. San Antonio College General Education requirements.

GRADUATION REQUIREMENTS FOR 2015 16

The following requirements apply to both Associate in Science (A.S.) and Associate in Arts (A.A.) degrees:

Unit Requirement: Sixty (60) degree-appropriate Units. A letter grade of "C" or better 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 pages 68-69). All courses must be completed with a grade of "C" or better.

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 "CR".

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:

- | | |
|----------|------------------------------------|
| READ 90 | Reading College Texts |
| AMLA 33R | American Language Advanced Reading |

or by obtaining eligibility for READ 100 on the Reading Placement Test.

Math Competency: This requirement is met by completing one of the following with a grade of "C" or better.

1. Math 71 Intermediate Algebra,
or
Math 71B Intermediate Algebra - Second Half
or
Math 71X Practical Intermediate Algebra
or
2. Completing a more advanced college level mathematics course.
or
3. 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 in either of two ways:

1. 12 Units in residence and enrollment in last semester, or
2. 45 Units in residence if the last semester is not 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" in all course. See pages 68-91 for listings of the Associate in Science degree majors.

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" in all courses. See pages 96-101 for listings of the Associate in Arts Degree in Liberal Arts & Sciences with areas of emphasis.

2. 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.
3. 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.

GENERAL EDUCATION OUTCOMES (GEOS)

GEOs are statements that define the knowledge, skills, and perspectives acquired by students who satisfy our general education requirements. It is through the assessment of GEOs that the Mt. SAC general education curriculum will be evaluated for improvements. GEOs have been determined and will be assessed by faculty who teach courses within Areas A-E of our general education pattern. The GEOs for Mt. SAC can be found at: http://www.mtsac.edu/instruction/generaled/geos_mtsac.html

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 <http://www.mtsac.edu/instruction/outcomes/sloinfo.html>

Adapted from CSU Executive Order 595 and Title 5 Section 40405.1

GENERAL EDUCATION REQUIREMENTS FOR 2015 16

AREA A:

Communication in the English Language (6 Units):

Select one [1] course from the following:

- ENGL 1A Freshman Composition
- ENGL 1AH Freshman Composition – Honors

Select one [1] course from the following:

- SPCH 1A Public Speaking
- SPCH 1AH Public Speaking – Honors
- SPCH 2 Fundamentals of Communication
- SPCH 8 Professional and Organizational Speaking
- SPCH 8H Professional and Organizational Speaking – Honors

AREA B:

The Physical Universe and Life (3 Units):

Select one [1] course from the Physical Sciences or Life Sciences:

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 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
- GEOG 1 Elements of Physical Geography
- GEOG 1H Elements of Physical Geography – Honors
- GEOG 1L Physical Geography Laboratory
- GEOG 1LH Physical Geography Laboratory – Honors
- GEOL 1 Physical 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 10 Natural Disasters
- METO 3 Weather and the Atmospheric Environment
- METO 3L Weather and the 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

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

AREA C:

Arts and Humanities (6 Units):

Select two [2] courses, six [6] Units minimum, with at least one [1] course from the Arts and one [1] from Humanities:

ARTS

- AHIS 1 Understanding the Visual Arts, or
- ARTB 1 Understanding the Visual Arts
- AHIS 3 History of Women and Gender in Art

- AHIS 3H History of Women and Gender in Art – Honors
- 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 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 12 History of Precolumbian Art and Architecture
- AHIS 12H History of Precolumbian Art and Architecture – Honors
- AHIS 14 Rome: The Ancient City
- AHIS 15 Culture and Art of Pompeii
- ARCH 250 World Architecture I
- ARCH 251 World Architecture II
- ARTB 14 Basic Studio Arts
- ARTD 15A Drawing: Beginning
- ARTD 20 Design: Two-Dimensional
- ARTD 25A Beginning Painting I
- 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
- ID 14 History of Furniture and Decorative Arts
- MUS 7 Fundamentals of Music
- MUS 11A Music Literature Survey
- MUS 11B Music Literature Survey
- MUS 12 History of Jazz
- MUS 13 Introduction to Music Appreciation
- MUS 13H Introduction to Music Appreciation – Honors
- MUS 14A World Music
- MUS 14B American Folk Music
- MUS 15 Rock Music History and Appreciation
- 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
- *HIST 1 History of the United States
- *HIST 3 World History: Prehistoric to Early Modern
- *HIST 3H World History: Prehistoric to Early Modern – Honors
- *HIST 4 World History: Early Modern to the Present
- *HIST 4H World History: Early Modern to the Present – Honors
- *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 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
- HUMA 1 The Humanities
- ITAL 1 Elementary Italian

GENERAL EDUCATION REQUIREMENTS FOR 2015 16 (CONTINUED)

ITAL 2	Continuing Elementary Italian	SIGN 202	American Deaf Culture	*CHLD 11	Child and Adolescent Development	SOC 14H	Marriage and the Family— Honors
ITAL 3	Intermediate Italian	SPAN 1	Elementary Spanish	FASH 14	Dress, Culture, and Identity	*SOC 15	Child Development
ITAL 4	Continuing Intermediate Italian	SPAN 2	Continuing Elementary Spanish	GEOG 2	Human Geography	SOC 20	Sociology of Ethnic Relations
ITAL 60	Italian Culture Through Cinema	SPAN 3	Intermediate Spanish	GEOG 2H	Human Geography – Honors	SOC 20H	Sociology of Ethnic Relations – Honors
JAPN 1	Elementary Japanese	SPAN 4	Continuing Intermediate Spanish	GEOG 5	World Regional Geography	SPCH 7	Intercultural Communication
JAPN 2	Continuing Elementary Japanese	SPAN 11	Spanish for the Spanish Speaking	GEOG 8	The Urban World	SPCH 7H	Intercultural Communication – Honors
JAPN 3	Intermediate Japanese	SPAN 12	Continuing Spanish for the Spanish Speaking	GEOG 30	Geography of California	*SPCH 26	Interpersonal Communication
JAPN 4	Continuing Intermediate Japanese			GEOG 30H	Geography of California – Honors	*SPCH 26H	Interpersonal Communication – Honors
JAPN 5	Advanced Japanese			*HIST 3	World History: Prehistoric to Early Modern	SPCH 30	Gateway to Communication Studies
LATN 1	Elementary Latin	AREA D:				AREA E:	
LATN 2	Continuing Elementary Latin	Social, Political and Economic Institutions				Lifelong Understanding and Self-Development	
LIT 1	Early American Literature	(6 Units):		*HIST 3H	World History: Prehistoric to Early Modern – Honors	(3 Units):	
LIT 2	Modern American Literature	U.S. History and American Institutions		*HIST 4	World History: Early Modern to the Present	<i>Select one [1] course from the following:</i>	
LIT 3	Multicultural American Literature	<i>Select one [1] course from the following:</i>		*HIST 4H	World History: Early Modern to the Present – Honors	AD 3	Chemical Dependency: Intervention, Treatment and Recovery
LIT 6A	Survey of English Literature	*HIST 1	History of the United States	*HIST 10	History of Premodern Asia	BIOL 5	Contemporary Health Issues
LIT 6B	Survey of English Literature	*HIST 7	History of the United States to 1877	*HIST 11	History of Modern Asia	BIOL 13	Human Reproduction, Development and Aging
LIT 10	Survey of Shakespeare	*HIST 7H	History of the United States to 1877 – Honors	*HIST 16	The Wild West - A History, 1800-1890	BIOL 15	Human Sexuality
LIT 11A	World Literature to 1650	*HIST 8	History of the United States from 1865	*HIST 19	History of Mexico	BIOL 15H	Human Sexuality – Honors
LIT 11B	World Literature from 1650	*HIST 8H	History of the United States from 1865 – Honors	*HIST 35	History of Africa	BIOL 24	Introduction to Public Health
LIT 14	Introduction to Modern Poetry	*HIST 30	History of the African American 1619-1877	*HIST 39	California History	*CHLD 10	Child Growth and Lifespan Development
LIT 15	Introduction to Cinema	*HIST 31	History of the African American	HIST 44	History of Native Americans	*CHLD 10H	Child Growth and Lifespan Development – Honors
LIT 20	African American Literature	*HIST 36	Women in American History	JOUR 100	Introduction to Mass Media		
LIT 25	Contemporary Mexican American Literature	*HIST 40	History of the Mexican American	JOUR 107	Race, Culture, Sex, and Mass Media Images	*CHLD 11	Child and Adolescent Development
LIT 36	Introduction to Mythology	POLI 1	Political Science			COUN 5	Career/Life Planning
LIT 40	Children's Literature	POLI 1H	Political Science – Honors			FCS 41	Life Management
LIT 46	The Bible as Literature: Old Testament	POLI 25	Latino Politics in the United States			KIN 34	Fitness for Living
LIT 47	The Bible as Literature: New Testament	POLI 35	African American Politics			LEAD 55	Exploring Leadership
PHIL 5	Introduction to Philosophy			*POLI 5	Political Theory I – Ancient to Contemporary	NF 10	Nutrition for Personal Health and Wellness
PHIL 5H	Introduction to Philosophy – Honors	Elective Courses – select at least one [1] course from the following (3 Units):		*POLI 7	Political Theory II – Early Modern to Contemporary		
PHIL 12	Introduction to Ethics	AGAG 1	Food Production, Land Use and Politics – A Global Perspective			NF 12	Sports Nutrition
PHIL 12H	Introduction to Ethics – Honors	ANTH 3	Archaeology	POLI 9	Introduction to International Relations	NF 25	Essentials of Nutrition
PHIL 15	Major World Religions	ANTH 5	Principles of Cultural Anthropology	POLI 10	Environmental Politics	NF 25H	Essentials of Nutrition – Honors
PHIL 15H	Major World Religions – Honors	ANTH 22	General Cultural Anthropology	PSYC 1A	Introduction to Psychology	NF 28	Cultural and Ethnic Foods
PHIL 20A	History of Ancient Philosophy	ANTH 30	The Native American	PSYC 1AH	Introduction to Psychology – Honors	*PSYC 14	Developmental Psychology
PHIL 20AH	History of Ancient Philosophy – Honors	BUSC 1A	Principles of Economics – Macroeconomics	*PSYC 14	Developmental Psychology	*PSYC 15	Introduction to Child Psychology
PHIL 20B	History of Modern Philosophy	BUSC 1AH	Principles of Economics – Macroeconomics – Honors	*PSYC 15	Introduction to Child Psychology	*PSYC 25	The Psychology of Women
PHIL 20BH	History of Modern Philosophy – Honors	BUSC 1B	Principles of Economics – Microeconomics	PSYC 19	Abnormal Psychology	PSYC 26	Psychology of Sexuality
*POLI 5	Political Theory I – Ancient to Contemporary	BUSC 1BH	Principles of Economics – Microeconomics – Honors	*PSYC 25	The Psychology of Women	PSYC 33	Psychology for Effective Living
*POLI 7	Political Theory II – Early Modern to Contemporary	CHLD 1	Child, Family, School and Community	R-TV 1	Introduction to Electronic Media	*SOC 15	Child Development
SIGN 101	American Sign Language 1	*CHLD 10	Child Growth and Lifespan Development	SOC 1	Sociology	*SPCH 26	Interpersonal Communication
SIGN 102	American Sign Language 2	*CHLD 10H	Child Growth and Lifespan Development – Honors	SOC 1H	Sociology – Honors	*SPCH 26H	Interpersonal Communication – Honors
SIGN 103	American Sign Language 3			SOC 1H	Sociology – Honors		
SIGN 104	American Sign Language 4			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 14	Marriage and the Family		

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

PROGRAMS OF STUDY LEADING TO AN ASSOCIATE DEGREE

ALPHABETICAL LISTING ASSOCIATE IN SCIENCE DEGREE (A.S.)

Mt. San Antonio College offers two year occupational degrees in the following section of this Catalog. To qualify for the degree, students must complete the required courses for the major as shown, plus additional general education courses as listed on pages 65-66. For further information, please consult with the Counseling Center.

A	I-J-K
Accounting 71	Industrial Design Engineering..... 81
Administrative Assistant 71	Integrated Pest Management 81
Agri-Technology 71	Interior Design 81
Air Conditioning and Refrigeration 71	Interior Design – Kitchen and Bath 81
Airframe and Aircraft Powerplant Maintenance Technology – Day 71	International Business..... 81
Airframe and Aircraft Powerplant Maintenance Technology – Evening..... 72	L
Alcohol/Drug Counseling 72	Law Enforcement 82
Animation 73	Licensed Vocational Nurse to RN 82
Applied Laboratory Science Technology (ALST) 73	Livestock Management 84
Architectural Design Concentration 73	M-N
Architectural Technology Concentration 74	Manufacturing Technology..... 84
Aviation Science 74	Marketing Management 84
B-C-D	Mental Health Technology – Psychiatric Technician 84
Building Automation 74	Nursing 85
Business: Management 74	O-P-Q
Business: Retail Management 74	Ornamental Horticulture..... 87
Child Development 75	Paralegal/Legal Assistant..... 88
Commercial Flight 75	Park & Sports Turf Management 88
Computer – Database Management Systems 75	Pet Science 88
Computer and Networking Technology 75	Photography 89
Computer Network Administration and Security Management..... 76	Physical Education 89
Computer Programming 76	Psychiatric Technician to RN 89
Construction Inspection 76	R
E	Radio Broadcasting: Behind the Scenes 91
Educational Paraprofessional 77	Radio Broadcasting: On the Air..... 91
Electronics and Computer Engineering Technology 77	Radiologic Technology..... 91
Emergency Medical Services 77	Real Estate 93
Equipment Technology 78	Registered Veterinary Technology 93
F	Respiratory Therapy 93
Fashion Design and Technologies 79	S-T
Fashion Merchandising 79	Sign Language/Interpreting..... 94
Fire Technology 79	Small Business Management 95
G-H	Television Production..... 95
General Business 79	U-V-W
Graphic Design 79	Welding – Semiautomatic Arc Welding..... 95
Histologic Technician Training 80	
Horse Ranch Management 80	
Hospitality and Restaurant Management 80	
Human Resource Management..... 80	

LISTING BY INSTRUCTIONAL DIVISION ASSOCIATE IN SCIENCE DEGREE

Arts Division	Natural Sciences Division
Animation 73	Agri-Technology 71
Graphic Design 79	Applied Laboratory Science Technology (ALST) ... 73
Photography 89	Equipment Technology 78
Radio Broadcasting: Behind the Scenes 91	Histologic Technician Training 80
Radio Broadcasting: On the Air 91	Horse Ranch Management 80
Television Production 95	Integrated Pest Management 81
Business Division	Livestock Management 84
Accounting 71	Ornamental Horticulture..... 87
Administrative Assistant 71	Park & Sports Turf Management 88
Business: Management 74	Pet Science 88
Business: Retail Management 74	Registered Veterinary Technology 93
Child Development 75	Technology & Health Division
Computer – Database Management Systems 75	Air Conditioning and Refrigeration..... 71
Computer Network Administration & Security Management 76	Airframe and Aircraft Powerplant Maintenance Technology – Day 71
Computer Programming 76	Airframe and Aircraft Powerplant Maintenance Technology – Evening..... 72
Fashion Design and Technologies 79	Alcohol/Drug Counseling 71
Fashion Merchandising 79	Architectural Design Concentration..... 73
General Business 79	Architectural Technology Concentration..... 74
Hospitality and Restaurant Management 80	Aviation Science 74
Human Resource Management 80	Building Automation..... 74
Interior Design 81	Commercial Flight 75
Interior Design – Kitchen and Bath 81	Computer and Networking Technology 75
International Business 81	Construction Inspection 76
Marketing Management 84	Electronics and Computer Engineering Technology..... 77
Paralegal/Legal Assistant 88	Emergency Medical Services 77
Real Estate 93	Fire Technology 79
Small Business Management 95	Industrial Design Engineering 81
Humanities & Social Sciences Division	Law Enforcement 82
Educational Paraprofessional 77	Licensed Vocational Nurse to RN 82
Sign Language/Interpreting 94	Manufacturing Technology..... 84
Kinesiology, Athletics & Dance Division	Mental Health Technology – Psychiatric Technology 84
Physical Education 89	Nursing 85
	Psychiatric Technician to RN 89
	Radiologic Technology..... 91
	Respiratory Therapy 93
	Welding 95

Accounting

Business Division

Degree S0502

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.

Required Courses:

BUSA 7	Principles of Accounting - Financial	5.0
BUSA 8	Principles of Accounting - Managerial	5.0
BUSA 21	Cost Accounting	4.5
	or	
BUSA 58	Federal Income Tax Law	3.0
BUSA 52	Intermediate Accounting	3.0
BUSA 75	Using Microcomputers in Financial Accounting	1.0
BUSA 76	Using Microcomputers in Managerial Accounting	1.0
BUSM 20	Principles of Business	3.0
	Total Units	21.0 - 22.5

Administrative Assistant

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.

Required Courses:

BUSO 25	Business Communications	3.0
BUSO 26	Oral Communications for Business	3.0
CISB 10	Office Skills	3.0
CISB 15	Microcomputer Applications	3.5
CISB 16	Macintosh Applications	2.0
CISB 21	Microsoft Excel	3.0
CISB 31	Microsoft Word	3.0
CISB 51	Microsoft PowerPoint	3.0

Select one (1) course or any one (1) combination

lecture-lab course from:

CISD 11	Database Management – Microsoft Access	3.0
CISD 11L	Database Management – Microsoft Access Laboratory	0.5
	or	
CISN 21	Windows Operating System	3.0
	or	
CISS 11	Practical Computer Security	2.0
	or	
CISW 15	Web Site Development	3.5
	Total Units	25.5 - 27.0

Agri-Technology

Natural Sciences Division

Degree S0101

The program of courses in Agriculture is designed to enable students to prepare for a career in this essential and diverse profession. The department offers a comprehensive Agricultural Sciences program and is unique in that most courses provide hands-on experiences designed to give the students a combination of

practical skills and technical knowledge.

The following programs list all courses needed to satisfy major requirements. Students may obtain certificates upon completion of required courses listed. Additional courses needed for completion of the Degree are listed in this catalog. It is recommended that all students consult with the department chairperson, faculty advisor, or counselor to file an educational plan.

These programs are intended to prepare students for employment following graduation. Students desiring a bachelor's degree should consult with the department chairperson, counselor or advisor to discuss transferability of courses. The curriculum is flexible in nature to allow for previous experience and specialization in a given area of agriculture and agricultural business.

Required Courses:

AGAG 1	Food Production, Land Use and Politics - A Global Perspective	3.0
AGAG 91	Agricultural Calculations	3.0
AGAN 1	Animal Science	3.0
AGOR 1	Horticultural Science	3.0
AGOR 32	Landscaping and Nursery Management	3.0
AGOR 56	Engine Diagnostics	3.0
AGOR 71	Landscape Construction Fundamentals	3.0

PLUS select three (3) courses from:

AGLI 14	Swine Production	3.0
AGLI 16	Horse Production and Management	4.0
AGLI 17	Sheep Production	3.0
AGLI 30	Beef Production	3.0
AGOR 24	Integrated Pest Management	3.0
AGOR 62	Landscape Irrigation - Design and Installation	3.0
AGPE 70	Pet Shop Management	3.0
AGPE 71	Canine Management	3.0
	Total Units	30.0 - 31.0

Air Conditioning and Refrigeration

Technology and Health Division

Degree S0909

The Air Conditioning and Refrigeration (AIRC) Degree Program prepares students for entry level employ-

ment 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.

Required Courses:

AIRC 10	Technical Mathematics in Air Conditioning and Refrigeration	2.0
AIRC 11	Welding for Air Conditioning and Refrigeration	2.0
AIRC 12	Air Conditioning Codes and Standards	3.0
AIRC 20	Refrigeration Fundamentals	4.0
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5.0
AIRC 26	Gas Heating Fundamentals	2.0
AIRC 30	Heat Load Calculations & Design	4.0
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4.0
AIRC 32A	Air Properties and Measurement	1.5
AIRC 34	Advanced Mechanical Refrigeration	4.0
	Total Units	31.5

Airframe and Aircraft Powerplant Maintenance Technology - Day

Technology and Health Division

Degree S0911

This program prepares students to enter employment as a certified airframe and powerplant technician in the aircraft maintenance industry. Training is given in the overhaul of various airframes and powerplants and their components. Completion of this program leads to an Associate in Science degree. Two state-awarded certificates are also available upon successful completion of this program - on certificate in Airframe Maintenance

Programs of Study Leading to an Associate Degree

Technology and one certificate in Aircraft Powerplant Maintenance Technology. 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 or evening 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 65B are equivalent to evening program courses AIRM 95A, 95B, 96A, 96B, 97A, 97B, 98A, and 98B. Day program courses AIRM 66A and 66B are equivalent to evening program courses AIRM 90A, 90B, 91A, 91B, 92A, 92B, 93A, and 93B. The evening program courses are offered in 9-week modules.

Successful completion of this program enables students to take the FAA examinations in Airframe, 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 a counselor or advisor to discuss transferability of courses.

Required Courses:

AIRM 65A	Aircraft Powerplant Maintenance Technology	13.0
AIRM 65B	Aircraft Powerplant Maintenance Technology: Reciprocating & Turbine	13.0
AIRM 66A	Aircraft Airframe Maintenance Structures	13.0
AIRM 66B	Airframe Maintenance Technology	13.0
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 71	Aviation Maintenance Science	6.0
AIRM 72	Aircraft Materials and Processes	1.5
AIRM 73	Aircraft Welding	1.5
Total Units		67.0

Recommended Electives:

AIRM 74	Aircraft Maintenance Technology - Work Experience	2.0
AIRM 80	Lab Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4.0

Airframe and Aircraft Powerplant Maintenance Technology - Evening Technology and Health Division Degree S0951

This program prepares students to enter employment as a certified airframe and powerplant technician in the aircraft maintenance industry. Training is given in the overhaul of various airframes and powerplants and their components. Completion of this program leads to an Associate in Science degree. Two state-awarded certificates are also available upon successful completion of this program - one certificate in Airframe Maintenance Technology and one certificate in Aircraft Powerplant Maintenance Technology. 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 or evening 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 65B are equivalent to evening program courses AIRM 95A, 95B, 96A, 96B, 97A, 97B, 98A, and 98B. Day program courses AIRM 66A and 66B are equivalent to evening program courses AIRM 90A, 90B, 91A, 91B, 92A, 92B, 93A, and 93B. The evening program courses are offered in 9-week modules.

Successful completion of this program enables students to take the FAA examinations in Airframe, 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 a counselor or advisor to discuss transferability of courses.

Required Courses:

AIRM 70A	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3.0

AIRM 71	Aviation Maintenance Science	6.0
AIRM 72	Aircraft Materials and Processes	1.5
AIRM 73	Aircraft Welding	1.5
AIRM 90A	Airframe Maintenance Technology	3.0
AIRM 90B	Airframe Maintenance Technology: Structure and Design	3.0
AIRM 91A	Airframe Maintenance Technology	3.0
AIRM 91B	Airframe Maintenance Technology: Aluminum Repair	3.0
AIRM 92A	Airframe Maintenance Technology: Hydraulics & Pneu	3.0
AIRM 92B	Airframe Maintenance Technology	3.0
AIRM 93A	Airframe Maintenance Technology: Systems	3.0
AIRM 93B	Airframe Maintenance Technology: Fire Suppression	3.0
AIRM 95A	Aircraft Powerplant Maintenance Technology	3.0
AIRM 95B	Aircraft Powerplant Maintenance Technology: Reciprocating Engines	3.0
AIRM 96A	Aircraft Powerplant Maintenance Technology: Turbine Engines	3.0
AIRM 96B	Aircraft Powerplant Maintenance Technology: Propellers	3.0
AIRM 97A	Aircraft Powerplant Maintenance Technology: Instrumentation	3.0
AIRM 97B	Aircraft Powerplant Maintenance Technology: Fuel Meter Systems	3.0
AIRM 98A	Aircraft Powerplant Maintenance Technology: Ignition Systems	3.0
AIRM 98B	Aircraft Powerplant Maintenance Technology: Lubricating Systems	3.0
Total Units		63.0

Recommended Electives:

AIRM 74	Aircraft Maintenance Technology - Work Experience	2.0
AIRM 80	Lab Studies in Aircraft Maintenance Technology	0.5
PHYS 1	Physics	4.0

Alcohol/Drug Counseling Technology and Health Division Degree S2101

In this program the student integrates theory and practical experience in developing skills necessary to work with the alcohol and drug abuse population as well as families and employers of chemically-dependent persons. The curriculum is designed to meet the credentialing requirements of the California Association of Alcohol/Drug Educators. Students who complete this option qualify for employment in a variety of chemical-dependant settings.

Required Courses:

AD 1	Alcohol/Drug Dependency	3.0
AD 2	Physiological Effects of Alcohol/Drugs	3.0
AD 3	Chemical Dependency: Intervention, Treatment and Recovery	3.0
AD 4	Issues in Domestic Violence	3.0
AD 5	Chemical Dependency: Prevention and Education	1.5
AD 6	Dual Diagnosis	3.0
Required skill courses:		
AD 8	Group Process and Leadership	3.0
AD 9	Family Counseling	3.0
AD 10	Client Record and Documentation	1.5
AD 11	Techniques of Intervention and Referral	3.0

Required field work courses:

AD 13	Internship/Seminar	4.0
AD 14	Advanced Internship/Seminar	4.0

Select two (2) courses from:

CHLD 10	Child Growth and Lifespan Development	3.0
<i>or</i>		
CHLD 10H	Child Growth and Lifespan Development - Honors	3.0
PSYC 1A	Introduction to Psychology	3.0
<i>or</i>		
PSYC 1AH	Introduction to Psychology – Honors	3.0
PSYC 19	Abnormal Psychology	3.0
SOC 1	Sociology	3.0
<i>or</i>		
SOC 1H	Sociology – Honors	3.0
SOC 14	Marriage and the Family	3.0

SOC 15	Child Development	3.0
Total Units		41.0

Eligibility Requirements and Selection Procedures

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.

Animation

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.

Required Courses:

ANIM 100	Digital Paint and Ink	3.0
<i>or</i>		
ARTC 100	Graphic Design I	3.0
ANIM 101A	Drawing - Gesture and Figure	3.0
ANIM 104	Drawing Fundamentals	3.0
<i>or</i>		
ARTD 15A	Drawing: Beginning	3.0
ANIM 108	Principles of Animation	3.0
ANIM 115	Storyboarding	3.0
ANIM 116	Character Development	1.5
ANIM 130	Introduction to 3D Modeling	3.0
ANIM 131	Introduction to Gaming	3.0
ANIM 148	Demo Reel	3.0
<i>or</i>		
ARTC 290	Portfolio	3.0
ARTD 17A	Drawing: Life	3.0

Required Electives

Select one (1) course from the following:

(3 Units)

ANIM 109	Advanced Principles of Animation	3.0
ANIM 132	Intermediate 3D Modeling	3.0
ANIM 141	2D Game Level Design	3.0
ANIM 151	Game Prototype Production	3.0
ANIM 172	Motion Graphics, Compositing and Visual Effects	3.0

ANIM 175	Digital Animation	3.0
ARTD 16	Drawing: Perspective	3.0
Total Units		31.5

Recommended Electives

AHIS 4	History of Western Art: Prehistoric through Gothic	3.0
AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors	3.0
AHIS 5	History of Western Art: Renaissance through Modern	3.0
AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	3.0
ANIM 111A	Animal Drawing	1.5
ANIM 111B	Animal Drawing	1.5
ARTD 20	Design: Two-Dimensional	3.0

Applied Laboratory Science Technology (ALST)

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.

Required Courses:

BUSM 10	Principles of Continuous Quality Improvement	3.0
CHEM 20	Introductory Organic and Biochemistry	5.0
CHEM 50	General Chemistry I	5.0
<i>or</i>		
CHEM 50H	General Chemistry I - Honors	5.0
CHEM 51	General Chemistry II	5.0

PLUS select (6-7) six or seven Units from:

MICR 22	Microbiology	4.0
PHIL 12	Introduction to Ethics	3.0

or

PHIL 12H	Introduction to Ethics - Honors	3.0
SPCH 26	Interpersonal Communication	3.0
<i>or</i>		
SPCH 26H	Interpersonal Communication - Honors	3.0
Total Units		29.0 - 30.0

Architectural Design Concentration

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.

Required Courses:

ARCH 101	Design I - Elements of Design	4.0
ARCH 102	Design II - Architectural Design	4.0
ARCH 121	CADD and Digital Media Level I	4.0
ARCH 122	Architectural Presentations	4.0
ARCH 141	Design Drawing and Communication	4.0
ARCH 142	Architectural Materials and Specifications	4.0
ARCH 201	Design III - Environmental Design	4.0
ARCH 202	Design IV - Advanced Project	4.0
ARCH 221	Architectural Illustration	3.0
ARCH 222	Advanced Digital Design, Illustration and Animation	3.0
ARCH 250	World Architecture I	3.0
ARCH 251	World Architecture II	3.0

Total Units 44.0

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.

Architectural Technology Concentration

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.

Required Courses:

ARCH 101	Design I - Elements of Design	4.0
ARCH 121	CADD and Digital Media Level I	4.0
ARCH 141	Design Drawing and Communication	4.0
ARCH 142	Architectural Materials and Specifications	4.0
ARCH 145	Building and Zoning Codes	3.0
ARCH 146	Architectural Drawings and Fabrications	3.0
ARCH 147	Architectural CAD and BIM	3.0
ARCH 247	Architectural CAD Working Drawings	3.0
INSP 70	Elements of Construction	3.0
INSP 71	Construction Estimating	3.0
EDT 26	Civil Engineering Technology and CAD	3.0
Total Units		37.0

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.

Aviation Science 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.

Required Courses:

AERO 100	Primary Pilot Ground School	4.0
AERO 102	Aviation Weather	3.0
AERO 104	Federal Aviation Regulations	2.0
AERO 152	Air Transportation	3.0
AERO 200	Aviation Safety and Human Factors	3.0
AERO 250	Navigation	3.0
AERO 252	Instrument Ground School	3.0
AIRT 151	Aircraft Recognition and Performance	3.0
AIRT 201	Terminal Air Traffic Control	3.0
AIRT 203	Enroute Air Traffic Control	3.0
AIRT 251	Air Traffic Control Team Skills	1.5
Total Units		31.5

Recommended Electives:

AERO 150	Commercial Pilot Ground School	3.0
AERO 202	Aircraft and Engines	3.0
BUSM 60	Human Relations in Business	3.0

Building Automation Technology and Health Division Degree S0308

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:

AIRC 20	Refrigeration Fundamentals	4.0
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5.0
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4.0
AIRC 34	Advanced Mechanical Refrigeration	4.0
AIRC 61	Building Automation Fundamentals	2.5
AIRC 65	Building Automation Networks and Programming	3.0
AIRC 67	Energy Management	4.0
ELEC 11	Technical Applications in Microcomputers	3.0
CISW 41	XML Secure Programming	3.0
CNET 56	Computer Networks	4.0
Total Units		36.5

Business: Management

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:

BUSA 7	Principles of Accounting - Financial	5.0
BUSM 10	Principles of Continuous Quality Improvement	3.0
BUSM 20	Principles of Business	3.0
BUSM 51	Principles of International Business	3.0
BUSM 60	Human Relations in Business	3.0
BUSM 61	Business Organization and Management	3.0

BUSM 62	Human Resource Management	3.0
BUSS 36	Principles of Marketing	3.0
CISB 15	Microcomputer Applications	3.5
Total Units		29.5

Recommended Electives:

BUSM 81	Work Experience in Business	1.0
BUSM 85	Special Issues in Business	2.0
BUSM 85	Special Issues in Marketing	2.0

Business: Retail Management

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.

Required Courses:

BUSA 7	Principles of Accounting - Financial	5.0
<i>or</i>		
BUSA 72	Bookkeeping - Accounting	5.0
BUSA 11	Fundamentals of Accounting	3.0
BUSM 60	Human Relations in Business	3.0
BUSM 61	Business Organization and Management	3.0
BUSM 62	Human Resource Management	3.0
BUSO 25	Business Communications	3.0
BUSO 26	Oral Communications for Business	3.0
BUSS 36	Principles of Marketing	3.0
CISB 15	Microcomputer Applications	3.5
FASH 62	Retail Buying and Merchandising	3.0
<i>or</i>		
BUSS 50	Retail Store Management and Merchandising	3.0
Total Units		32.5

Child Development

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.

Required Courses:

CHLD 1	Child, Family, School and Community	3.0
CHLD 5	Principles and Practices in Child Development Programs	3.0
CHLD 6	Survey of Child Development Curriculum	3.0
CHLD 11	Child and Adolescent Development	3.0
CHLD 64	Health, Safety and Nutrition of Children	3.0
CHLD 66	Early Childhood Development Observation and Assessment	2.0
CHLD 66L	Early Childhood Development Observation and Assessment Laboratory	1.0
CHLD 67	Early Childhood Education Practicum	2.0
CHLD 67L	Early Childhood Education Practicum Laboratory	1.0
CHLD 68	Children With Special Needs	3.0
CHLD 69	Early Childhood Development Field Work Seminar	2.0
CHLD 84	Guidance and Discipline in Child Development Settings	1.0
CHLD 91	Early Childhood Development Field Work	1.0
Total Units		28.0

Recommended Electives:

CHLD 50	Teaching in a Diverse Society	3.0
CHLD 51	Early Literacy in Child Development	3.0
CHLD 61	Language Arts and Art Media for Young Children	3.0

CHLD 62	Music and Motor Development for Young Children	3.0
CHLD 63	Creative Sciencing and Math for Young Children	3.0
CHLD 71A	Administration of Child Development Programs	3.0
CHLD 71B	Management/Marketing/Personnel for ECD Programs	3.0
CHLD 72	Teacher, Parent, and Child Relationships	3.0
CHLD 73	Infant/Toddler Care and Development	3.0

Note: These courses are acceptable for the Child Development requirements leading to the Child Development Permit.

Commercial Flight

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.

Required Courses:

AERO 100	Primary Pilot Ground School	4.0
AERO 102	Aviation Weather	3.0
AERO 104	Federal Aviation Regulations	2.0
AERO 150	Commercial Pilot Ground School	3.0
AERO 152	Air Transportation	3.0
AERO 200	Aviation Safety and Human Factors	3.0
AERO 202	Aircraft and Engines	3.0
AERO 250	Navigation	3.0
AERO 252	Instrument Ground School	3.0
Total Units		27.0

Recommended Electives:

AIRT 151	Aircraft Recognition and Performance	3.0
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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.

Computer - Database Management Systems

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. Student 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.

Required Courses:

CISB 11	Computer Information Systems	3.5
CISB 15	Microcomputer Applications	3.5
CISD 40	Database Design	3.0
CISM 11	Systems Analysis and Design	3.5
CISN 21	Windows Operating System	3.0
or		
CISN 31	Linux Operating System	3.0
CISN 31L	Linux Operating System Laboratory	0.5

and		
BUSM 20	Principles of Business	3.0
or		
BUSA 7	Principles of Accounting - Financial	5.0
Plus any two (2) lecture-lab combinations below:		
CISD 11	Database Management - Microsoft Access	3.0
CISD 11L	Database Management - Microsoft Access Lab	0.5
CISD 14	VBA for Excel and Access	3.0
CISD 14L	VBA for Excel and Access Lab	0.5
CISD 21	Database Management - Microsoft SQL Server	3.0
CISD 21L	Database Management - Microsoft SQL Server Laboratory	0.5
CISD 31	Database Management - Oracle	3.0
CISD 31L	Database Management - Oracle Laboratory	0.5
Total Units		26.5 - 29.0

Computer and Networking Technology

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.

Programs of Study Leading to an Associate Degree

Required Courses:

CNET 50	PC Servicing	4.0
CNET 52	PC Operating Systems	4.0
CNET 54	PC Troubleshooting	4.0
CNET 56	Computer Networks	4.0
CNET 58	Server Systems	4.0
CNET 60	A+ Certification Preparation	2.0
CNET 62	Network+ Certification Preparation	2.0
CNET 64	Server+ Certification Preparation	2.0
CNET 66	Security+ Certification Preparation	2.0
ELEC 11	Technical Applications in Microcomputers	3.0

or

CISB 15	Microcomputer Applications	3.5
ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 50B	Electronic Circuits (AC)	4.0
ELEC 56	Digital Electronics	4.0
TECH 60	Customer Relations for the Technician	2.0

Total Units 45.0 - 45.5

Recommended Electives:

ELEC 51	Semiconductor Devices and Circuits	4.0
ELEC 74	Microcontroller Systems	4.0

Computer Network Administration and Security Management

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.

Required Courses:

CISN 11	Telecommunications/Networking	3.0
CISN 11L	Telecommunications/Networking Lab	0.5
CISN 24	Window Server Network and Security Administration	3.0
CISN 24L	Window Server Network and Security Administration Lab	0.5
CISN 51	Cisco CCNA Networking and Routing	3.0
CISN 51L	Cisco CCNA Networking and Routing	0.5
CISS 21	Network Vulnerabilities and Countermeasures	3.0

CISS 21L	Network Vulnerabilities and Countermeasures Lab	0.5
CISS 23	Network Analysis, Intrusion Detection/Prevention Systems	3.0
CISS 23L	Network Analysis, Intrusion Detection/Prevention Systems Lab	0.5
CISS 25	Network Security and Firewalls	3.0
CISS 25L	Network Security and Firewalls Lab	0.5
CISS 29	CNASM Service Learning	1.0

Required Electives

Select one (1) lecture or one (1) combination lecture/lab course from the following: (1-4 Units)

CISB 11	Computer Information Systems	3.5
	or	
CISN 21	Windows Operating System	3.0
	or	
CISN 31	Linux Operating System	3.0
CISN 31L	Linux Operating System Laboratory	0.5
	or	
CISN 34	Linux Networking and Security	3.0
CISN 34L	Linux Networking and Security Laboratory	0.5
	or	
CISP 11	Programming in Visual Basic	3.0
CISP 11L	Programming in Visual Basic Laboratory	0.5
	or	
CISP 21	Programming in Java	3.0
CISP 21L	Programming in Java Laboratory	0.5
	or	
CISP 31	Programming in C++	3.0

CISP 31L	Programming in C++ Laboratory	0.5
	or	
CISP 41	Programming in C#	3.0
CISP 41L	Programming in C# Lab	0.5
	or	
CISS 13	Principles of Information Systems Security	4.0
	or	
CISS 15	Operating Systems Security	3.0
	or	
CISS 27	Defending Computer Systems	1.0
Total Units		23.0 - 26.0

Computer Programming

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.

Required 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	3.0
	or	
CISN 31	Linux Operating System	3.0
CISN 31L	Linux Operating System Laboratory	0.5

CISP 10	Principles of Object-Oriented Design	2.0
BUSM 20	Principles of Business	3.0
	or	
BUSA 7	Principles of Accounting - Financial	5.0
CISD 11	Database Management - Microsoft Access	3.0
CISD 11L	Database Management - Microsoft Access Lab	0.5
	or	
CISD 21	Database Management - Microsoft SQL Server	3.0
CISD 21L	Database Management - Microsoft SQL Server Laboratory	0.5

	or	
CISD 31	Database Management - Oracle	3.0
CISD 31L	Database Management - Oracle Laboratory	0.5

Required Electives (7 Units)

PLUS one of the following concentrations:

C++

CISP 31	Programming in C++	3.0
CISP 31L	Programming in C++ Laboratory	0.5
CISP 34	Advanced C++ Programming	3.0
CISP 34L	Advanced C++ Programming Laboratory	0.5

Visual Basic:

CISP 11	Programming in Visual Basic	3.0
CISP 11L	Programming in Visual Basic Laboratory	0.5
CISP 14	Advanced Visual Basic .NET	3.0
CISP 14L	Advanced Visual Basic.NET Laboratory	0.5

Java:

CISP 21	Programming in Java	3.0
CISP 21L	Programming in Java Laboratory	0.5
CISP 24	Advanced Java Programming	3.0
CISP 24L	Advanced Java Laboratory	0.5
Total Units		29.0 - 31.5

**Construction Inspection
Technology and Health Division
Degree S0920**

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

Required Courses:

ARCH 142	Architectural Materials and Specifications	4.0
ARCH 145	Building and Zoning Codes	3.0
INSP 17	Legal Aspects/Construct	3.0
INSP 70	Elements of Construction	3.0
INSP 71	Construction Estimating	3.0
INSP 87	Fund Construct Inspect	3.0

Total Units 19.0

Recommended Electives:

ARCH 141	Architectural Drawing	3.0
ARCH 146	Architectural Drawings and Fabrications	3.0
INSP 67	Reading Construction Drawings	3.0

**Educational Paraprofessional
(Instructional Assistant)
Humanities and Social Sciences 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.

Required Courses

CHLD 1	Child, Family, School and Community	3.0
CHLD 10	Child Growth and Lifespan Development	3.0
	<i>or</i>	
CHLD 10H	Child Growth and Lifespan Development - Honors	3.0
	<i>or</i>	
CHLD 11	Child and Adolescent Development	3.0
	<i>or</i>	
PSYC 14	Developmental Psychology	3.0
	<i>or</i>	
PSYC 15	Introduction to Child Psychology	3.0
CHLD 68	Children With Special Needs	3.0
EDUC 10	Introduction to Education	3.0
EDUC 16	Aspects and Issues in Teaching	3.0

Required Electives

Select One (1) course from: (3 Units)

CHLD 51	Early Literacy in Child Development	3.0
CHLD 64	Health, Safety and Nutrition of Children	3.0
ENGL 81	Language Acquisition	3.0
KIN 3	First Aid and CPR	3.0
LIT 40	Children's Literature	3.0

Total Units 18.0

**Electronics and Computer
Engineering Technology
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.).

Required Courses:

ELEC 11	Technical Applications in Microcomputers	3.0
ELEC 12	Computer Simulation and Troubleshooting	2.0
ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 50B	Electronic Circuits (AC)	4.0
ELEC 51	Semiconductor Devices and Circuits	4.0
ELEC 53	Communication Systems	4.0
ELEC 54A	Industrial Electronics	4.0
ELEC 54B	Industrial Electronic Systems	3.0
ELEC 55	Microwave Communications	4.0
ELEC 56	Digital Electronics	4.0
ELEC 61	Electronic Assembly and Fabrication	3.0
ELEC 74	Microcontroller Systems	4.0
TECH 60	Customer Relations for the Technician	2.0

Total Units 45.0

Recommended Electives:

CISP 11	Programming in Visual Basic	3.0
EDT 11	Technical Engineering Drawing I	3.0
ELEC 62	Advanced Surface Mount Assembly and Rework	2.0
ELEC 76	FCC General Radiotelephone Operator License Preparation	2.0
PHYS 2AG	General Physics	4.0

**Emergency Medical Services
Technology and Health Division
Degree S1210**

Students who complete the required courses listed below for the Emergency Medical Technician-Paramedic (EMT-P) Certificate and who also complete the graduation requirements of Mt. San Antonio College will be awarded the Degree in Emergency Medical Services.

This Paramedic Program is accredited by CAAHEP (Committee on Accreditation of Allied Health Education Programs) and approved by the Los Angeles

Programs of Study Leading to an Associate Degree

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.

Required Courses:

EMS 10	Anatomy and Physiology for Paramedics	2.0
EMS 20	Emergency Cardiac Care for Paramedics	1.5
EMS 30	Pharmacology for Paramedics	2.5
EMS 40	Cardiology for Paramedics	5.0
EMS 50	Paramedic Skills Competency	5.0
EMS 60	EMS Theory for Paramedics	8.5
EMS 70	Paramedic Clinical Internship	4.0
EMS 80	Paramedic Field Externship	9.5

Total Units **38.0**

Recommended Electives:

ADJU 1	The Administration of the Justice System	3.0
FIRE 1	Fire Protection Organization	3.0
PSYC 1A	Introduction to Psychology	3.0
SOC 1	Sociology	3.0

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 "C" (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.

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:

- 1) Be an EMT-I currently certified in California.
 - 2) 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-I (approximately 1,200 hours) within the last two years.
 - 3) File a college application and be accepted as a student at Mt. San Antonio College.
 - 4) Submit an application for the Paramedic Program to the Technology and Health Division Office (909) 274-7500, Ext. 4750. All applications are dated upon receipt in the Technology and Health Division Office. The Paramedic Program begins two times per year and runs for 29 weeks.
 - 5) Take the Assessment of Written English, Math Placement test, and Degrees of Reading Power tests at least ten working days before the start of the pre-course EMS 1 and EMS 2. Placement examinations will be individually assessed to determine eligibility for the pre-courses. The placement tests are administered by the Assessment Center in the Student Services Center
 - 6) Successful completion of EMS-1, *Fundamentals for Paramedics* and EMS 2, *Preparation for Paramedic Program*.
 - 7) Forward two official transcripts of all coursework completed (high school, EMT-I, Fire Science, and other than Mt. San Antonio College courses). One transcript must be sent to the Technology and Health Division Office, the other to the Admissions and Records Office.
- NOTE: If the course(s) were taken and/or the degree obtained at Mt. San Antonio College, it is not necessary to request transcripts. Indicate

in the mailing address the program for which transcripts are being sent to the Technology and Health Division Office.

EXAMPLE:

Mt. San Antonio College
Technology and Health Division
Paramedic Program
1100 North Grand Avenue
Walnut, CA 91789-1399

- 8) A physical examination, proof of certain immunizations, and a criminal background check 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. In addition, drug testing may be required as part of the physical examination and/or requested by the college or one of its agents.

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
- 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 EMS program, students must be able to speak, write and read English to ensure patient safety and to complete classes successfully.

Equipment Technology

Natural Sciences Division

Degree S0118

The courses in equipment technology 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. 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.

This program is intended to prepare students to become technicians for entry level positions or skills enhancement in the operation, service, maintenance and repair of industrial and agricultural power equipment.

Listed below are the courses needed to satisfy major requirements. It is recommended that students consult with the department chairperson, counselor or advisor to file an educational plan. For additional information, call the Agricultural Sciences Department, ext. 4540 or visit the Mt. SAC Web site at www.

mtsac.edu/instruction/sciences/agriculture

Required Courses:

AGAG 1	Food Production, Land Use and Politics - A Global Perspective	3.0
AGAG 59	Work Experience in Agriculture	1.0 - 4.0
AGOR 51	Tractor and Landscape Equipment Operations	3.0
AGOR 52	Hydraulics	3.0
AGOR 53	Small Engine Repair I	3.0
AGOR 54	Small Engine Repair II	3.0
AGOR 55	Diesel Engine Repair	3.0
AGOR 56	Engine Diagnostics	3.0
AGOR 57	Power Train Repair	3.0
AGOR 71	Landscape Construction Fundamentals	3.0
AGOR 72	Landscape Hardscape Applications	3.0
CISB 15	Microcomputer Applications	3.5
Total Units		34.5 - 37.5

Fashion Design and Technologies

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.

Required Courses:

FASH 8	Introduction to Fashion	3.0
FASH 10	Clothing Construction I	3.0
FASH 12	Clothing Construction II	3.0
FASH 14	Dress, Culture, and Identity	3.0
FASH 15	Aesthetic Design in Fashion	3.0
FASH 17	Textiles	3.0
FASH 21	Patternmaking I	3.0
FASH 22	Fashion Design By Draping	3.0
FASH 23	Patternmaking II	3.0
FASH 24	Fashion Patternmaking by Computer	3.0
FASH 25	Fashion Computer-Assisted Drawing	3.0
Total Units		33.0

Fashion Merchandising

Business Division

Degree S1308

The A.S. Degree in Fashion Merchandising is designed to prepare students for entry-level careers in the apparel industry in Southern California. This A.S. program also offers students courses specializing in apparel retailing, advertising, textiles, and visual communications.

The courses emphasize the business of fashion, wholesale merchandise planning, 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 showroom assisting.

Required Courses:

FASH 8	Introduction to Fashion	3.0
FASH 10	Clothing Construction I	3.0
FASH 15	Aesthetic Design in Fashion	3.0
FASH 17	Textiles	3.0
FASH 25	Fashion Computer-Assisted Drawing	3.0
FASH 59	Fashion Retailing	3.0
FASH 62	Retail Buying and Merchandising	3.0
FASH 63	Fashion Promotion	3.0
FASH 66	Visual Merchandising Display	3.0
Total Units		27.0

Fire Technology

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.

Required Courses:

FIRE 1	Fire Protection Organization	3.0
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FIRE 2	Fire Prevention Technology	3.0
FIRE 3	Fire Protection Equipment and Systems	3.0
FIRE 4	Building Construction for Fire Protection	3.0
FIRE 5	Fire Behavior and Combustion	3.0
FIRE 13	Principles of Fire and Emergency Services Safety and Survival	3.0

Required Electives

Select two (2) courses from: (5.5-22.5 Units)

EMT 90	Emergency Medical Technician	8.0
FIRE 6	Hazardous Materials/ICS	3.0
FIRE 7	Fire Fighting Tactics and Strategy	3.0
FIRE 8	Fire Company Organization and Management	3.0
FIRE 9	Fire Hydraulics	3.0
FIRE 10	Arson and Fire Investigation	3.0
FIRE 11	Fire Apparatus and Equipment	3.0
FIRE 12	Wildland Fire Control	4.5
FIRE 86	Basic Fire Academy	14.5
KINF 53	Physical Training for the Basic Fire Academy	2.5

Total Units 23.5 - 40.5

Recommended Electives:

KINF 51	Agility Testing Preparation for Administration of Justice and Fire Technology	1.0
KINF 52	Fitness and Conditioning for Administration of Justice, Fire Technology and Forestry	1.0

General Business

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.

Required Courses:

BUSA 7	Principles of Accounting - Financial	5.0
or		
BUSA 72	Bookkeeping - Accounting	5.0

BUSL 18	Business Law	3.0
or		
BUSL 18H	Business Law - Honors	3.0
BUSM 10	Principles of Continuous Quality Improvement	3.0
BUSM 20	Principles of Business	3.0
BUSM 60	Human Relations in Business	3.0
BUSM 61	Business Organization and Management	3.0
BUSM 62	Human Resource Management	3.0
BUSO 5	Business English	3.0
BUSO 25	Business Communications	3.0
BUSS 36	Principles of Marketing	3.0
CISB 15	Microcomputer Applications	3.5

Select six (6) Units from:

BUSA	Business: Accounting	1.0 - 5.0
BUSC	Business: Economics	3.0
BUSL	Business: Law	1.0 - 3.0
BUSM	Business: Management	1.0 - 4.0
BUSS	Business: Sales, Merchandising and Marketing	1.0 - 4.0
CISB	Computer Information Systems Beginning	2.0 - 4.0
Total Units		41.5

Graphic Design

Arts Division

Degree S0318

This program is designed to provide students with a combination of creative, design, problem solving, and technical skills necessary for entry-level employment as a Graphic Designer in the Commercial Art industry. Students completing this program are eligible for advanced training or transfer to a college or university for further study.

Required Courses:

ARTC 100	Graphic Design I	3.0
ARTC 120	Graphic Design II	3.0
ARTC 160	Typography	3.0
ARTC 165	Illustration	3.0
ARTC 290	Portfolio	3.0
ARTD 15A	Drawing: Beginning	3.0
ARTD 17A	Drawing: Life	3.0
ARTD 20	Design: Two Dimensional	3.0

Programs of Study Leading to an Associate Degree

ARTD 25A	Beginning Painting I	3.0
Plus select (1) course from: (3 Units)		
AHIS 5	History of Western Art: Renaissance Through Modern	3.0
AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	3.0
AHIS 6	History of Modern Art	3.0
AHIS 6H	History of Modern Art - Honors	3.0
Total Units		30.0
Recommended Electives:		
AHIS 4	History of Western Art: Prehistoric Through Gothic	3.0
ANIM 172	Motion Graphics, Compositing and Visual Effects	3.0
ANIM 175	Web Animation With Flash	3.0
ARTC 140	Graphic Design III	3.0
ARTC 299	Graphic Design Internship	1.0
ARTD 16	Drawing: Perspective	3.0
ARTD 45A	Printmaking: Introduction to Screenprinting	3.0
ARTS 22	Design: Three-Dimensional	3.0
PHOT 10	Basic Digital and Film Photography	3.0

Histologic Technician Training

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.

Required Courses:

ANAT 10B	Introductory Human Physiology	4.0
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<i>or</i>		
ANAT 36	Human Physiology	5.0
<i>or</i>		
MICR 26	Introduction to Immunology	3.0
ANAT 35	Human Anatomy	5.0
CHEM 10	Chemistry for Allied Health Majors	5.0
<i>or</i>		
CHEM 40	Introduction to General Chemistry	5.0
<i>or</i>		
CHEM 50	General Chemistry I	5.0
<i>or</i>		
CHEM 50H	General Chemistry I - Honors	5.0
HT 1	Introduction to Histotechnology	1.0
HT 2	Scientific Basics for Histologic Technicians	3.0
HT 10	Histology	3.0
HT 12	Beginning Histotechniques	5.0
HT 14	Advanced Histotechniques	5.0
HT 16	Histochemistry/ Immunohistochemistry	4.0
HT 17	Work Experience in Histotechnology	4.0
MICR 1	Principles of Microbiology	5.0
<i>or</i>		
MICR 22	Microbiology	4.0
Total Units		42.0 - 45.0

Horse Ranch Management

Natural Sciences Division

Degree S0102

Horse Ranch Management offers students a look into the science, breeding, management and training of horses using a hands-on approach. It helps to prepare students for a variety of jobs in the horse industry and is molded around a core of horse science, agriculture, and general education courses. 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.

Required Courses:

<i>(Complete three (3) Units of Work Experience-AGAG 59)</i>		
AGAG 59	Work Experience in Agriculture	1.0
AGAN 2	Animal Nutrition	3.0
AGAN 94	Animal Breeding	3.0

AGLI 16	Horse Production and Management	4.0
AGLI 18	Horse Ranch Management	4.0
AGLI 19	Horse Hoof Care	2.0
AGLI 20	Horse Behavior and Training	2.0
AGLI 96	Animal Sanitation and Disease Control	3.0
AGLI 97	Artificial Insemination of Livestock	2.0
Required Electives		
Select six (6) Units from:		
AGOR 51	Tractor and Landscape Equipment Operations	3.0
AGOR 53	Small Engine Repair I	3.0
AGOR 71	Landscape Construction Fundamentals	3.0
BUSM 20	Principles of Business	3.0
BUSM 66	Small Business Management	3.0
WELD 40	Introduction to Welding	2.0
Total Units		32.0

Hospitality and Restaurant Management

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 wishing to transfer should consult with Hospitality Management Coordinator to discuss transfer options.

Required Courses:

HRM 51	Introduction to Hospitality	3.0
HRM 52	Food Safety and Sanitation	1.5
HRM 53	Dining Room Service Management	3.0
HRM 54	Basic Cooking Techniques	3.0
HRM 56	Hospitality Supervision	3.0

HRM 57	Hospitality Cost Control	3.0
HRM 64	Hospitality Financial Accounting	3.0
HRM 66	Hospitality Law	3.0
HRM 70	Introduction to Lodging	3.0
PLUS one of the following (3 Units):		
HRM 61	Menu Planning	3.0
HRM 62	Event Planning and Catering	3.0
<i>or</i>		
HRM 91	Hospitality Work Experience	1.0
<i>(This is a variable unit course. Three (3) Units are required)</i>		
Total Units		28.5

Human Resource Management

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.

Required Courses:

ANTH 22	General Cultural Anthropology	3.0
BUSA 70	Payroll and Tax Accounting	3.0
BUSL 19	Advanced Business Law	3.0
BUSM 20	Principles of Business	3.0
BUSM 60	Human Relations in Business	3.0
BUSM 61	Business Organization and Management	3.0
BUSM 62	Human Resource Management	3.0
BUSO 25	Business Communications	3.0
CISB 15	Microcomputer Applications	3.5
Total Units		27.5

Industrial Design Engineering

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.

Required Courses:

IDE 110	Design Foundation - Visual Literacy	3.0
IDE 120	Introduction to CAD	3.0
IDE 130	Shop Processes	3.0
IDE 150	Design Foundations	3.0
IDE 160	Intermediate CAD	3.0
IDE 170	Introduction to Prototyping	3.0
IDE 210	Advanced Media	3.0
IDE 220	Advanced CAD	3.0
IDE 230	Intro to Mechanical Principles	3.0
IDE 250	Product Design and Viability	6.0
IDE 270	Manufacturing Processes and Materials	3.0

Total Units 36.0

Recommended Electives:

ELEC 50A	Electronic Circuits - Direct Current (DC)	4.0
ELEC 81	Laboratory Studies in Electronics Technology	1.0 - 2.0
MATH 51	Elementary Algebra	4.0
PHYS 1	Physics 1	4.0
WELD 30	Metal Sculpture	2.0
WELD 40	Introduction to Welding	2.0

Integrated Pest Management

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 or advisor to review lower-division requirements of the college or university they plan to attend.

Required Courses:

AGOR 1	Horticultural Science	3.0
AGOR 24	Integrated Pest Management	3.0
AGOR 29	Ornamental Plants - Herbaceous	3.0
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0
AGOR 39	Turf Grass Production and Management	3.0
AGOR 50	Soil Science and Management	3.0
AGOR 62	Landscape Irrigation - Design and Installation	3.0
AGOR 63	Landscape Irrigation Systems Management	3.0
AGOR 91	Work Experience in Nursery Operations	3.0

Students must take at least 6 Units of any of the following:

BIOL 1	General Biology	4.0
BIOL 2	Plant and Animal Biology	4.0
BIOL 3	Ecology and Field Biology	4.0

BIOL 4	Biology for Majors	4.0
<i>or</i>		
BIOL 4H	Biology for Majors - Honors	4.0
BIOL 6	Humans and the Environment	3.0
BIOL 6L	Humans and the Environment Laboratory	2.0
BIOL 8	Cell and Molecular Biology	4.0
BIOL 20	Marine Biology	3.0
BIOL 21	Marine Biology Laboratory	1.0
BIOL 34	Fundamentals of Genetics	3.0
BIOL 50	Biology Basic Skills	0.5
BTNY 3	Plant Structures, Functions, and Diversity	5.0
CHEM 10	Chemistry for Allied Health Majors	5.0
CHEM 20	Introductory Organic and Biochemistry	5.0
CHEM 40	Introduction to General Chemistry	5.0
CHEM 50	General Chemistry I	5.0
<i>or</i>		
CHEM 50H	General Chemistry I - Honors	5.0
CHEM 51	General Chemistry II	5.0
CHEM 80	Organic Chemistry	5.0
CHEM 81	Organic Chemistry II	5.0
From the following list complete (9 Units)		
AGOR 2	Plant Propagation/Greenhouse Management	3.0
AGOR 15	Interior Landscaping	3.0
AGOR 32	Landscaping and Nursery Management	3.0
AGOR 40	Sports Turf Management	3.0
AGOR 75	Urban Arboriculture	3.0
Total Units		42.0

Interior Design

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.

Required Courses:

ID 10	Introduction to Interior Design	2.0
ID 10L	Introduction to Interior Design Laboratory	1.0

ID 12	Materials and Products for Interior Design	3.0
ID 14	History of Furniture and Decorative Arts	3.0
ID 20	Color and Design Theory I	3.0
ID 21	Color and Design Theory II	3.0
ID 22	Design Drawing for Interior Design	3.0
ID 23	Computer Aided Drawing for Interior Design I	3.0
ID 25	Space Planning for Interior Design I	3.0
ID 26	Space Planning for Interior Design II	3.0
ID 27	Rapid Visualization	3.0
ID 29	Interior Design Studio I	3.0
ID 31	Building Systems for Interior Design	3.0
ID 32	Lighting Design and Theory for Interior Design	3.0
ID 34	Computer Aided Drawing for Interior Design II	3.0
ID 36	Portfolio Development for Interior Design	3.0
<i>or</i>		
ID 37	Business Practices for Interior Design	3.0
ID 38	Internship in Interior Design	2.0
<i>(1.0 - 3.0 unit course, 2.0 Units required)</i>		
ID 39	Interior Design Studio II	3.0
Total Units		50.0

Recommended Electives:

AGOR 13	Landscape Design	3.0
AGOR 15	Interior Landscaping	3.0
ARCH 122	Architectural Presentations	3.0
ARTG 20	Art, Artists and Society	3.0
BUSA 72	Bookkeeping - Accounting	5.0
ID 50	Interior Design Specialized Studio	3.0
ID 52	Independent Studies in Interior Design	1.0

Interior Design - Kitchen and Bath

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.

Programs of Study Leading to an Associate Degree

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.

Required Courses:

ID 10	Introduction to Interior Design	2.0
ID 10L	Introduction to Interior Design Laboratory	1.0
ID 12	Materials and Products for Interior Design	3.0
ID 14	History of Furniture and Decorative Arts	3.0
ID 20	Color and Design Theory I	3.0
ID 21	Color and Design Theory II	3.0
ID 22	Design Drawing for Interior Design	3.0
ID 23	Computer Aided Drawing for Interior Design I	3.0
ID 25	Space Planning for Interior Design I	3.0
ID 26	Space Planning for Interior Design II	3.0
ID 27	Rapid Visualization	3.0
ID 29	Interior Design Studio I	3.0
ID 31	Building Systems for Interior Design	3.0
ID 32	Lighting Design and Theory for Interior Design	3.0
ID 34	Computer Aided Drawing for Interior Design II	3.0
ID 37	Business Practices for Interior Design	3.0
ID 38	Internship in Interior Design <i>(1.0 - 3.0 variable unit course, 2 Units required)</i>	1.0
ID 39	Interior Design Studio II	3.0
ID 40	Kitchen and Bath Studio I	3.0
ID 41	Kitchen and Bath Studio II	3.0
ID 48	Internship in Kitchen and Bath <i>(1.0 - 3.0 variable unit course, 3 Units required)</i>	1.0
Total Units		59.0

Recommended Electives:

ARCH 122	Architectural Presentations	3.0
BUSA 72	Bookkeeping - Accounting	5.0
BUSM 66	Small Business Management	3.0
BUSS 50	Retail Store Management	3.0

ID 50	and Merchandising Interior Design Specialized Studio	3.0
ID 52	Independent Studies in Interior Design	1.0

International Business

Business Division

Degree S0507

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:

BUSL 20	International Business Law	3.0
BUSM 20	Principles of Business	3.0
BUSM 50	World Culture: A Business Perspective	3.0
or		
ANTH 22	General Cultural Anthropology	3.0
BUSM 51	Principles of International Business	3.0
BUSM 52	Principles of Exporting and Importing	3.0
BUSM 61	Business Organization and Management	3.0
BUSM 66	Small Business Management	3.0
BUSS 36	Principles of Marketing	3.0

PLUS select one (1) course (4 Units)

CHIN 1	Elementary Chinese	4.0
FRCH 1	Elementary French	4.0
GERM 1	Elementary German	4.0
ITAL 1	Elementary Italian	4.0
JAPN 1	Elementary Japanese	4.0
SPAN 1	Elementary Spanish	4.0

Total Units 28.0

Recommended Electives:

BUSM 81	Work Experience in Business	1.0
BUSM 85	Special Issues in Business	2.0
BUSS 85	Special Issues in Marketing	2.0

Law Enforcement

Technology and Health Division

Degree S2102

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.

Required Courses:

ADJU 1	The Administration of Justice System	3.0
ADJU 2	Principles and Procedures of the Justice System	3.0
ADJU 3	Concepts of Criminal Law	3.0
ADJU 4	Legal Aspects of Evidence	3.0
ADJU 5	Community Relations	3.0
ADJU 68	Administration of Justice Report Writing	3.0

Required Electives

PLUS select four (4) courses from the following (12 Units)

ADJU 6	Concepts of Enforcement Services	3.0
ADJU 13	Concepts of Traffic Services	3.0
ADJU 20	Principles of Investigation	3.0
ADJU 38	Narcotics Investigation	3.0
ADJU 59	Gangs and Corrections	3.0
ADJU 74	Vice Control	3.0
CORS 10	Introduction to Correctional Sciences	3.0
SOC 1	Sociology	3.0

or

SOC 1H	Sociology - Honors	3.0
SOC 5	Introduction to Criminology	3.0

or

SOC 5H	Introduction to Criminology - Honors	3.0
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Total Units 30.0

Recommended Electives:

KINF 51	Agility Testing Preparation for Administration of Justice and Fire Technology	1.0
KINF 52	Fitness and Conditioning for Administration of Justice, Fire Technology, and Forestry	1.0

Licensed Vocational Nurse to RN

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.

Prerequisite Courses

- Human Anatomy, including a laboratory component, a minimum of four (4) semester units.
 - Human Physiology, including a laboratory component, a minimum of four (4) semester units.
 - Microbiology, including a laboratory component, a minimum of four (4) semester units.
 - English 1A (Writing Composition), minimum of three (3) semester units with a minimum grade of C.
 - PSYC 1A (Introduction to Psychology), minimum of three (3) semester units
 - CHLD 10 (Child Growth & Lifespan Development) or PSYC 14 (Developmental Psychology), minimum of three (3) semester units
- PSYC 1A must be completed prior to entrance into NURS 5: Psychiatric Nursing.
CHLD 10 or PSYC 14 must be completed prior to entrance into NURS 6: Pediatric Nursing.

Non-course requirements:

1. 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.
2. A cumulative grade point average (GPA) of 2.5 for all college coursework completed.
3. Eligibility for MATH 71 Intermediate Algebra (Preferably MATH 71 or a college level math course completed).
4. High school graduation or GED or academic degree from an accredited college/university in the United States.
5. Possess a current, active California Licensed Vocational Nurse license.
6. A physical examination, including specific immunizations is required of all candidates prior to the beginning of nursing classes.
7. Current Healthcare Provider CPR certification.
8. Criminal background check and drug screening must be completed prior to any patient contact.
9. 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).

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 or Advising Center to schedule an appointment.

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:

1. Once a student has completed all course prerequisites, they may request an appointment with a counselor or educational advisor.
2. Students who have completed coursework at other colleges must bring the following information to their eligibility appointment:
 - a. Official transcripts of all college work completed at all colleges.
 - b. If the prerequisite courses were completed at another college, a course description and a copy of the course syllabus.
 - c. 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).
 - d. Due to specific college deadlines for International Student application, please inform the Counseling/Educational Advisor that this applies to you.
 - e. 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.

Required Courses: (28.0 Units)

NURS 4	Maternity Nursing	3.0
NURS 5	Psychiatric Nursing	3.0
NURS 6	Pediatric Nursing	3.0
NURS 7	Medical-Surgical Nursing: Nutrition/Elimination/ Surgical Asepsis	7.0
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5.0
NURS 9	Leadership in Nursing	1.0
NURS 10	Medical-Surgical Nursing: Integration/Regulation	4.0
NURS 11	Preceptorship in Nursing	2.0
Requirements for the Major:		
ANAT 35	Human Anatomy	5.0
ANAT 36	Human Physiology	5.0
<i>or</i>		
ANAT 10A	Introductory Human Anatomy	4.0
ANAT 10B	Introductory Human Physiology	4.0
<i>and</i>		
MICR 1	Principles of Microbiology	5.0
<i>or</i>		
MICR 22	Microbiology	4.0
<i>and</i>		
ENGL 1A	Freshman Composition	4.0
<i>or</i>		
ENGL 1AH	Freshman Composition - Honors	4.0
<i>and</i>		
CHLD 10	Child Growth and Lifespan Development	3.0
<i>or</i>		
CHLD 10H	Child Growth and Lifespan Development - Honors	3.0

PROGRAMS OF STUDY LEADING TO AN ASSOCIATE DEGREE

Programs of Study Leading to an Associate Degree

	<i>or</i>		
PSYC 14	Developmental Psychology	3.0	
	<i>and</i>		
PSYC 1A	Introduction to Psychology	3.0	
	<i>or</i>		
PSYC 1AH	Introduction to Psychology - Honors	3.0	
	<i>and</i>		
SPCH 1A	Public Speaking	4.0	
	<i>or</i>		
SPCH 1AH	Public Speaking - Honors	4.0	
	<i>or</i>		
SPCH 2	Fundamentals of Communication	4.0	
	<i>or</i>		
SPCH 8	Professional and Organizational Speaking	4.0	
	<i>or</i>		
SPCH 8H	Professional and Organizational Speaking - Honors	4.0	
	Total Units		54.0 - 57.0

Livestock Management

**Natural Sciences Division
Degree S0103**

This program is designed to give students basic skills in livestock management for employment opportunities on farms, ranches, and agriculture sales and services.

Required Courses:

AGAG 1	Food Production, Land Use and Politics - A Global Perspective	3.0	
	<i>(Complete one (1) to four (4) Units of Work Experience AGAG 59)</i>		
AGAG 59	Work Experience in Agriculture	1.0	
AGAN 1	Animal Science	3.0	
AGAN 2	Animal Nutrition	3.0	
AGAN 94	Animal Breeding	3.0	
AGLI 14	Swine Production	3.0	
AGLI 17	Sheep Production	3.0	
AGLI 30	Beef Production	3.0	
AGLI 34	Livestock Judging and Selection	2.0	
AGLI 96	Animal Sanitation and Disease Control	3.0	
AGLI 97	Artificial Insemination of Livestock	2.0	

Required Electives

Select three (3) Units from each option: (6 Units)

Agricultural Mechanics/Production: select three (3) Units

AGOR 53	Small Engine Repair I	3.0
AGOR 51	Tractor and Landscape Equipment Operations	3.0
WELD 40	Introduction to Welding	2.0
AGLI 16	Horse Production and Management	4.0

and

Business Management: select three (3) Units

BUSM 20	Principles of Business	3.0
BUSM 66	Small Business Management	3.0
BUSS 35	Professional Selling	3.0
BUSS 36	Principles of Marketing	3.0

Total Units 35.0 - 38.0

Recommended Electives

AGAG 91	Agricultural Calculations	3.0
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Manufacturing Technology

Technology and Health Division

Degree S0918

This curriculum is designed to prepare the student for entrance into the manufacturing field in one of the machining occupations, such as machinist (manual, N/C, and CAD/CAM), or machinist apprentice. 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. Setup and tooling procedures and part certification upon completion of the metal removing process are covered. Instruction on all types of lathes, mills, grinders, and specialized equipment such as EDM and CNC is included. Supplementary instruction is also provided in bench work, layout, inspection process, blueprint reading, metal composition, heat treatment, assembly procedures, jig and fixture design, and construction.

Required Courses:

EDT 16	Basic CAD and Computer Applications	4.0
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EDT 18	Engineering CAD Applications	4.0
MFG 10	Mathematics & Blueprint Reading for Manufacturing	3.0
MFG 11	Manufacturing Processes I	2.0
MFG 12	Manufacturing Processes II	2.0
MFG 38	MasterCAM I	2.0
MFG 38B	MasterCAM II	2.0
MFG 85	Manual Computerized Numerical Control (CNC) Programming	2.0
WELD 40	Introduction to Welding	2.0
	Total Units	23.0

Marketing Management

Business Division

Degree S0510

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:

BUSA 7	Principles of Accounting - Financial	5.0
	<i>or</i>	
BUSA 72	Bookkeeping - Accounting	5.0
BUSM 20	Principles of Business	3.0
BUSM 61	Business Organization and Management	3.0
BUSO 25	Business Communications	3.0
BUSS 35	Professional Selling	3.0
BUSS 36	Principles of Marketing	3.0
BUSS 85	Special Issues in Marketing	2.0
CISB 15	Microcomputer Applications	3.5

PLUS select one (1) course from:

BUSC 1A	Principles of Economics - Macroeconomics	3.0
	<i>or</i>	
BUSC 1AH	Principles of Economics - Macroeconomics - Honors	3.0
BUSC 1B	Principles of Economics - Microeconomics	3.0
	<i>or</i>	
BUSC 1BH	Principles of Economics - Microeconomics - Honors	3.0

BUSC 17	Applied Business Statistics	3.0
BUSM 60	Human Relations in Business	3.0
BUSO 5	Business English	3.0
	Total Units	28.5

Mental Health Technology

- Psychiatric Technician

Technology and Health Division

Degree S1208

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.

Required Courses:

MENT 40	Introduction to Interviewing and Counseling	3.0
MENT 56	Medical-Surgical Nursing for Psychiatric Technicians	9.0
MENT 56L	Medical-Surgical Clinical Experience	4.0
MENT 58D	Advanced Medical-Surgical Nursing and Pharmacology for PT	4.0
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 Technicians	2.0
MENT 72	Nursing Care of the Developmentally Disabled Person	7.0
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	6.0
MENT 82	Work Experience in Mental Health Technology	2.0
PSYC 1A	Introduction to Psychology	3.0
	<i>or</i>	
PSYC 1AH	Introduction to Psychology - Honors	3.0
	Total Units	54.0

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.

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:

- a) 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.)
- b) Be 18 years of age.
- c) File a college application and be accepted as a student at Mt. San Antonio College.
- d) Submit an application for the Mental Health/ Psychiatric Technician Program to the Technology and Health Division Office (909) 274-7500, Ext. 4750. All applications are dated upon receipt in the Technology and Health Division Office. A program begins each fall and spring semester.
- e) Take the required English Placement Test (AWE). Eligibility for ENGL 68 is advised. If you have already taken a college placement exam within the past two years at another school, arrange to have your test scores forwarded to the Technology and Health Division Office. (If you were tested at Mt. San Antonio College, the office will obtain the test scores as long as an “Application for Admission” is on file with the Admissions and Records Office.) Testing is administered by the Assessment Center, located in the Student Services Center. Arrangements should be made with them to schedule a day and time to take the English Placement Test, if required. The Assessment Center is open Monday through Friday. You may contact them at (909) 274-7500, Ext. 4265.

- f) Forward two official transcripts of all coursework completed (high school, nursing school, and other than Mt. San Antonio college courses.) One transcript must be sent to the Technology and Health Division Office and the other to the Admissions and Records Office.
- g) For students who possess a college degree, the English Placement Test is not required. However, it will be necessary for a student to obtain two official copies of the college transcript showing the degree issued. One transcript must be sent to the Technology and Health Division Office and the other to the Admissions and Records Office. NOTE: Concerning Entrance Requirements ‘e’ and ‘f’, if the courses were taken and/or the degree obtained at Mt. San Antonio College, it is not necessary to request transcripts. Indicate in the mailing address the program for which your transcript is being sent to the Technology and Health Division Office. EXAMPLE: Mt. San Antonio College Technology and Health Division Psychiatric Technician Program 1100 North Grand Avenue Walnut, CA 91789-1399
- h) A physical examination, including specific immunizations, 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 and malpractice insurance are required of all candidates upon acceptance.
- i) Certain convictions may prevent a candidate from being licensed as a Psychiatric Technician.

- j) All students will be required to pass a background check prior to entering the clinical education phase.

Selection Procedure:

In determining eligibility of an applicant, consideration will be given to satisfactory scores on the English Placement Test. The College will make every effort to notify the applicant of acceptance by mail no less than two months prior to the beginning of a program. ALL APPLICANTS ARE REQUIRED TO MEET THE 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 for extremely heaving 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 device)
- 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 a 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
- Exposure to products containing latex

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 complete classes successfully and to ensure patient safety.

Nursing

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.

Prerequisite courses:

1. Human Anatomy, including a laboratory component, a minimum of four (4) semester units.
2. Human Physiology, including a laboratory component, a minimum of four (4) semester units.
3. Microbiology, including a laboratory component, a minimum of four (4) semester units.
4. English 1A (Writing Composition) minimum of three (3) semester units with a minimum grade of C.

PROGRAMS OF STUDY LEADING TO AN ASSOCIATE DEGREE

Programs of Study Leading to an Associate Degree

Non-course requirements:

1. An overall grade point average of 2.5 for the Human Anatomy, Human Physiology and Microbiology prerequisite courses with no gradeless than a "C" for each course and no more than one repetition of any one of these courses.
2. A cumulative grade point average (GPA) of 2.5 for all college coursework completed.
3. Eligibility for MATH 71 Intermediate Algebra (Preferably MATH 71 or a college level math course completed).
4. High school graduation or GED or academic degree from an accredited college/university in the United States.
5. A physical examination, including specific immunizations is required of all candidates prior to the beginning of nursing classes.
6. Current Healthcare Provider CPR certification.
7. 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 and TITLE (UNITS)

ANAT 35	Human Anatomy	5.0
ANAT 10A	Introductory Human Anatomy	4.0
ANAT 36	Human Physiology	5.0
ANAT 10B	Introductory Human Physiology	4.0
MICR 1	Principles of Microbiology	5.0
MICR 22	Microbiology	4.0
ENGL 1A	Freshman Composition	4.0
<i>or</i>		
ENGL 1AH	Freshman Composition - Honors	4.0

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 and TITLE (UNITS)

PSYC 14	Developmental Psychology	3.0
<i>or</i>		

CHLD 10	Child Growth and Lifespan Development	3.0
<i>or</i>		
CHLD 10H	Child Growth and Lifespan Development - Honors (Must be completed before NURS 6: Pediatric Nursing)	3.0
PSYC 1A	Introduction to Psychology	3.0
<i>or</i>		
PSYC 1AH	Introduction to Psychology - Honors (Must be completed before NURS 5: Psychiatric Nursing)	3.0
SPCH 1A	Public Speaking	4.0
<i>or</i>		
SPCH 1AH	Public Speaking - Honors	4.0
<i>or</i>		
SPCH 2	Fundamentals of Communication	4.0
<i>or</i>		
SPCH 8	Professional and Organizational Speaking	4.0
<i>or</i>		
SPCH 8H	Professional and Organizational Speaking-Honors	4.0

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 and TITLE (UNITS)

- HISTORY OR POLITICAL SCIENCE * (3.0)
- ARTS * – ONE COURSE FROM ARTS AREA (3.0)
- HUMANITIES * – ONE COURSE FROM HUMANITIES AREA (3.0)
- Physical Well-being Requirement Complete at least one of the physical education activity courses with the following prefixes: DNCE, KINA, KINF, KINI, KINL, KINS, or KINX (0.5 or 1.0)
- Completion of Intermediate Algebra (MATH 71, 71X, or 71B)(Up to 5.0)
- Reading competency *

*See Mt. SAC Catalog for applicable courses

REQUIREMENTS FOR NURSING

- Semester 1**
Nursing 1A The Nursing Process I, 5.0 units CSU

- Nursing 1B The Nursing Process II, 5.0 units CSU
Nursing 2 Pharmacology, 2.0 units CSU

Semester 2

- Nursing 3 Medical-Surgical Nursing: Locomotion/Sensation/ Integument/ Oncology/Immunology, 3.5 units CSU
Nursing 4 Maternity Nursing, 3.0 units CSU
Nursing 6 Pediatric Nursing, 3.0 units CSU

Semester 3

- Nursing 7 Medical-Surgical Nursing: Nutrition/ Elimination/ Surgical Asepsis, 7.0 units CSU
Nursing 5 Psychiatric/Mental Health Nursing, 3.0 units CSU

Semester 4

- Nursing 8 Medical-Surgical Nursing: Circulation and Oxygenation, 5.0 units CSU
Nursing 9 Leadership, 1.0 unit CSU
Nursing 10 Medical-Surgical Nursing: Integration/ Regulation, 4.0 units CSU
Nursing 11 Preceptorship In Nursing, 2.0 units CSU

Total Units 43.5 units

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 Nursing Educational Advisor Kathleen Clarke (kclarke@mtsac.edu).

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:
1. An accredited high school in the United States by transcripts or diploma or;
 2. Documentation of a passing score on the General Education Development (GED) exam or;

3. Associate degree, or Baccalaureate degree from an accredited institution of higher education in the United States or;

4. Official evaluation of international diploma/degree

OTHER PROGRAM REQUIREMENTS

1. Meet the minimum physical and mental qualifications to perform essential nursing functions (see Essential Functions).
2. Criminal background check and drug screening must be completed prior to any patient contact.
3. A physical examination, including specific immunization is required of all candidates prior to the beginning of nursing classes.
4. 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.

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.

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.

1. Get a Mt. SAC ID number (if you don't already have one.) To do this, go to <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.

Required Courses

Required Nursing Courses: (43.5 units)

NURS 1A	The Nursing Process I	5.0
NURS 1B	The Nursing Process II	5.0
NURS 2	Pharmacology	2.0
NURS 3	Medical-Surgical Nursing: Locomotion/Sensory/Integ/Oncology/Immu	3.5
NURS 4	Maternity Nursing	3.0
NURS 5	Psychiatric Nursing	3.0
NURS 6	Pediatric Nursing	3.0
NURS 7	Medical-Surgical Nursing: Nutrition/Elimination/ Surgical Asepsis	7.0
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5.0
NURS 9	Leadership in Nursing	1.0
NURS 10	Medical-Surgical Nursing: Integration/Regulation	4.0
NURS 11	Preceptorship in Nursing	2.0
Required Prerequisite Courses for the Major:		
ANAT 35	Human Anatomy	5.0
ANAT 36	Human Physiology	5.0
or		
ANAT 10B	Introductory Human Physiology	4.0
ANAT 10A	Introductory Human Anatomy	4.0
and		
MICR 1	Principles of Microbiology	5.0
or		
MICR 22	Microbiology	4.0
and		
ENGL 1A	Freshman Composition	4.0
or		
ENGL 1AH	Freshman Composition - Honors	4.0
Other General Education Requirements		
CHLD 10	Child Growth and Lifespan Development	3.0
or		
CHLD 10H	Child Growth and Lifespan Development - Honors	3.0
or		
PSYC 14	Developmental Psychology	3.0
and		
PSYC 1A	Introduction to Psychology	3.0

or	
PSYC 1AH	Introduction to Psychology - Honors 3.0
and	
SPCH 1A	Public Speaking 4.0
or	
SPCH 1AH	Public Speaking - Honors 4.0
or	
SPCH 2	Fundamentals of Communication 4.0
or	
SPCH 8	Professional and Organizational Speaking 4.0
or	
SPCH 8H	Professional and Organizational Speaking - Honors 4.0
Total Units 69.5 -72.5	

Additional Notations

PSYC 1A must be completed prior to entrance into NURS 5: Psychiatric Nursing. CHLD 10 or PSYC 14 must be completed prior to entrance into NURS 6: Pediatric Nursing.
 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.
 Requirements for the Associate degree
 Students must develop an education plan with a counselor or educational adviser to complete college academic requirements for the A.S. degree. Contact Counseling and Advising Services to schedule an appointment.
 Questions regarding equivalent course work from other colleges should be addressed with Counseling and Advising Services.

Ornamental Horticulture

Natural Sciences Division Degree S0119

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

Programs of Study Leading to an Associate Degree

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 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 www.mtsac.edu/instruction/sciences/agriculture

Required Courses:

AGAG 1	Food Production, Land Use and Politics - A Global Perspective	3.0
AGOR 1	Horticultural Science	3.0
AGOR 2	Plant Propagation/ Greenhouse Management	3.0
AGOR 13	Landscape Design	3.0
AGOR 24	Integrated Pest Management	3.0
AGOR 29	Ornamental Plants - Herbaceous	3.0
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0
AGOR 32	Landscaping and Nursery Management	3.0
AGOR 39	Turf Grass Production and Management	3.0
AGOR 50	Soil Science and Management	3.0
AGOR 62	Landscape Irrigation - Design and Installation	3.0
AGOR 71	Landscape Construction Fundamentals	3.0
PLUS complete one (1) to four (4) Units from the following course:		
AGOR 91	Work Experience in Nursery Operations	1.0
PLUS select six (6) Units from:		
AGOR 15	Interior Landscaping	3.0
AGOR 35	Ornamental Plants for Southwest Climates	3.0

AGOR 40	Sports Turf Management	3.0
AGOR 51	Tractor and Landscape Equipment Operations	3.0
AGOR 53	Small Engine Repair I	3.0
AGOR 63	Landscape Irrigation Systems Management	3.0
AGOR 72	Landscape Hardscape Applications	3.0
AGOR 75	Urban Arboriculture	3.0
CISB 15	Microcomputer Applications	3.5
Total Units		43.0 - 46.0

Paralegal/Legal Assistant

**Business Division
Degree S0310**

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.

Required Courses:

PLGL 30	Introduction to Paralegal/Legal	3.0
PLGL 31A	Legal Analysis and Writing	3.0
PLGL 31B	Advanced Legal Analysis and Writing	3.0
PLGL 33A	Civil Procedure I	3.0
PLGL 33B	Civil Procedure II	3.0
PLGL 35A	Law Office Procedures	3.0
PLGL 35B	Automated Law Office Procedures	3.0
PLGL 37	Tort Law	3.0
PLGL 38	Employment and Ethical Issues in Paralegalism	2.0
PLGL 39	Contract Law	3.0
PLUS choose two (2) courses from:		
PLGL 40	Landlord-Tenant Law	3.0

PLGL 41	Property Law	3.0
PLGL 42	Family Law	3.0
PLGL 43	Wills and Trusts	3.0
PLGL 44	Bankruptcy Law	3.0
PLGL 45	Creditors' Rights	3.0
PLGL 48	Criminal Law and Procedures	3.0
PLGL 49	Evidence Law	3.0
PLGL 50	Comparative Law	3.0
BUSL 18	Business Law	3.0
or		
BUSL 18H	Business Law - Honors	3.0
BUSL 19	Advanced Business Law	3.0
BUSL 20	International Business Law	3.0
Total Units		35.0

Park and Sports Turf Management

**Natural Sciences Division
Degree S0116**

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 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.

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 hard scape), and properly identify and maintain trees, shrubs and turf grasses. In addition, students will learn about personnel management, budgeting and other management topics.

Required Courses:

AGOR 4	Park Management	3.0
AGOR 5	Park Facilities	3.0

AGOR 13	Landscape Design	3.0
AGOR 24	Integrated Pest Management	3.0
AGOR 29	Ornamental Plants - Herbaceous	3.0
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0
AGOR 39	Turf Grass Production and Management	3.0
AGOR 40	Sports Turf Management	3.0
AGOR 50	Soil Science and Management	3.0
AGOR 51	Tractor and Landscape Equipment Operations	3.0
AGOR 62	Landscape Irrigation - Design and Installation	3.0
AGOR 63	Landscape Irrigation Systems Management	3.0
AGOR 71	Landscape Construction Fundamentals	3.0
AGOR 73	Landscaping Laws, Contracting, and Estimating	3.0
AGOR 75	Urban Arboriculture	3.0
Complete one (1) to four (4) Units from the following course		
AGOR 91	Work Experience in Nursery Operations	1.0
Total Units		46.0 - 49.0

Pet Science

**Natural Sciences Division
Degree S0104**

The program of courses in Agriculture is designed to enable students to prepare for a career in this essential and diverse profession. The Department offers a comprehensive Agricultural Sciences Program and is unique in that most courses provide hands-on experience designed to give the student a combination of practical skills and technical knowledge.

The following programs list all courses needed to satisfy major requirements. Students may obtain certificates upon completion of required courses listed. It is recommended that all students consult with the department chairperson, counselor or advisor to file an educational plan.

These programs are intended to prepare students for employment following graduation. Students desiring a bachelor's degree should consult with the department chairperson, counselor or advisor to discuss transferabil-

ity of courses. The curriculum is flexible in nature to allow for previous experience and specialization in a given area of agriculture and agricultural business.

Required Courses:

AGAN 1	Animal Science	3.0
AGAN 2	Animal Nutrition	3.0
AGAN 51	Animal Handling and Restraint	3.0
AGAN 94	Animal Breeding	3.0
AGLI 96	Animal Sanitation and Disease Control	3.0
AGPE 70	Pet Shop Management	3.0
AGPE 71	Canine Management	3.0
AGPE 72	Feline Management	3.0
AGPE 73	Tropical and Coldwater Fish Management	2.0
AGPE 74	Reptile Management	2.0
AGPE 76	Aviculture - Cage and Aviary Birds	3.0
Total Units		31.0

Photography

Arts Division

Degree S1002

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. Students desiring a bachelor's degree should consult with a counselor/advisor or catalog of the institution they wish to attend regarding transferability of courses.

Required Courses:

PHOT 1A	Laboratory Studies: Beginning Black and White Photography	1.0
or		
PHOT 1B	Laboratory Studies: Advanced Black and White Photography	1.0
or		
PHOT 1C	Laboratory Studies: Studio Photography	1.0
or		
PHOT 1D	Laboratory Studies: Computer Applications in Photography	1.0
and		
PHOT 9	Digital Image Editing for Photographers	3.0

or		
ARTC 100	Graphic Design I	3.0
PHOT 10	Basic Digital and Film Photography	3.0
PHOT 11	Intermediate Photography	4.0
PHOT 14	Commercial Lighting	3.0
PHOT 15	History of Photography	3.0
PHOT 16	Fashion Photography	3.0
or		
PHOT 18	Portraiture and Wedding Photography	3.0
or		
PHOT 12	Photographic Alternatives	3.0
PHOT 20	Color Photography	3.0
PHOT 19	Digital Color Management	3.0
or		
PHOT 24	Advanced Digital Image Editing for Photographers	3.0
PHOT 28	Photography Portfolio Development	3.0
or		
ARTC 290	Portfolio	3.0
PHOT 29	Studio Business Practices for Commercial Artists	3.0
PHOT 30	Advertising Photography	3.0
PHOT 17	Photocommunication	3.0
or		
PHOT 26	Video for Photographers	3.0
Total Units		38.0

Recommended Electives:

AHIS 1	Understanding the Visual Arts	3.0
or		
ARTB 1	Understanding the Visual Arts	3.0

Physical Education

Kinesiology, Athletics and Dance Division Degree S0806

This program is designed to prepare students for employment in the field of Physical Education. Students wishing a bachelor's degree (transfer program) should consult with a counselor or advisor to file an educational plan and to discuss transferability.

Required Courses:

ANAT 35	Human Anatomy	5.0
ANAT 36	Human Physiology	5.0

NF 10	Nutrition for Personal Health and Wellness	3.0
or		
NF 25	Essentials of Nutrition	3.0
or		
NF 25H	Essentials of Nutrition - Honors	3.0
KIN 3	First Aid and CPR	3.0
or		
KIN 5	Advanced First Aid/CPR/ Emergency Response	3.0
or		
KIN 17	Introduction to Kinesiology	3.0
KIN 19	Introduction to Care/Prevention of Activity/Sports -Related Injuries	3.0
KIN 34	Fitness for Living	3.0
PLUS: Select eight (8) courses from:		
DNCE	Dance Activity	0.5 - 2.0
KINA	Kinesiology: Aquatics	0.5 - 2.0
KINF	Kinesiology: Fitness	0.5 - 2.5
KINI	Kinesiology: Individual	0.5 - 1.0
KINL	Kinesiology: Adaptive	0.5 - 1.0
KINS	Kinesiology: Sports	0.5 - 1.0
Total Units		26.0 - 42.0

Psychiatric Technician to RN

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.

Prerequisite Courses:

1. Human Anatomy, including a laboratory component, a minimum of four (4) semester units.

2. Human Physiology, including a laboratory component, a minimum of four (4) semester units.
 3. Microbiology, including a laboratory component, a minimum of four (4) semester units.
 4. English 1A (Writing Composition) minimum of three (3) semester units with a minimum grade of C.
 5. PSYC 1A (Introduction to Psychology), minimum of three (3) semester units
 6. CHLD 10 (Child Growth & Lifespan Development) or PSYC 14 (Developmental Psychology), minimum of three (3) semester units
- CHLD 10 or PSYC 14 must be completed prior to entrance into NURS 6: Pediatric Nursing.

Non-course requirements:

1. 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.
2. A cumulative grade point average (GPA) of 2.5 for all college coursework completed.
3. Eligibility for MATH 71 Intermediate Algebra (Preferably MATH 71 or a college level math course completed).
4. High school graduation or GED or academic degree from an accredited college/university in the United States.
5. Possess a current, active California Psychiatric Technician License.
6. Criminal background check and drug screening must be completed prior to any patient contact.
7. A physical examination, including specific immunizations is required of all candidates prior to the beginning of nursing classes.
8. Current Healthcare Provider CPR certification
9. 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

PROGRAMS OF STUDY LEADING TO AN ASSOCIATE DEGREE

Programs of Study Leading to an Associate Degree

provide proof of current Psychiatric Technician License, physical, CPR card, Background Check, and drug testing prior to the start of class.)

Required Courses:

Requirements for Nursing: (28.5 Units)

Semester 1

Nursing 3 Medical-Surgical Nursing: Locomotion/Sensation/Integument/Oncology/Immunology, 3.5 units CSU

Nursing 4 Maternity Nursing, 3.0 units CSU

Nursing 6 Pediatric Nursing, 3.0 units CSU

Semester 2

Nursing 7 Medical-Surgical Nursing: Nutrition/ Elimination/Surgical Asepsis, 7.0 units CSU

Semester 3

Nursing 8 Medical-Surgical Nursing: Circulation and Oxygenation, 5.0 units CSU

Nursing 9 Leadership, 1.0 unit CSU

Nursing 10 Medical-Surgical Nursing: Integration/ Regulation, 4.0 units CSU

Nursing 11 Preceptorship in Nursing, 2.0 units CSU

Total Units 28.5 units

REQUIREMENT FOR THE MAJOR (or Equivalent)

ANAT 35 Human Anatomy, 5.0 CSU, UC and

ANAT 36 Human Physiology, 5.0 CSU, UC or

ANAT 10A Introductory Human Anatomy, 4.0 CSU, UC and

ANAT 10B Introductory Human Physiology, 4.0 CSU, UC

MICR 1 Principles of Microbiology, 5.0 CSU, UC or

MICR 22 Microbiology, 4.0 CSU, UC

ENGL 1A Freshman Composition, 3.0 CSU, UC

CHLD 10 Child Growth and Development, 3.0 CSU, UC or

PSYC 14 Developmental Psychology, 3.0 CSU, UC

PSYC 1A Introduction to Psychology 3.0 CSU, UC

SPCH 1A Public Speaking, 4.0 CSU, UC or

SPCH 2 Fundamental of Communication, 4.0 CSU, UC or

SPCH 8 Professional and Organizational Speaking, 4.0 CSU, UC

Total Units 24.0 - 27.0

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.

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:

1. Once a student has completed all course prerequisites, they may request an appointment with a counselor or educational advisor.
2. Students who have completed coursework at other colleges must bring the following information to their eligibility appointment:
 - a. Official transcripts of all college work completed at all colleges.
 - b. If the prerequisite courses were completed at another college, a course description and a copy of the course syllabus.
 - c. 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).
 - d. Due to specific college deadlines for International Student application, please inform the Counseling/Educational Advisor that this applies to you.
 - e. 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.

Required Courses

Requirements for Nursing: (28.5 units)

NURS 3	Medical-Surgical Nursing: Locomotion/Sensory/Integ/Oncology/Immu	3.5
NURS 4	Maternity Nursing	3.0
NURS 6	Pediatric Nursing	3.0
NURS 7	Medical-Surgical Nursing: Nutrition/Elimination/ Surgical Asepsis	7.0
NURS 8	Medical-Surgical Nursing: Circulation and Oxygenation	5.0
NURS 9	Leadership in Nursing	1.0
NURS 10	Medical-Surgical Nursing: Integration/Regulation	4.0
NURS 11	Preceptorship in Nursing	2.0
	and	
	Requirements for the Major:	
ANAT 35	Human Anatomy	5.0
ANAT 36	Human Physiology	5.0
	or	
ANAT 10A	Introductory Human Anatomy	4.0
ANAT 10B	Introductory Human Physiology	4.0
	and	
MICR 1	Principles of Microbiology	5.0
	or	
MICR 22	Microbiology	4.0
	and	
ENGL 1A	Freshman Composition	4.0
	or	
ENGL 1AH	Freshman Composition - Honors	4.0
	and	
CHLD 10	Child Growth and Lifespan Development	3.0

CHLD 10H	Child Growth and Lifespan Development - Honors	3.0	R-TV 15	Broadcast Law and Business Practices	3.0
	<i>or</i>		R-TV 96A	Campus Radio Station Lab: Studio Procedures and Equipment Operations	1.0
PSYC 14	Developmental Psychology	3.0	R-TV 96B	Campus Radio Station Lab: Disc Jockey & News Anchor/Reporter Skills	1.0
	<i>and</i>		R-TV 96C	Campus Radio Station Lab: Hosting and Management Skills	1.0
PSYC 1A	Introduction to Psychology	3.0	R-TV 97A	Radio/Entertainment Industry Seminar	1.0
PSYC 1AH	Introduction to Psychology - Honors	3.0	R-TV 97B	Radio/Entertainment Industry Work Experience	1.0
	<i>and</i>		Plus 6 Units from the Following Courses: 6 Units:		
SPCH 1A	Public Speaking	4.0	R-TV 05	Radio-TV Newswriting	3.0
	<i>or</i>		R-TV 06	Broadcast Traffic Reporting	1.5
SPCH 1AH	Public Speaking - Honors	4.0	R-TV 17	Internet Radio and Podcasting	3.0
	<i>or</i>		R-TV 31	History of Radio DJs	3.0
SPCH 2	Fundamentals of Communication	4.0	R-TV 32	Radio - TV Internet Applications	3.0
	<i>or</i>		R-TV 35	Pop Culture in the Media	3.0
SPCH 8	Professional and Organizational Speaking	4.0	R-TV 99	Radio/TV Special Projects	2.0
	<i>or</i>		R-TV 101	Work Experience in Broadcast Entertainment	1.0
SPCH 8H	Professional and Organizational Speaking - Honors	4.0		Total Units	29.0
	Total Units	54.5 - 57.5			

Radio Broadcasting: Behind the Scenes

Arts Division

Degree S0606

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.

Required Courses:

R-TV 01	Introduction to Electronic Media	3.0
R-TV 09	Broadcast Sales and Promotion	3.0
R-TV 10	Radio Programming and Producer Techniques	3.0
R-TV 11A	Beginning Radio Production	3.0
R-TV 11B	Advanced Radio Production	3.0

Radio Broadcasting: On the Air

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.

Required Courses:

R-TV 01	Introduction to Electronic Media	3.0
R-TV 02	On-Air Personality Development	3.0
R-TV 05	Radio-TV Newswriting	3.0
R-TV 07A	Beginning Commercial Voice-Overs	3.0
R-TV 11A	Beginning Radio Production	3.0
R-TV 15	Broadcast Law and Business Practices	3.0
R-TV 17	Internet Radio and Podcasting	3.0
R-TV 96A	Campus Radio Station Lab: Studio Procedures and Equipment Operations	1.0
R-TV 96B	Campus Radio Station Lab: Disc Jockey & News Anchor/Reporter Skills	1.0

R-TV 96C	Campus Radio Station Lab: Hosting and Management Skills	1.0
R-TV 97A	Radio/Entertainment Industry Seminar	1.0
R-TV 97B	Radio/Entertainment Industry Work Experience	1.0
Plus 6 Units from the following courses (6 Units)		
R-TV 03	Sportscasting and Reporting	1.5
R-TV 04	Broadcast News Field Reporting	3.0
R-TV 06	Broadcast Traffic Reporting	1.5
R-TV 09	Broadcast Sales and Promotion	3.0
R-TV 10	Radio Programming and Producer Techniques	3.0
R-TV 11B	Advanced Radio Production	3.0
R-TV 31	History of Radio DJs	3.0
R-TV 32	Radio-TV Internet Applications	3.0
R-TV 35	Pop Culture in the Media	3.0
R-TV 99	Radio/TV Special Projects	2.0
R-TV 101	Work Experience in Broadcast Entertainment	1.0
	Total Units	32.0

Radiologic Technology

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.

To remain in the program, students must maintain a grade of "C" or better in all courses.

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 Technologist 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.

Required Courses:

RAD 1A	Clinical Experience 1A	5.0
RAD 1B	Clinical Experience 1B	3.0
RAD 2A	Clinical Experience 2A	5.0
RAD 2B	Clinical Experience 2B	3.0
RAD 3A	Clinical Experience 3A	7.5
RAD 3B	Clinical Experience 3B	3.0
RAD 3C	Clinical Experience 3C	7.5
RAD 4	Clinical Experience IV	4.5
RAD 30	Radiographic Pathology	1.5
RAD 31	Fluoroscopy and Radiobiology	5.0
RAD 32	Digital Imaging in Radiology	2.0
RAD 50	Introduction to Radiologic Science and Health Care	3.0
RAD 61A	Theory of Radiologic Technology	4.0
RAD 61B	Radiographic Procedures I	3.0
RAD 61C	Radiographic Procedures I Laboratory	1.5
RAD 62A	Theory of Radiologic Technology	4.0
RAD 62B	Radiographic Procedures II	3.0
RAD 62C	Radiographic Procedures II Laboratory	1.5
RAD 63	Theory of Radiologic Technology	4.0
RAD 64	Theory of Radiologic Technology	4.0
RAD 91	Patient Care in Radiologic Sciences	3.0
	Total Units	78.0

Additional Notations

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:

- a) File a college application and be accepted as a student at Mt. San Antonio College.
- b) Take the college placement examination which is used as an indicator. If you have already taken a college placement test exam within the past two years at another school, arrange to have your scores forwarded to the Technology and Health Division Office. (If you were tested at Mt. San Antonio College, the Technology and Health Division Office will obtain the test scores as long as an "Application for Admission" is on file with the Admission and Records Office.) Arrangement

should be made with the Service Center to Schedule a date and time to take the college placement examination if required. The Assessment Center is open Monday through Friday. You may contact them at (909) 274-7500 ext. 4265. For students who possess a college degree, the English placement test is not required, however, it will be necessary for a student to obtain two official copies of the college transcript showing the degree issued. One official transcript must be sent to Technology and Health Division Office and the other to Admission and Records. If the courses were taken and /or the degree obtained at Mt. San Antonio College, it is not necessary to request transcripts. Request the transcript for the Division Office be addressed as follows:
Mt. San Antonio College
Technology and Health Division
Radiologic Technology Program
1100 North Grand Avenue
Walnut CA 91789-1299

- c) Forward two official transcripts of all coursework completed (high school, and other than Mt. San Antonio College courses). One transcript must be sent to Technology and Health Division Office and the other to Admission and Records.
- d) Submit an application for the Radiologic Technology Program to the Technology and Health Division Office (909) 274-7500 ext. 4750. All applications are dated upon receipt in the Technology and Health Division Office. A program begins each summer intersession.
- e) Applicant must be 18 years of age upon entrance into the program.
- f) High school graduate or equivalent. Please provide copy of diploma as proof of high school completion.
- g) 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.
- h) Complete all AS degree General Education requirements to include program prerequisites

listed below (i) before admission to the program. Students are required to make an appointment with an educational advisor to review general education requirements for graduation.

- i) Complete the following prerequisite courses with a minimum grade of "C" in each course. Students must complete prerequisite courses before admission to the program. Students may seek variances for courses completed at other institutions. Course must be an equivalent course or higher to the courses listed below and transcripts/course outlines must be reviewed by the Department Chair of the appropriate department to seek approval.
 1. ANAT 10A Introductory Human Anatomy or ANAT 35 Human Anatomy
 2. ANAT 10B Introductory Human Physiology or ANAT 36 Human Physiology
 3. PHYS 1 Physics
 4. MEDI 90 Medical Terminology

Acceptance Requirements:

- a) A mandatory orientation meeting with the Radiologic Technology Department will be held during the spring semester. You will be contacted with date and time of orientation once you have been accepted.
- b) A physical examination, including certain immunization and drug testing is required as part of the physical examination for all radiologic technology students before entrance into the clinical setting. Forms and information will be provided at time of orientation.
- c) All students will be required to pass a criminal background check prior to entering the clinical education phase (a valid Social Security number is required to complete this process.)

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 the acceptance by mail no less than one month prior to beginning of a program.

Program Completion Requirements:

- a) All students entering the Radiologic

Technology Program MUST complete all the major course requirements and the general education requirements necessary to complete the Associate degree before a certificate documenting completion in Radiologic Technology will be given. 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.

- b) In addition to the major requirements and general education, students must also complete a course in venipuncture for radiographers. This course is offered through Continuing Education but may be taken elsewhere with prior approval from the department.
- c) A course in mammography is also offered in the final semester for graduate students and licensed radiographers. This course is optional.

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
- 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:

In order to ensure student and patient safety and welfare, the radiologic technology student must have sufficient strength, motor coordination, manual dexterity, intellectual capacity, and sensory functions to be able to:

- 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. Students for which English is a second language may be required to complete a verbal communication assessment prior to entering the program.
- 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.

Real Estate

Business Division

Degree S0512

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.

Required Courses:

BUSR 50	Real Estate Principles	3.0
BUSR 51	Legal Aspects of Real Estate	3.0
BUSR 52	Real Estate Practice	3.0

or

BUSR 52D	Real Estate Practice Work Experience	3.0
BUSR 53	Real Estate Finance	3.0
BUSR 55	Real Estate Economics	3.0
BUSR 81	Appraisal: Principles and Procedures	3.5
CISB 15	Microcomputer Applications	3.5

PLUS Group A Select two (2), three (3) or four (4) courses from:

BUSR 57	Income Tax Aspects of Real Estate Investments	3.0
BUSR 59	Real Estate Property Management	3.0
BUSR 60	Real Estate Investment Planning	3.0
BUSR 62	Mortgage Loan Brokering and Lending	3.0
BUSR 76	Escrow Procedures I	3.0

PLUS Group B Select zero (0), one (1) or two (2) courses from:

BUSA 7	Principles of Accounting - Financial	5.0
BUSA 11	Fundamentals of Accounting	3.0
BUSA 72	Bookkeeping - Accounting	5.0
BUSL 18	Business Law	3.0

or

BUSL 18H	Business Law – Honors	3.0
BUSM 20	Principles of Business	3.0
BUMS 60	Human Relations in Business	3.0
BUMS 66	Small Business Management	3.0
BUSO 5	Business English	3.0
BUSO 25	Business Communications	3.0

BUSO 26	Oral Communications for Business	3.0
BUSS 35	Professional Selling	3.0
BUSS 36	Principles of Marketing	3.0
PSYC 1A	Introduction to Psychology	3.0
<i>or</i>		
PSYC 1AH	Introduction to Psychology - Honors	3.0
Total Units		28.0 - 44.0

Registered Veterinary Technology

Natural Sciences Division

Degree S0105

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 department offers a comprehensive agricultural sciences program and 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 check the lower division requirements in the catalog of the college or university which they plan to attend and also the semester and year in which courses are offered.

These programs are intended to prepare students for employment following graduation. Students desiring a bachelor's degree (transfer program) should consult with the Program Director, counselor or advisor to discuss transferability of courses.

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 vivariums, animal shelters, and other animal care agencies. Students who satisfactorily complete the requirements of this program are eligible to take the appropriate licensing exam to become a Registered Veterinary Technician.

Students wishing to be admitted into the second-year courses will need to meet with the Program Director one semester prior to fill out application and to make sure all program requirements have been met.

Required Courses:

Required courses 1st year: (25 Units)

AGAN 1	Animal Science	3.0
AGAN 2	Animal Nutrition	3.0

AGAN 51	Animal Handling and Restraint	3.0
AGHE 54	Veterinary Office Procedures	3.0
AGHE 64	Veterinary Pharmacology	3.0
AGHE 79	Laboratory Animal Medicine and Care	3.0
AGHE 86	Anatomy and Physiology of Domestic Animals	4.0
AGLI 96	Animal Sanitation and Disease Control	3.0

Required courses 2nd year: (20 Units)

AGHE 60	Medical Nursing and Animal Care	4.0
AGHE 61	Surgical Nursing	4.0
AGHE 62A	Clinical Pathology	4.0
AGHE 62B	Clinical Pathology	4.0
AGHE 65	Veterinary Radiography	2.0
AGHE 84B	Applied Animal Health Procedures	1.0
AGHE 85	Seminar in Registered Veterinary Technology <i>(Complete four (4) Units of work experience-AGHE 83A)</i>	1.0
AGHE 83A	Work Experience in Animal Health	1.0

Required Electives:

Select six (6) Units from the following:

AGAN 94	Animal Breeding	3.0
AGLI 12	Exotic Animal Management	3.0
AGLI 14	Swine Production	3.0
AGLI 16	Horse Production and Management	4.0
AGLI 17	Sheep Production	3.0
AGLI 18	Horse Ranch Management	4.0
AGLI 19	Horse Hoof Care	2.0
AGLI 30	Beef Production	3.0
AGPE 70	Pet Shop Management	3.0
AGPE 71	Canine Management	3.0
AGPE 72	Feline Management	3.0
AGPE 73	Tropical and Coldwater Fish Management	2.0
AGPE 74	Reptile Management	2.0
AGPE 76	Aviculture - Cage and Aviary Birds	3.0

Total Units 55.0

Respiratory Therapy

Technology and Health Division

Degree S1205

The Respiratory Therapy Program, which is accredited by the Committee 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 cardio-pulmonary 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.

Required Courses:

RESD 50	Theory and Principles of Respiratory Therapy	2.0
RESD 51A	Respiratory Therapy Science	4.0
RESD 51B	Respiratory Therapy Science	4.0
RESD 52	Pulmonary Anatomy and Physiology	3.0
RESD 53	Cardiopulmonary Pathophysiology	3.0
RESD 55	Adult Respiratory Intensive Care	3.0
RESD 56A	Techniques of Respiratory Therapy	2.5
RESD 56B	Techniques of Respiratory Therapy	6.0
RESD 56C	Techniques of Respiratory Therapy	2.5
RESD 56D	Techniques of Respiratory Therapy	6.0
RESD 57A	Special Procedures for Respiratory Care	1.5
RESD 57B	Special Procedures for Respiratory Care	1.5
RESD 58	Neonatal Intensive Care	3.0
RESD 59	Respiratory Therapeutic Modalities	3.0
RESD 60	Comprehensive Pulmonary Assessment	2.0
RESD 61	Current Issues in Respiratory Care	3.0
RESD 62	Pharmacology for Respiratory Care	1.5

Total Units 51.5

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:
1) Applicants must be at least 18 years of age upon entrance into the program and must be

a high school graduate or equivalent. Please provide copy of diploma as proof of high school completion.

- 2) File a college application and be accepted as a student at Mt. San Antonio College.
- 3) Applicant must take the College placement exams before taking any of the prerequisite or respiratory therapy courses.

NOTE: Testing is administered by the Assessment Center located in the Student Services Center, Building 9B. You may contact them at (909) 274-7500, ext. 4265, to set up an appointment.

If you have taken English and math at another college, please provide college transcripts. For students who possess a college degree, the college placement examination is not required. However, it will be necessary for the applicant to obtain two official copies of the college transcript showing the degree issued. One official transcript must be sent to the Respiratory Therapy Program Office and the other to the Admission Office. If the degree was obtained at Mt.SAC, it is not necessary to request transcripts. Transcripts should be addressed as follows:

Mt. San Antonio College
Technology and Health Division
Respiratory Therapy Program
1100 North Grand Avenue
Walnut CA 91789-1389

- 4) Submit an application for the Respiratory Therapy Program to the Technology and Health Division Office (Bldg. 28A, Room 101E), (909) 274-7500, ext. 4750.

All applications are dated upon receipt.

Foreign Transcripts:

All coursework taken outside of the United States must be analyzed by a designated agency for foreign transcript evaluation. No foreign course work will be accepted without this evaluation. It is the sole responsibility of the applying student to get the evaluation completed before entry into the program. Information for transcript evaluation available in the Technology and Health Division.

A.S. degree Requirements

All students entering the Respiratory Therapy Program MUST complete all the major course requirements and the general education requirements necessary to complete the Associate degree before a certificate documenting completion in Respiratory Therapy will be given. This certificate will permit the student to sit for all National Board for Respiratory Care (NBRC), Incorporated, examinations.

Other Requirements:

RESD 50 pre-requisites ANAT 10A/B, 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 education phase. A physical examination, including specific immunizations, is required of all candidates prior to beginning classes.

These requirements are in accordance with healthcare agency policy that insures that students are in good health and free from communicable disease and able to perform their training functions. Drug testing is required as part of this physical examination. 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
- Posses 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 devises)
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationship
- Near vision: ability to se 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.

Special Information

The completion of the Respiratory Therapy Program and receipt of a certificate documenting completion of required curses requires completion of the Associate degree. The student may elect to pursue either the Associate in Science or Associate in Arts degree. All students entering the program must submit an educational plan showing the major course requirements for the degree.

To remain in the program, students must maintain a “C” or better grad in all courses.

Upon completion of the Respiratory Therapy requirements, the student is given a certificate documenting completion. This certification will permit the student to sit for all National Board for Respiratory Care (NBRC), Incorporated, examinations.

Readmission Policy

To remain in the program, students must maintain a “C” or better grade in all courses. 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 re-start the program will be required to retake all Respiratory Therapy courses even if satisfactory grades were received. Re-entry may occur only one time.

Sign Language/Interpreting

Humanities and Social Sciences Division Degree S0801

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, American Sign Language 4, (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.

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.

Required Courses:

SIGN 105	American Sign Language 5	4.0
SIGN 108	Fingerspelling	2.0
SIGN 201	Introduction to Deaf Studies	3.0
SIGN 202	American Deaf Culture	3.0
SIGN 210	American Sign Language Structure	3.0
SIGN 220	Translation: American Sign Language/English	3.0
SIGN 223	Principles of Interpreting	3.0
SIGN 225	Ethical Decision Making for Interpreters	2.0
SIGN 227	Cognitive Processing for Interpreters	4.0
SIGN 231	Interpreting	4.0
SIGN 232	Advanced Interpreting	4.0
SIGN 239	Applied Interpreting	2.0

Required Electives

Select three (3) courses from: (5-5.5 Units)

SIGN 240	Vocabulary Building for Interpreters	2.0
SIGN 250	Interpreting with Classifiers	1.5
SIGN 260	Video Interpreting	1.5
SIGN 299	Special Projects in Sign Language/Interpreting	2.0

Total Units 42.0 - 42.5

Small Business Management

Business Division

Degree S0508

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:

BUSA 7	Principles of Accounting – Financial	5.0
BUSM 10	Principles of Continuous Quality Improvement	3.0
BUSM 20	Principles of Business	3.0
BUSM 60	Human Relations in Business	3.0
BUSM 61	Business Organization and Management	3.0
BUSM 62	Human Resource Management	3.0
BUSM 66	Small Business Management	3.0
BUSS 36	Principles of Marketing	3.0
CISB 15	Microcomputer Applications	3.5

Total Units 29.5

Recommended Electives:

BUSM 81	Work Experience in Business	1.0
BUSM 85	Special Issues in Business	2.0
BUSS 85	Special Issues in Marketing	2.0

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.

Television Production

Arts Division

Degree S0602

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.

Required Courses:

Choose two (2) of the following courses:

R-TV 01	Introduction to Electronic Media	3.0
R-TV 14	Media Aesthetics	3.0
R-TV 28	Introduction to Writing for Electronic Media	3.0

PLUS 12 units from the following courses, or any of the above courses not taken:

PHOT 10	Basic Digital and Film Photography	3.0
R-TV 18	Introduction to Screenwriting	3.0
R-TV 19A	Beginning Video Production	3.0
R-TV 19B	Advanced Video Production	3.0
R-TV 20	Television News Production	3.0
R-TV 21	Remote Multicamera Production	3.0
R-TV 22	Editing for Film and Television	3.0
R-TV 23	Reality Show Production	3.0
R-TV 24	American Film History	3.0
R-TV 25	World Cinema	3.0
R-TV 100	Work Experience in Film and TV	1.0

Total Units 18.0

Welding – Semiautomatic Arc Welding

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.

Required Courses:

WELD 40	Introduction to Welding	2.0
WELD 50	Oxyacetylene Welding	2.0
WELD 51	Basic Electric Arc Welding	2.0
WELD 53A	Welding Metallurgy	3.0
WELD 70A	Beginning Arc Welding	3.0
WELD 70B	Intermediate Arc Welding	3.0
WELD 70C	Certification for Welders	3.0
WELD 80	Construction Fabrication and Welding	3.0

Total Units 21.0

Recommended Electives:

BUSM 61	Business Organization and Management	3.0
WELD 30	Metal Sculpture	2.0
WELD 60	Print Reading and Computations for Welders	3.0
WELD 81	Pipe and Tube Welding	3.0

Associate in Arts degree in Liberal Arts and Sciences

**Emphasis in Business
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.

Required Courses:

BUSC 1A	Principles of Economics - Macroeconomics	3.0
	<i>or</i>	
BUSC 1AH	Principles of Economics - Macroeconomics - Honors	3.0
BUSC 1B	Principles of Economics - Microeconomics	3.0
	<i>or</i>	
BUSC 1BH	Principles of Economics - Microeconomics - Honors	3.0
CISB 15	Microcomputer Applications	3.5
	<i>or</i>	
CISB 11	Computer Information Systems	3.5

Plus select a minimum of three (3) courses from the following which should be selected in consultation with a counselor or educational advisor.

BUSA 7	Principles of Accounting - Financial	5.0
BUSA 8	Principles of Accounting - Managerial	5.0
BUSC 17	Applied Business Statistics	3.0
BUSL 18	Business Law	3.0
	<i>or</i>	
BUSL 18H	Business Law - Honors	3.0
BUSM 20	Principles of Business	3.0
BUSO 25	Business Communications	3.0

**Total Units 18.5 - 22.5
for Area of Emphasis**

Associate in Arts degree in Liberal Arts and Sciences

**Emphasis in Communication
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.

Required Courses:

Core/Required Courses (7 Units)

SPCH 1A	Public Speaking	4.0
	<i>or</i>	
SPCH 1AH	Public Speaking - Honors	4.0
	<i>or</i>	
SPCH 2	Fundamentals of Communication	4.0
SPCH 26	Interpersonal Communication	3.0
	<i>or</i>	
SPCH 26H	Interpersonal Communication - Honors	3.0
PLUS Select eleven (11) Units from the following:		
SPCH 1A	Public Speaking	4.0
	<i>or</i>	
SPCH 1AH	Public Speaking - Honors	4.0
SPCH 1B	Intermediate Public Speaking	3.0
SPCH 2	Fundamentals of Communication	4.0
SPCH 3	Voice and Diction	3.0
SPCH 4	Performance of Literature	3.0
SPCH 6	Group Communication	3.0
SPCH 7	Intercultural Communication	3.0
	<i>or</i>	
SPCH 7H	Intercultural Communication Honors	3.0
SPCH 8	Professional and Organizational Speaking	4.0
	<i>or</i>	
SPCH 8H	Professional and Organizational Speaking - Honors	4.0
SPCH 15	Forensics: Fundamentals of Contest Speech and Debate	2.0
SPCH 16	Forensics: Individual Event Team	3.0
SPCH 17	Forensics: Debate Team	3.0
SPCH 18	Forensics: Reader's Theater Team	3.0
SPCH 20	Argumentation and Debate	3.0
	<i>or</i>	
SPCH 20H	Argumentation and Debate - Honors	3.0

ASSOCIATE IN ARTS DEGREE (AA) WITH EMPHASES

Liberal Arts and Sciences with area of emphasis in one of the following:

Business.....	96	Language Arts.....	99
Communication.....	96	Mathematics.....	100
Fine Arts.....	96	Music.....	100
Humanities.....	97	Natural Sciences.....	100
Information Technology.....	98	Social & Behavioral Sciences.....	101
Kinesiology and Wellness.....	99		

Mt. San Antonio College's Associate in Arts degrees are designed to meet the needs of students interested in graduating with a two-year college degree by studying in a specific area of emphasis. These students are not intending to pursue a specific occupational major, nor are they necessarily planning to transfer. However, careful educational planning with a counselor or an educational advisor will help ensure that, if a student subsequently decides to transfer at a later date to a four-year college or university, he or she would have a solid foundation in the transfer process.

To qualify for an Associate in Arts degree, students must complete all the graduation requirements as listed on page 66 of this catalog. In addition, students choose one of eleven "areas of emphasis" and complete the appropriate requirements as shown in this section. Courses listed within an area of emphasis may also be used to satisfy general education requirements, with additional elective courses chosen by the student to complete the 60-unit degree requirement. The printed degree and transcript notation will read "Associate in Arts in Liberal Arts and Sciences, Emphasis in (specific area)."

Note: Students wishing to transfer to the California State University system may be required to select additional General Education courses from either the CSU General Education pattern found on page 110 of this catalog or from the Intersegmental General Education Transfer Core Curriculum (IGETC) pattern listed on page 115 of this catalog.

Students wishing to transfer to the University of California system may be required to select additional General Education courses only from the Intersegmental General Education Transfer Core Curriculum (IGETC) pattern listed on page 115 of this catalog.

All students wishing to transfer are strongly advised to meet with a counselor or educational advisor to determine the most effective selection of general education courses to facilitate transfer to either the California State University system or to the University of California in specific majors.

SPCH 30	Gateway to Communication Studies	3.0
SPCH 99	Special Projects in Speech	2.0
JOUR 100	Introduction to Mass Media	3.0
JOUR 101	Beginning Newswriting	3.0
JOUR 102	Intermediate Newswriting	3.0
JOUR 111	Broadcast News Writing	3.0
PHOT 10	Basic Digital and Film Photography	3.0
R-TV 01	Introduction to Electronic Media	3.0
R-TV 11A	Beginning Radio Production	3.0
R-TV 19A	Beginning Video Production	3.0
R-TV 99	Radio/TV Special Projects	2.0
Totals Units		18.0
for Area of Emphasis		

Associate in Arts degree in Liberal Arts and Sciences

**Emphasis in Fine Arts
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, students select 12 Units from the list of approved electives.

<p>Required Courses:</p> <p>ARTD 15A Drawing: Beginning 3.0</p> <p>ARTD 17A Drawing: Life 3.0</p> <p>ARTD 20 Design: Two-Dimensional 3.0</p> <p>ARTD 21 Design: Color and Composition 3.0</p> <p>ARTD 25A Beginning Painting I 3.0</p> <p>ARTS 22 Design: Three-Dimensional 3.0</p> <p>AHIS 4 History of Western Art: Prehistoric through Gothic or</p> <p>AHIS 4H History of Western Art: Prehistoric Through Gothic - Honors and</p> <p>AHIS 5 History of Western Art: Renaissance through Modern or</p> <p>AHIS 5H History of Western Art: Renaissance Through Modern - Honors</p> <p>PLUS Select twelve (12) Units from one of the following art categories:</p> <p>Ceramics:</p> <p>ARTS 30A Ceramics: Beginning I 3.0</p> <p>ARTS 30B Ceramics: Beginning II 3.0</p> <p>ARTS 31 Ceramics: Advanced Studio 2.0</p> <p>ARTS 33 Ceramics: Hand Construction 3.0</p> <p>ARTS 34 The Sculptural Vessel 3.0</p> <p>Sculpture:</p> <p>ARTS 40A Sculpture: Beginning 3.0</p> <p>ARTS 40B Sculpture: Intermediate 3.0</p> <p>ARTS 40C Sculpture: Carving 3.0</p> <p>ARTS 41A Sculpture: Life 3.0</p> <p>ARTS 41B Sculpture: Intermediate Life 3.0</p> <p>ARTS 42 Sculpture: Mold Making 3.0</p> <p>ARTS 46A Sculpture: Special Effects Makeup 3.0</p> <p>ARTS 46B Sculpture: Special Effects Makeup 3.0</p> <p>Drawing:</p> <p>ANIM 101A Drawing - Gesture and Figure 3.0</p> <p>ARTD 16 Drawing: Perspective 3.0</p> <p>ARTD 17B Drawing: Life-Advanced 3.0</p> <p>ARTD 23A Drawing: Heads and Hands 1.5</p> <p>ARTD 23B Drawing: Advanced Heads and Hands 1.5</p> <p>ARTD 23C Drawin: Expressive Heads and Hands 1.5</p> <p>ANIM 101C Figure Gesture-Design 3.0</p> <p>ANIM 107 Figure in Motion 3.0</p>	<p>ANIM 111A Animal Drawing 1.5</p> <p>ANIM 111B Animal Drawing 1.5</p> <p>ARTD 15B Drawing: Intermediate 3.0</p> <p>ANIM 101B Figure Gesture - Design 3.0</p> <p>Illustration:</p> <p>ARTC 100 Graphic Design I 3.0</p> <p>ARTC 163 Dynamic Sketching 3.0</p> <p>ARTC 165 Illustration 3.0</p> <p>ARTC 167 Visual Development 3.0</p> <p>ARTC 169 Conceptual Illustration 3.0</p> <p>ARTC 290 Portfolio 3.0</p> <p>ARTD 19A Figure Painting 3.0</p> <p>Figure:</p> <p>ANIM 101A Drawing - Gesture and Figure 3.0</p> <p>ANIM 101B Figure Gesture - Design 3.0</p> <p>ANIM 101C Figure Gesture-Design 3.0</p> <p>ANIM 107 Figure in Motion 3.0</p> <p>ANIM 111A Animal Drawing 1.5</p> <p>ANIM 111B Animal Drawing 1.5</p> <p>ARTD 17B Drawing: Life-Advanced 3.0</p> <p>ARTD 19A Figure Painting 3.0</p> <p>ARTD 23A Drawing: Heads and Hands 1.5</p> <p>ARTD 23B Drawing: Advanced Heads and Hands 1.5</p> <p>ARTD 23C Drawing: Expressive Heads and Hands 1.5</p> <p>ARTS 41A Sculpture: Life 3.0</p> <p>ARTS 41B Sculpture: Intermediate Life 3.0</p> <p>Painting:</p> <p>ARTD 19A Figure Painting 3.0</p> <p>ARTD 25B Beginning Painting II 3.0</p> <p>ARTD 26A Intermediate Painting I 3.0</p> <p>ARTD 26B Intermediate Painting II 3.0</p> <p>ARTD 27 Painting: Watercolor 3.0</p> <p>Printmaking:</p> <p>ARTD 43A Introduction to Printmaking 3.0</p> <p>ARTD 43B Intermediate Printmaking in Intaglio/Relief 3.0</p> <p>ARTD 44A Printmaking: Introduction to Lithography I 3.0</p> <p>ARTD 44B Printmaking: Intermediate Lithography 3.0</p> <p>ARTD 45A Printmaking: Introduction to Screenprinting 3.0</p> <p>ARTD 45B Printmaking: Intermediate Screenprinting 3.0</p>	<p>ARTD 46A Printmaking: Introduction to Monotype 3.0</p> <p>ARTD 46B Intermediate Painterly Printmaking 3.0</p> <p>ARTD 47A Printmaking: Photo and Alternative Processes 3.0</p> <p>Gallery:</p> <p>ARTC 100 Graphic Design I 3.0</p> <p>ARTG 20 Art, Artists and Society 3.0</p> <p>ARTG 21A Introduction to Exhibition Production 3.0</p> <p>ARTG 21B Intermediate Exhibition Production 3.0</p> <p>Photography:</p> <p>PHOT 10 Basic Digital and Film Photography 3.0</p> <p>PHOT 12 Photographic Alternatives 3.0</p> <p>PHOT 20 Color Photography 3.0</p> <p>PHOT 9 Digital Image Editing for Photographers or</p> <p>PHOT 17 Photocommunication 3.0</p> <p>Graphic Design :</p> <p>ARTC 100 Graphic Design I 3.0</p> <p>ARTC 120 Graphic Design II 3.0</p> <p>ARTC 140 Graphic Design III 3.0</p> <p>ARTC 160 Typography 3.0</p> <p>ARTC 200 Web Design 3.0</p> <p>ARTC 220 Graphic Design IV 3.0</p> <p>Total Units 36.0</p> <p>for Area of Emphasis</p>	<p>Required Courses:</p> <p>Music</p> <p>MUS 11A Music Literature Survey 3.0</p> <p>MUS 11B Music Literature Survey 3.0</p> <p>MUS 12 History of Jazz 3.0</p> <p>MUS 13 Introduction to Music Appreciation or</p> <p>MUS 13H Introduction to Music Appreciation - Honors 3.0</p> <p>MUS 14A World Music 3.0</p> <p>MUS 14B American Folk Music 3.0</p> <p>MUS 15 Rock Music History and Appreciation 3.0</p> <p>Art History</p> <p>AHIS 3 History of Women and Gender in Art or</p> <p>AHIS 3H History of Women and Gender in Art - Honors 3.0</p> <p>AHIS 4 History of Western Art: Prehistoric Through Gothic or</p> <p>AHIS 4H History of Western Art: Prehistoric Through Gothic - Honors 3.0</p> <p>AHIS 5 History of Western Art: Renaissance Through Modern or</p> <p>AHIS 5H History of Western Art - Renaissance Through Modern - Honors 3.0</p> <p>AHIS 6 History of Modern Art or</p> <p>AHIS 6H History of Modern Art - Honors 3.0</p> <p>AHIS 9 History of Asian Art 3.0</p> <p>AHIS 10 A History of Greek and Roman Art and Architecture 3.0</p> <p>AHIS 11 History of African, Oceanic, and Native American Art 3.0</p> <p>AHIS 12 History of Precolumbian Art and Architecture or</p> <p>AHIS 12H History of Precolumbian Art and Architecture - Honors 3.0</p> <p>ARCH 250 World Architecture I or</p> <p>ARCH 251 World Architecture II 3.0</p>
<p>Associate in Arts degree in Liberal Arts and Sciences</p> <p>Emphasis in Humanities Degree A8984</p> <p>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. Students must select a total of 18 to 20 Units choosing courses from at least 5 of the following 7 categories:</p>			

Programs of Study Leading to an Associate Degree

Philosophy and Political Sciences

PHIL 12	Introduction to Ethics	3.0
	<i>or</i>	
PHIL 12H	Introduction to Ethics - Honors	3.0
PHIL 20A	History of Ancient Philosophy	3.0
	<i>or</i>	
PHIL 20AH	History of Ancient Philosophy - Honors	3.0
PHIL 20B	History of Modern Philosophy	3.0
	<i>or</i>	
PHIL 20BH	History of Modern Philosophy - Honors	3.0
POLI 5	Political Theory I	3.0
	- Ancient to Contemporary	
POLI 9	Introduction to International Relations	3.0

English and Dramatic Arts Literature

FRCH 60	French Culture/Cinema	3.0
ITAL 60	Italian Culture Through Cinema	3.0
LIT 10	Survey of Shakespeare	3.0
LIT 11A	World Literature to 1650	3.0
LIT 11B	World Literature from 1650	3.0
LIT 15	Introduction to Cinema	3.0
SPCH 4	Performance of Literature	3.0
THTR 10	History of Theater Arts	3.0

Religion and Literature

LIT 36	Introduction to Mythology	3.0
LIT 46	Bible/Lit: Old Testament	3.0
LIT 47	Bible/Lit: New Testament	3.0
PHIL 15	Major World Religions	3.0
	<i>or</i>	
PHIL 15H	Major World Religions - Honors	3.0

History

HIST 3	World History: Prehistoric to Early Modern	3.0
	<i>or</i>	
HIST 3H	World History: Prehistoric to Early Modern - Honors	3.0
HIST 4	World History: Early Modern to the Present	3.0
	<i>or</i>	
HIST 4H	World History: Early Modern to the Present - Honors	3.0
HIST 10	History of Asia	3.0
HIST 11	History of Asia	3.0
HIST 16	The Wild West - A History, 1800-1890	3.0
HIST 19	History of Mexico	3.0

HIST 35	History of Africa	3.0
HIST 44	History of Native Americans	3.0

Foreign Languages

ARAB 2	Continuing Elementary Arabic	4.0
CHIN 2	Continuing Elementary Chinese	4.0
CHIN 3	Intermediate Chinese	4.0
FRCH 2	Continuing Elementary French	4.0
FRCH 3	Intermediate French	4.0
GERM 2	Continuing Elementary German	4.0
GERM 3	Intermediate German	4.0
ITAL 2	Continuing Elementary Italian	4.0
ITAL 3	Intermediate Italian	4.0
JAPN 2	Continuing Elementary Japanese	4.0
JAPN 3	Intermediate Japanese	4.0
SPAN 2	Continuing Elementary Spanish	4.0
SPAN 3	Intermediate Spanish	4.0
SPAN 11	Spanish for the Spanish Speaking	4.0
SPAN 12	Continuing Spanish for the Spanish Speaking	4.0
SIGN 101	American Sign Language 1	4.0
SIGN 102	American Sign Language 2	4.0

Total Units 18.0 - 20.0 for Area of Emphasis

Associate in Arts degree in Liberal Arts and Sciences

Emphasis in Information Technology Degree A8985

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 place 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.

Required Courses:

Information Technology Basics (7 Units)

CISB 11	Computer Information Systems	3.5
CISB 15	Microcomputer Applications	3.5

Software Development (3.5 Units)

CISP 11	Programming in Visual Basic	3.0
CISP 11L	Programming in Visual Basic Laboratory	0.5
	<i>or</i>	
CISP 21	Programming in Java	3.0
CISP 21L	Programming in Java Laboratory	0.5
	<i>or</i>	
CISP 31	Programming in C++	3.0
CISP 31L	Programming in C++ Laboratory	0.5
	<i>or</i>	
CISP 41	Programming in C#	3.0
CISP 41L	Programming in C# Lab	0.5
	<i>or</i>	
CISP 52	Mobile Device Programming	3.0
CISP 52L	Mobile Device Programming Laboratory	0.5
	<i>or</i>	
CISW 21	Secure Web Programming with ASP.NET	3.0
CISW 21L	Secure Web Programming with ASP.NET Lab	0.5
	<i>or</i>	
CISW 24	Secure Server Side Web Programming	3.0
CISW 24L	Secure Server Side Web Programming Lab	0.5

Database Technology (3.5 Units)

CISD 11	Database Management - Microsoft Access	3.0
CISD 11L	Database Management - Microsoft Access Lab	0.5
	<i>or</i>	
CISD 21	Database Management - Microsoft SQL Server	3.0
CISD 21L	Database Management - Microsoft SQL Server Laboratory	0.5
	<i>or</i>	
CISD 31	Database Management - Oracle	3.0

CISD 31L	Database Management - Oracle Laboratory	0.5
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Operating Systems and Networking (3.0-3.5 Units)

CISN 11	Telecommunications/Networking	3.0
CISN 11L	Telecommunications/Networking Lab	0.5
	<i>or</i>	
CISN 21	Windows Operating System	3.0
	<i>or</i>	
CISN 31	Linux Operating System	3.0
CISN 31L	Linux Operating System Laboratory	0.5
	<i>or</i>	
CISN 61	Virtualization Technology	3.0

Security (3.0-4.0 Units)

CISS 13	Principles of Information Systems Security	4.0
	<i>or</i>	
CISS 15	Operating Systems Security	3.0
	<i>or</i>	
CISS 21	Network Vulnerabilities and Countermeasures	3.0
CISS 21L	Network Vulnerabilities and Countermeasures Lab	0.5

Total Units 20.0-21.5 for Area of Emphasis

Recommended Electives:

BUSA 7	Principles of Accounting - Financial	5.0
BUSM 20	Principles of Business	3.0
BUSM 60	Human Relations in Business	3.0
BUSO 25	Business Communications	3.0
BUSS 36	Principles of Marketing	3.0
CISB 31	Microsoft Word	3.0
CISB 51	Microsoft PowerPoint	3.0
CISM 11	Systems Analysis and Design	3.5
R-TV 17	Internet Radio and Podcasting	3.0
SPCH 26	Interpersonal Communication	3.0
	<i>or</i>	
SPCH 26H	Interpersonal Communication - Honors	3.0

**Associate in Arts degree
in Liberal Arts and Sciences**

**Emphasis in Kinesiology and Wellness
Degree A8986**

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.

Required Courses:

**Kinesiology, Movement, and Health Promotion
Select a minimum of 6 Units from the following:
(6 Units)**

KIN 3	First Aid and CPR	3.0
	or	
KIN 5	Advanced First Aid/CPR/ Emergency Response	3.0
KIN 13	Sports Officiating	3.0
KIN 17	Introduction to Kinesiology	3.0
KIN 19	Introduction to Care/Prevention of Activity/Sports -Related Injuries	3.0
KIN 34	Fitness for Living	3.0
KIN 39	Techniques of Fitness Testing	2.0
KIN 44	Theory of Coaching	3.0
DN-T 18	Introduction to Dance	3.0
DN-T 20	History and Appreciation of Dance	3.0

Scientific and Nutrition Background

**Select minimum of 3 Units from the following:
(3 Units)**

ANAT 10A	Introductory Human Anatomy	4.0
	or	
ANAT 35	Human Anatomy	5.0
ANAT 10B	Introductory Human Physiology	4.0
	or	
ANAT 36	Human Physiology	5.0
CHEM 10	Chemistry for Allied Health Majors	5.0
	or	
CHEM 40	Introduction to General Chemistry	5.0
MICR 1	Principles of Microbiology	5.0
	or	
MICR 22	Microbiology	4.0

PHYS 1	Physics	4.0
	or	
PHYS 2AG	General Physics	4.0
PSYC 1B	Biological Psychology	3.0
BIOL 1	General Biology	4.0
BIOL 5	Contemporary Health Issues	3.0
	or	
BIOL 13	Human Repro Devel Aging	3.0
NF 10	Nutrition for Personal Health and Wellness	3.0
	or	
NF 25	Essentials of Nutrition	3.0
	or	
NF 25H	Essentials of Nutrition - Honors	3.0

**Behavioral Development and Diversity
Select a minimum of 3 Units from the following:
(3 Units)**

PSYC 1A	Introduction to Psychology	3.0
	or	
PSYC 1AH	Introduction to Psychology - Honors	3.0
PSYC 3	Research Methods/Psych	4.0
PSYC 17	Introduction to Human Services	3.0
PSYC 26	Psychology of Sexuality	3.0
PSYC 33	Psychology for Effective Living	3.0
SOC 1	Sociology	3.0
	or	
SOC 1H	Sociology - Honors	3.0
SOC 2	Contemporary Social Problems	3.0
	or	
SOC 2H	Contemporary Social Problems - Honors	3.0
SOC 20	Sociology of Ethnic Relations	3.0
	or	
SOC 20H	Sociology of Ethnic Relations - Honors	3.0
COUN 2	College Success Strategies	3.0
COUN 5	Career/Life Planning	3.0

Activity Course

(A minimum of two courses selected from the following):
Students pursuing an AA degree with an emphasis in Kinesiology and Wellness are required to take a minimum of two activity courses in at least two areas of kinesiology or dance:
KINA (Aquatics)

KINF (Fitness)	
KINI (Individual Sports)	
KINS (Team Sports)	
KINL (Adaptive)	
DNCE (Dance)	
Plus additional Units taken from any courses in clusters 1-3 above for a total of at least 18 Units.	
Total Units	18.0
for Area of Emphasis	

**Associate in Arts degree in Liberal
Arts and Sciences**

**Emphasis in Language Arts
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.

Required Courses:

**Language Acquisition
(minimum of 9 Units selected from the following):**

CHLD 51	Early Literacy in Child Development	3.0
ENGL 1C	Critical Thinking and Writing	4.0
	or	
ENGL 1CH	Critical Thinking and Writing - Honors	4.0
	or	
PHIL 9	Critical Analysis and Writing	3.0
ENGL 81	Language Acquisition	3.0
READ 100	Analysis and Critical Reading	3.0
SIGN 210	American Sign Language Structure	3.0
STDY 100	Student Achievement and Fundamentals of Learning	3.0

Language Arts and Diversity

(minimum 6 Units selected from the following):

SPAN 1	Elementary Spanish	4.0
SPAN 2	Continuing Elementary Spanish	4.0
SPAN 3	Intermediate Spanish	4.0
SPAN 4	Continuing Intermediate Spanish	4.0
SPAN 11	Spanish for the Spanish Speaking	4.0
SPAN 12	Continuing Spanish for the Spanish Speaking	4.0

SPAN 53	Conversational Spanish	3.0
SPAN 54	Continuing Conversational Spanish	3.0
FRCH 1	Elementary French	4.0
FRCH 2	Continuing Elementary French	4.0
FRCH 3	Intermediate French	4.0
FRCH 4	Continuing Intermediate French	4.0
FRCH 53	Intermediate Conversational French	3.0
FRCH 54	Continuing Intermediate Conversational French	3.0
ITAL 1	Elementary Italian	4.0
ITAL 2	Continuing Elementary Italian	4.0
ITAL 3	Intermediate Italian	4.0
ITAL 4	Continuing Intermediate Italian	4.0
ITAL 52	Conversational Italian	3.0
ITAL 53	Continuing Conversational Italian	3.0
ITAL 54	Advanced Conversational Italian	3.0
GERM 1	Elementary German	4.0
GERM 2	Continuing Elementary German	4.0
GERM 3	Intermediate German	4.0
CHIN 1	Elementary Chinese	4.0
CHIN 2	Continuing Elementary Chinese	4.0
CHIN 3	Intermediate Chinese	4.0
CHIN 4	Continuing Intermediate Chinese	4.0
JAPN 1	Elementary Japanese	4.0
JAPN 2	Continuing Elementary Japanese	4.0
JAPN 3	Intermediate Japanese	4.0
JAPN 4	Continuing Intermediate Japanese	4.0
JAPN 5	Advanced Japanese	4.0
LATN 1	Elementary Latin	4.0
LATN 2	Continuing Elementary Latin	4.0
ARAB 1	Elementary Arabic	4.0
ARAB 2	Continuing Elementary Arabic	4.0
SIGN 101	American Sign Language 1	4.0
SIGN 102	American Sign Language 2	4.0
SIGN 103	American Sign Language 3	4.0
SIGN 104	American Sign Language 4	4.0
SIGN 105	American Sign Language 5	4.0
LIT 3	Multicultural American Literature	3.0
LIT 11A	World Literature to 1650	3.0
	or	
LIT 11B	World Literature from 1650	3.0
LIT 20	African American Literature	3.0
LIT 25	Contemporary Mexican American Literature	3.0

Programs of Study Leading to an Associate Degree

CHLD 50	Multicultural Education: Anti-Bias Perspective	3.0
JOUR 100	Introduction to Mass Media	3.0
JOUR 107	Race, Culture, Sex, and Mass Media Images	3.0
R-TV 01	Introduction to Electronic Media	3.0
Personal Options		
(minimum 3 Units selected from the following):		
	BUSO 25 Business Communications	3.0
CHLD 61	Language Arts and Art Media for Young Children	3.0
ENGL 1B	English - Introduction to Literary Types	3.0
<i>or</i>		
ENGL 1BH	English - Introduction to Literary Types - Honors	3.0
ENGL 8A	Creative Writing - Fiction	3.0
ENGL 8B	Creative Writing - Poetry	3.0
ENGL 8C	Creative Writing - Novel	3.0
ENGL 8D	Creative Writing - Poetry Collection	3.0
ENGL 8E	Creative Writing - Memoir	3.0
ENGL 8F	Creative Writing - Nonfiction	3.0
ENGL 9A	Writing the Personal Journal	3.0
JOUR 101	Beginning Newswriting	3.0
<i>or</i>		
JOUR 102	Intermediate Newswriting	3.0
JOUR 108	Writing for Public Relations	3.0
LIT 1	Early American Literature	3.0
<i>or</i>		
LIT 2	Modern American Literature	3.0
LIT 6A	Survey of English Literature	3.0
<i>or</i>		
LIT 6B	Survey of English Literature	3.0
LIT 40	Children's Literature	3.0
R-TV 05	Radio-TV Newswriting	3.0
SPCH 4	Performance of Literature	3.0
Total Units for Area of Emphasis		18.0

Associate in Arts degree in Liberal Arts and Sciences

Emphasis in Mathematics 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.

Required Courses:

(Minimum 18 Units selected from the following with at most two CSCI courses)

MATH 130	College Algebra	4.0
MATH 140	Calculus for Business	4.0
MATH 150	Trigonometry	3.0
MATH 160	Precalculus Mathematics	4.0
MATH 180	Calculus and Analytic Geometry	4.0
MATH 181	Calculus and Analytic Geometry	5.0
MATH 245	A Transition to Advanced Mathematics	3.0
MATH 280	Calculus and Analytic Geometry	5.0
MATH 285	Lin Algebra & Diff Equtns	5.0
CSCI 110	Fundamentals of Computer Science	3.5
CSCI 140	C++ Language & Objects	4.0
CSCI 145	Java Language and Object Oriented Programming	4.0

Total Units for Area of Emphasis 18.0

Recommended Electives:

MATH 100	Survey of College Mathematics	3.0
MATH 110	Elementary Statistics	3.0
<i>or</i>		
MATH 110H	Elementary Statistics - Honors	3.0
MATH 115	Statway II	5.0
MATH 120	Finite Mathematics	3.0
CHEM 50	General Chemistry I	5.0
<i>or</i>		
CHEM 50H	General Chemistry I - Honors	5.0
CHEM 51	General Chemistry II	5.0
PHYS 4A	Engineering Physics	5.0
PHYS 4B	Engineering Physics	5.0
PHYS 4C	Engineering Physics	5.0

Associate in Arts degree in Liberal Arts and Sciences

Emphasis in Music Degree A8990

An emphasis in Music provides the student with an understanding of music theory, harmony and the history of western music. In addition to the foundational Music courses, students select courses in piano and a performance ensemble.

Required Courses:

MUS 2	Music Theory	3.0
MUS 3A	Harmony - Diatonic	3.0
MUS 5A	Musicianship - Ear Training and Sight Singing	1.0
MUS 5B	Musicianship - Diatonic	1.0
MUS 11A	Music Literature Survey	3.0
MUS 16	Individual Instruction	0.5
MUS 22	Conducting	1.5

Piano

Select two (2) Units from the following courses:

MUS 17A	Elementary Piano	1.0
MUS 17B	Intermediate Piano	1.0
MUS 18	Advanced Piano	1.0

Performance Ensemble

Select from the following courses:

MUS 27	Chamber Music	1.5
MUS 30	Collegiate Chorale	1.0
MUS 31	Concert Choir	1.5
MUS 34	Women's Vocal Ensemble	2.0
MUS 36	Wind Symphony	1.0
MUS 38	Ensemble	0.5
MUS 39	Laboratory Band	2.0
MUS 44	Vocal Jazz Ensemble	2.0
MUS 45	Chamber Singers	2.0
MUS 47	Jazz Ensemble	2.0
MUS 48	Men's Vocal Ensemble	2.0
MUS 49	Wind Ensemble	2.0

Total Units for Area of Emphasis 18.0 - 20.0

Strongly Recommended Electives:

MUS 11B	Music Literature Survey	3.0
MUS 16	Individual Instruction	0.5
MUS 9	Introduction to Music Technology	3.0

Associate in Arts degree in Liberal Arts and Sciences

Emphasis in Natural Sciences Degree A8988

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.

Required Courses:

Select a minimum of 18 Units from the following with at least one GE lab from each group.

Group 1: Physical Sciences

ASTR 5	Introduction to Astronomy	3.0
<i>or</i>		
ASTR 5H	Introduction to Astronomy - Honors	3.0
ASTR 7	Geology of the Solar System	3.0
ASTR 8	Introduction to Stars, Galaxies, and the Universe	3.0
CHEM 80	Organic Chemistry	5.0
CHEM 81	Organic Chemistry II	5.0
GEOG 1	Elements of Physical Geography	3.0
<i>or</i>		
GEOG 1H	Elements of Physical Geography - Honors	3.0
GEOL 7	Geology of California	3.0
GEOL 8	Earth Science	3.0
<i>or</i>		
GEOL 8H	Earth Science - Honors	3.0
GEOL 9	Environmental Geology	3.0
GEOL 10	Natural Disasters	3.0
GEOL 24	Geologic Field Studies: Central California	4.0
<i>or</i>		
GEOL 25	Geologic Field Studies: Southern California	4.0
METO 3	Weather and the Atmospheric Environment	3.0

OCEA 10	Introduction to Oceanography <i>or</i>	3.0	<p>Group 2: Life Sciences GE Labs: Select at least one (1)</p> <p>ANTH 1L Biological Anthropology Laboratory 1.0 BIOL 1 General Biology 4.0 BIOL 2 Plant and Animal Biology 4.0 BIOL 3 Ecology and Field Biology 4.0 BIOL 4 Biology for Majors 4.0 <i>or</i> BIOL 4H Biology for Majors - Honors 4.0 BIOL 6L Humans and the Environment Laboratory 2.0 BIOL 8 Cell and Molecular Biology 4.0 BIOL 21 Marine Biology Laboratory 1.0 BIOL 34L Fundamentals of Genetics Lab 1.0 MICR 1 Principles of Microbiology 5.0 <i>or</i> MICR 22 Microbiology 4.0</p> <p>Total Units 18.0</p> <p>for Area of Emphasis</p> <hr/> <p>Associate in Arts degree in Liberal Arts and Sciences Emphasis in Social & Behavioral Sciences Degree A8991</p> <p>An emphasis in Social & Behavioral Sciences provides the student with an understanding of statistics, cultural and gender diversity, the development of the person, biology as it relates to behavior or society, and the historical and political implications on society.</p> <p>Required Courses: Foundation (minimum of 6-7 Units from the following courses):</p> <p>ANTH 1 Biological Anthropology 3.0 <i>or</i> ANTH 1H Biological Anthro - Honors 3.0 BIOL 1A Principles of Economics - Macroeconomics 3.0 <i>or</i> BUSC 1AH Principles of Economics - Macroeconomics - Honors 3.0 BUSC 1B Principles of Economics - Microeconomics 3.0 <i>or</i></p>	BUSC 1BH Principles of Economics - Microeconomics - Honors 3.0	POLI 35 African American Politics 3.0
OCEA 10H	Introduction to Oceanography - Honors <i>and</i>	3.0		HIST 1 History of the United States <i>or</i>	PSYC 25 The Psychology of Women 3.0
Group 1: Physical Sciences GE Labs: Select at least one (1)				HIST 7 History of the United States <i>or</i>	PSYC 26 Psychology of Sexuality 3.0
ASTR 5L	Astronomical Observing Laboratory	1.0		HIST 7H History of the United States - Honors 3.0	R-TV 01 Introduction to Electronic Media 3.0
CHEM 50	General Chemistry I <i>or</i>	5.0		POLI 1 Political Science <i>or</i>	SOC 5 Introduction to Criminology 3.0
CHEM 50H	General Chemistry I - Honors	5.0		POLI 1H Political Science - Honors 3.0	SOC 14 Marriage and the Family 3.0 <i>or</i>
CHEM 51	General Chemistry II	5.0		PSYC 1A Introduction to Psychology <i>or</i>	SOC 14H Marriage and the Family - Honors 3.0
GEOG 1L	Physical Geography Laboratory <i>or</i>	1.0		PSYC 1AH Introduction to Psychology - Honors 3.0	SOC 20 Sociology of Ethnic Relations 3.0 <i>or</i>
GEOG 1LH	Physical Geography Laboratory - Honors	1.0		SOC 1 Sociology <i>or</i>	SOC 20H Sociology of Ethnic Relations - Honors 3.0
GEOL 1	Physical Geology	4.0		SOC 1H Sociology - Honors 3.0	SPCH 7 Intercultural Communication 3.0 <i>or</i>
GEOL 8L	Earth Science Laboratory	1.0		MATH 110 Elementary Statistics <i>or</i>	SPCH 7H Intercultural Communication Honors 3.0
METO 3L	Weather and Atmospheric Environment Laboratory	1.0		MATH 110H Elementary Statistics - Honors <i>or</i>	Development of the Person (minimum of 3 Units selected from the following):
OCEA 10L	Introduction to Oceanography Laboratory	1.0		PSYC 10 Statistics for the Behavioral Sciences 4.0	BIOL 5 Contemporary Health Issues 3.0
PHSC 3	Energy Science	4.0		Cultural & Gender Diversity (minimum of 3 Units selected from the following):	
PHYS 1	Physics	4.0		ANTH 30 The Native American 3.0	BIOL 13 Human Repro Devel Aging 3.0
PHYS 2AG	General Physics	4.0		ANTH 5 Principles of Cultural Anthropology <i>or</i>	CHLD 1 Child, Family, School and Community 3.0
PHYS 2BG	General Physics	4.0		ANTH 22 General Cultural Anthropology 3.0	CHLD 10 Child Growth and Lifespan Development 3.0 <i>or</i>
PHYS 4A	Engineering Physics	5.0		BIOL 15 Human Sexuality <i>or</i>	CHLD 10H Child Growth and Lifespan Development - Honors 3.0
PHYS 4B	Engineering Physics	5.0		BIOL 15H Human Sexuality - Honors 3.0	PSYC 14 Developmental Psychology 3.0
PHYS 4C	Engineering Physics <i>and</i>	5.0		GEOG 2 Human Geography <i>or</i>	PSYC 19 Abnormal Psychology 3.0
Group 2: Life Sciences				GEOG 2H Human Geography - Honors 3.0	SOC 2 Contemporary Social Problems 3.0 <i>or</i>
ANTH 1	Biological Anthropology <i>or</i>	3.0		GEOG 5 World Regional Geography <i>or</i>	SOC 2H Contemporary Social Problems - Honors 3.0
ANTH 1H	Biological Anthropology - Honors	3.0		GEOG 30 Geography of California <i>or</i>	SOC 4 Introduction to Gerontology 3.0
BIOL 6	Humans and the Environment	3.0	GEOG 30H Geography of California - Honors 3.0	SOC 15 Child Development 3.0	
BIOL 17	Neurobiology and Behavior	3.0	HIST 36 Women in American History 3.0	Biology as it Relates to Behavior or Society (minimum of 3 Units selected from the following):	
BIOL 20	Marine Biology	3.0	JOUR 100 Introduction to Mass Media 3.0	ANTH 1 Biological Anthropology 3.0	
BIOL 25	Conservation Biology	3.0	JOUR 107 Race, Culture, Sex, and Mass Media Images 3.0	BIOL 6 Humans and the Environment 3.0	
BIOL 34	Fundamentals of Genetics	3.0	POLI 25 Latino Politics in the United States 3.0	BIOL 17 Neurobiology and Behavior 3.0	
BTNY 3	Plant Structures, Functions, and Diversity <i>and</i>	5.0		BIOL 34 Fundamentals of Genetics 3.0	
				PSYC 1B Biological Psychology 3.0	
				Historical and Political Implications on Society (minimum of 3 Units selected from the following):	
				GEOG 8 The Urban World 3.0	
				HIST 1 History of the United States 3.0 <i>or</i>	

PROGRAMS OF STUDY LEADING TO AN ASSOCIATE DEGREE

Programs of Study Leading to an Associate Degree

HIST 7	History of the United States	3.0
	<i>or</i>	
HIST 7H	History of the United States - Honors	3.0
	<i>or</i>	
HIST 8	History of the United States	3.0
	<i>or</i>	
HIST 8H	History of the United States - Honors	3.0
HIST 10	History of Asia	3.0
	<i>or</i>	
HIST 11	History of Asia	3.0
	<i>or</i>	
HIST 16	The Wild West - A History, 1800-1890	3.0
HIST 30	History of the African American 1619-1877	3.0
	<i>or</i>	
HIST 31	History of the African American	3.0
	<i>or</i>	
HIST 35	History of Africa	3.0
HIST 40	History of the Mexican American	3.0
	<i>or</i>	
HIST 44	History of Native Americans	3.0
POLI 9	Introduction to International Relations	3.0
	<i>or</i>	
POLI 25	Latino Politics in the United States	3.0
	<i>or</i>	
POLI 35	African American Politics	3.0
PSYC 17	Introduction to Human Services	3.0
Total Units for Area of Emphasis		18.0 - 19.0
Other recommended electives include:		
ANTH 3	Archaeology	3.0
BUSM 60	Human Relations in Business	3.0
CHLD 1	Child, Family, School and Community	3.0
CHLD 73	Infant/Toddler Care and Development	3.0
CHLD 85	Infants At Risk	3.0
COUN 5	Career/Life Planning	3.0
COUN 51	Career Planning	1.0
FCS 41	Life Management	3.0
LIBR 1	Information Resources and Research Methods	3.0
LIT 3	Multicultural American Literature	3.0
LIT 15	Introduction to Cinema	3.0
LIT 20	African American Literature	3.0

LIT 25	Contemporary Mexican American Literature	3.0
PSYC 3	Introduction to Research Methods in Psychology	4.0
PSYC 17	Introduction to Human Services	3.0
PSYC 19	Abnormal Psychology	3.0
PSYC 33	Psychology for Effective Living	3.0
SL 2	Linked Service Learning	1.0
	<i>or</i>	
SPCH 26	Interpersonal Communication	3.0
	<i>or</i>	
SPCH 26H	Interpersonal Communication - Honors	3.0

Associate in Arts in Art History for Transfer

Humanities and Social Sciences Division Degree A0330

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.

Required Courses:

Core Courses: (9 Units)

AHIS 4	History of Western Art: Prehistoric Through Gothic	3.0
	<i>or</i>	
AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors	3.0

ASSOCIATE DEGREE FOR TRANSFER (AA T & AS T)

Associate in Arts for Transfer Degree (AA-T):

Art History.....	102	Music	104
Communication Studies	102	Political Science	105
English	103	Psychology	105
Geography	103	Studio Arts	106
History	104	Theater Arts	107

Associate in Science for Transfer Degree (AS-T):

Mathematics.....	107	Administration of Justice.....	107
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Recent legislation requires that all California Community Colleges create associate degrees for transfer. To earn an "associate degree for transfer" a student must complete 60 semester Units that are eligible for transfer to the CSU that consist of: IGETC or CSU GE breadth, and a major or area of emphasis of at least 18 Units. Students must have a minimum GPA of 2.0 to receive an associate degree for transfer. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses.

AHIS 5	History of Western Art: Renaissance Through Modern	3.0	PHOT 10	Basic Digital and Film Photography	3.0
	<i>or</i>		List C: select two courses from the following or any course not selected from List A: (6 Units)		
AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	3.0	AHIS 3	History of Women and Gender in Art	3.0
ARTD 15A	Drawing: Beginning	3.0		<i>or</i>	
List A select one: (3 Units)			AHIS 3H	History of Women and Gender in Art - Honors	3.0
AHIS 9	History of Asian Art and Architecture	3.0	AHIS 6	History of Modern Art	3.0
AHIS 11	History of African, Oceanic, and Native American Art	3.0		<i>or</i>	
AHIS 12	History of Precolumbian Art and Architecture	3.0	AHIS 6H	History of Modern Art - Honors	3.0
	<i>or</i>		AHIS 8	History of Medieval Art and Architecture	3.0
AHIS 12H	History of Precolumbian Art and Architecture- Honors	3.0	AHIS 10	A History of Greek and Roman Art and Architecture	3.0
List B select one: (3 Units)			AHIS 14	Rome: The Ancient City	3.0
ARTB 14	Basic Studio Arts	3.0	AHIS 15	The Culture and Art of Pompeii	3.0
ARTD 17A	Drawing: Life	3.0	Total Units for Major 21.0		
ARTD 20	Design: Two-Dimensional	3.0	CSU General Education 39.0 - 42.0		
ARTG 20	Art, Artists and Society	3.0	or IGETC Pattern		
ARTS 22	Design: Three-Dimensional	3.0	<i>Courses may be double-counted with either CSU-GE or IGETC.</i>		
ARTS 30A	Ceramics: Beginning I	3.0	Degree Total 60.0		
ARTS 40A	Sculpture: Beginning	3.0			

Associate in Arts in Communication Studies for Transfer

Humanities and Social Sciences Division Degree A0325

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:

Core Courses: (4 Units)

SPCH 1A Public Speaking 4.0

or

SPCH 1AH Public Speaking - Honors 4.0

List A: Select any 2 courses from the following: (6 Units)

SPCH 6 Group Communication 3.0

SPCH 20 Argumentation and Debate 3.0

or

SPCH 20H Argumentation and Debate - Honors 3.0

SPCH 26 Interpersonal Communication 3.0

or

SPCH 26H Interpersonal Communication - Honors 3.0

List B: Select any 2 courses from the following or any 1 course not selected from List A (6-7 Units)

SPCH 2 Fundamentals of Communication 4.0

SPCH 4 Performance of Literature 3.0

SPCH 7 Intercultural Communication 3.0

or

SPCH 7H Intercultural Communication Honors 3.0

Limit of three (3) Units from:

JOUR 100 Introduction to Mass Media 3.0

SPCH 15 Forensics: Fundamentals of Contest Speech and Debate 2.0

or

SPCH 16 Forensics: Individual Event Team 3.0

or

SPCH 17 Forensics: Debate Team 3.0

or

SPCH 18 Forensics: Reader's Theater Team 3.0

List C: Select at least 1 course from the following or any 1 course not selected from List A or List B (3-4 Units)

ENGL 1C Critical Thinking and Writing 4.0

or

ENGL 1CH Critical Thinking and Writing - Honors 4.0

JOUR 101 Beginning News Writing 3.0

SPCH 3 Voice and Diction 3.0

SPCH 8 Professional and Organizational Speaking 4.0

or

SPCH 8H Professional and Organizational Speaking - Honors 4.0

SPCH 30 Gateway to Communication Studies 3.0

Total Units for Major 18.0

CSU General Education 39.0 - 42.0 or IGETC Pattern

Courses may be double-counted with either CSU-GE or IGETC.

Degree Total 60.0

Associate in Arts in English for Transfer

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:

Core Courses: (7 Units)

ENGL 1B English - Introduction to Literary Types 3.0

or

ENGL 1BH Introduction to Literary Types - Honors 3.0

and

ENGL 1C Critical Thinking and Writing 4.0

or

ENGL 1CH Critical Thinking and Writing - Honors 4.0

List A: Select two: (6 Units)

LIT 1 Early American Literature 3.0

and

LIT 2 Modern American Literature 3.0

or

LIT 6A Survey of English Literature 3.0

and

LIT 6B Survey of English Literature 3.0

or

LIT 11A World Literature to 1650 3.0

and

LIT 11B World Literature from 1650 3.0

List B: Select one course from the following or any course not selected from List A: (3 Units)

ENGL 8A Creative Writing Fiction 3.0

ENGL 8B Creative Writing Poetry 3.0

ENGL 8F Creative Writing Non-Fiction 3.0

ENGL 81 Language Acquisition 3.0

List C: Select one course from the following or any course not selected from List A or List B: (3 Units)

ENGL 8C Creative Writing Novel 3.0

JOUR 100 Introduction to Mass Media 3.0

JOUR 101 Beginning News Writing 3.0

LIT 10 Survey of Shakespeare 3.0

LIT 14 Introduction to Modern Poetry 3.0

LIT 15 Introduction to Cinema 3.0

LIT 25 Contemporary Mexican American Literature 3.0

LIT 36 Introduction to Mythology 3.0

LIT 40 Children's Literature 3.0

LIT 46 The Bible as Literature - Old Testament 3.0

LIT 47 The Bible as Literature - New Testament 3.0

Total Units for Major 19.0

CSU General Education 39.0 - 42.0 or IGETC Pattern

Courses may be double-counted with either CSU-GE or IGETC.

Degree Total 60.0

Associate in Arts in Geography for Transfer Degree

Humanities and Social Sciences Division Degree A0356

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

Programs of Study Leading to an Associate Degree

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.

Required Courses:

Required Core (7 Units)

GEOG 1	Elements of Physical Geography	3.0
<i>or</i>		
GEOG 1H	Elements of Physical Geography - Honors	3.0
GEOG 1L	Physical Geography Laboratory	1.0
<i>or</i>		
GEOG 1LH	Physical Geography Laboratory - Honors	1.0
GEOG 2	Human Geography	3.0
<i>or</i>		
GEOG 2H	Human Geography - Honors	3.0
List A: (9 Units)		
GEOG 5	World Regional Geography	3.0
GEOG 30	Geography of California	3.0
<i>or</i>		
GEOG 30H	Geography of California - Honors	3.0
GEOG 10	Introduction to Geographic Information Systems	3.0

List B: (3 Units)

ANTH 5	Principles of Cultural Anthropology	3.0
Total Units for Major		19.0
CSU General Education		39.0 - 42.0
or IGETC Pattern		
<i>Courses may be double-counted with either CSU-GE or IGETC.</i>		
Degree Total		60.0

Associate in Arts in History for Transfer

Humanities and Social Sciences Division Degree A0334

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 group or non-western subject matter fulfilling transfer level GE categories and courses in foreign languages.

The 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 day issues and problems within a meaningful historical context.

To earn an Associate in Arts in 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.

Required Courses:

Core Courses: (6 Units)

HIST 7	History of the United States to 1877	3.0
<i>or</i>		
HIST 7H	History of the United States to 1877 - Honors	3.0
<i>and</i>		
HIST 8	History of the United States from 1865	3.0
<i>or</i>		
HIST 8H	History of the United States from 1865 - Honors	3.0

List A select two: (6 Units)

HIST 3	World History: Prehistoric to Early Modern	3.0
<i>or</i>		
HIST 3H	World History: Prehistoric to Early Modern - Honors	3.0
<i>and</i>		
HIST 4	World History: Early Modern to the Present	3.0
<i>or</i>		
HIST 4H	World History: Early Modern to the Present - Honors	3.0

List B Select one course from each group: (6-7 Units)

Group 1: Diversity Course

AHIS 9	History of Asian Art and Architecture	3.0
AHIS 11	History of African, Oceanic, and Native American Art	3.0
AHIS 12	History of Precolumbian Art and Architecture	3.0
AHIS 12H	History of Precolumbian Art and Architecture - Honors	3.0
ARAB 1	Elementary Arabic	4.0
ARAB 2	Continuing Elementary Arabic	4.0
CHIN 1	Elementary Chinese	4.0
CHIN 2	Continuing Elementary Chinese	4.0
CHIN 3	Intermediate Chinese	4.0
CHIN 4	Continuing Intermediate Chinese	4.0
FRCH 1	Elementary French	4.0
FRCH 2	Continuing Elementary French	4.0
FRCH 3	Intermediate French	4.0
FRCH 4	Continuing Intermediate French	4.0
GERM 1	Elementary German	4.0
GERM 2	Continuing Elementary German	4.0
GERM 3	Intermediate German	4.0
HIST 10	History of Premodern Asia	3.0
HIST 11	History of Modern Asia	3.0
HIST 19	History of Mexico	3.0
HIST 30	History of the African American 1619-1877	3.0
HIST 31	History of the African American	3.0
HIST 35	History of Africa	3.0
HIST 36	Women in American History	3.0
HIST 40	History of the Mexican American	3.0
HIST 44	History of Native Americans	3.0

ITAL 1	Elementary Italian	4.0
ITAL 2	Continuing Elementary Italian	4.0
ITAL 3	Intermediate Italian	4.0
ITAL 4	Continuing Intermediate Italian	4.0
JAPN 1	Elementary Japanese	4.0
JAPN 2	Continuing Elementary Japanese	4.0
JAPN 3	Intermediate Japanese	4.0
JAPN 4	Continuing Intermediate Japanese	4.0
JAPN 5	Advanced Japanese	4.0
LATN 1	Elementary Latin	4.0
LATN 2	Continuing Elementary Latin	4.0
LIT 20	African American Literature	3.0
LIT 25	Contemporary Mexican American Literature	3.0
POLI 25	Latino Politics in the United States	3.0
POLI 35	African American Politics	3.0
SPAN 1	Elementary Spanish	4.0
SPAN 2	Continuing Elementary Spanish	4.0
SPAN 3	Intermediate Spanish	4.0
SPAN 4	Continuing Intermediate Spanish	4.0
SIGN 101	American Sign Language 1	4.0
SIGN 102	American Sign Language 2	4.0
SIGN 103	American Sign Language 3	4.0
SIGN 104	American Sign Language 4	4.0
SIGN 202	American Deaf Culture	3.0
Group 2: History-Related Humanities Course		
AHIS 1	Understanding the Visual Arts	3.0
AHIS 3	History of Women and Gender in Art	3.0
AHIS 3H	History of Women and Gender in Art - Honors	3.0
AHIS 4	History of Western Art: Prehistoric Through Gothic	3.0
AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors	3.0
AHIS 5	History of Western Art: Renaissance Through Modern	3.0
AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	3.0
AHIS 6	History of Modern Art	3.0
AHIS 6H	History of Modern Art - Honors	3.0
AHIS 9	History of Asian Art and Architecture	3.0
AHIS 10	A History of Greek and Roman Art and Architecture	3.0
AHIS 11	History of African, Oceanic, and Native American Art	3.0

Programs of Study Leading to an Associate Degree

PSYC 1AH	Introduction to Psychology - Honors	3.0
SOC 1	Sociology	3.0
<i>or</i>		
SOC 1H	Sociology - Honors	3.0
Total Units for Major		18.0 - 19.0
CSU General Education		39.0 - 42.0
or IGETC Pattern		
<i>Courses may be double-counted with either CSU-GE or IGETC.</i>		
Degree Total		60.0

Associate in Arts in Psychology for Transfer

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:

Core Courses: (10-11 Units)

PSYC 1A	Introduction to Psychology	3.0
<i>or</i>		

PSYC 1AH	Introduction to Psychology - Honors	3.0
PSYC 3	Research Methods/Psych	4.0
PSYC 10	Statistics for the Behavioral Sciences	4.0
<i>or</i>		
MATH 110	Elementary Statistics	3.0
<i>or</i>		
MATH 110H	Elementary Statistics - Honors	3.0

List A select one: (3-4 Units)

BIOL 1	General Biology	4.0
<i>or</i>		
PSYC 1B	Biological Psychology	3.0

List B: Select one course from the following or any course not selected from List A: (3 or more Units)

PSYC 14	Developmental Psychology	3.0
<i>or</i>		
BIOL 13	Human Repro Devel Aging	3.0
<i>or</i>		
CHLD 10	Child Growth and Lifespan Development	3.0
<i>or</i>		
CHLD 10H	Child Growth and Lifespan Development- Honors	3.0
<i>or</i>		
ENGL 1C	Critical Thinking and Writing	4.0
<i>or</i>		
ENGL 1CH	Critical Thinking and Writing - Honors	4.0
<i>or</i>		
PHIL 3	Introduction to Logic	3.0
<i>or</i>		
PHIL 3H	Introduction to Logic - Honors	3.0
<i>or</i>		
PHIL 8	Critical Thinking	3.0
<i>or</i>		
PHIL 9	Critical Analysis and Writing	3.0
<i>or</i>		
SOC 1	Sociology	3.0
<i>or</i>		
SOC 1H	Sociology - Honors	3.0
<i>or</i>		
SOC 15	Child Development	3.0

List C: Select one course from the following or any course not selected from List A or List B: (3 or more Units)

PSYC 5	Psychology of Reasoning and Problem Solving	3.0
<i>or</i>		
PSYC 14	Developmental Psychology	3.0
<i>or</i>		
PSYC 15	Introduction to Child Psychology	3.0
<i>or</i>		
PSYC 19	Abnormal Psychology	3.0
<i>or</i>		
PSYC 25	The Psychology of Women	3.0
<i>or</i>		
PSYC 26	Psychology of Sexuality	3.0
<i>or</i>		
PSYC 33	Psychology for Effective Living	3.0
Total Units for Major		19.0
CSU General Education		39.0 - 42.0
or IGETC Pattern		
<i>Courses may be double-counted with either CSU-GE or IGETC.</i>		
Degree Total		60.0

Associate in Arts in Studio Arts for Transfer

Humanities and Social Sciences Division Degree A0395

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:

Core Courses: (12 Units)

AHIS 5	History of Western Art: Renaissance through Modern	3.0
<i>or</i>		
AHIS 5H	History of Western Art: Renaissance Through Modern - Honors	3.0
ARTD 15A	Drawing: Beginning	3.0
ARTD 20	Design: Two-Dimensional	3.0
ARTS 22	Design: Three-Dimensional	3.0

Required Electives (3 Units)

List A: Select one course

AHIS 4	History of Western Art: Prehistoric through Gothic	3.0
<i>or</i>		
AHIS 4H	History of Western Art: Prehistoric Through Gothic - Honors	3.0
<i>and</i>		

List B: Select 3 courses (9 units)

ARTD 17A	Drawing: Life	3.0
ARTD 21	Design: Color and Composition	3.0
ARTD 25A	Beginning Painting I	3.0

Total Units for Major		24.0
CSU General Education		XX.0 - XX.0
or IGETC Pattern		

Courses may be double-counted with either CSU-GE or IGETC.

Degree Total		60.0
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Associate in Arts in Theater Arts for Transfer

**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:

Core Courses: (9 Units)

THTR 9	Introduction to Theater Arts	3.0
	<i>or</i>	
THTR 10	History of Theater Arts	3.0
THTR 11	Principles of Acting I	3.0
THTR 15	Play Rehearsal and Performance	1.0 - 3.0
List A: Select three courses (9 - 9.5 Units)		
THTR 12	Principles of Acting II	3.0
THTR 14	Stagecraft	3.0
THTR 15	Play Rehearsal and Performance	1.0 - 3.0
THTR 16	Theatrical Make-Up	3.0

THTR 18	Technical Theater Practicum	1.0
THTR 19	Theatrical Costuming	3.0
	Total Units for Major	18.0 - 18.5
	CSU General Education	39.0 - 42.0
	or IGETC Pattern	
	<i>Courses may be double-counted with either CSU-GE or IGETC.</i>	
	Degree Total	60.0

Associate in Science in Administration of Justice for Transfer

**Technology and Health Division
Degree S0362**

The Associate in 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 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:

List A: Required Courses: (6 Units)

ADJU 1	The Administration of Justice System	3.0
ADJU 3	Concepts of Criminal Law	3.0
List B Choose any two of the following (6 Units)		
ADJU 2	Principles and Procedures of the Justice System	3.0
ADJU 4	Legal Aspects of Evidence	3.0
ADJU 5	Community Relations	3.0
ADJU 20	Principles of Investigation	3.0

ADJU 50	Introduction to Forensics for Criminal Justice	3.0
List C Choose any two of the following courses (6 Units)		
MATH 110	Elementary Statistics	3.0
	<i>or</i>	
MATH 110H	Elementary Statistics - Honors	3.0
PSYC 1A	Introduction to Psychology	3.0
	<i>or</i>	
PSYC 1AH	Introduction to Psychology - Honors	3.0
SOC 1	Sociology	3.0
	<i>or</i>	
SOC 1H	Sociology - Honors	3.0
	Total Units for Major	18.0
	CSU General Education	39.0 - 42.0
	or IGETC Pattern	
	<i>Courses may be double-counted with either CSU-GE or IGETC.</i>	
	Degree Total	60.0

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.

Associate in Science in Mathematics for Transfer

**Natural Sciences Division
Degree S0333**

Upon successful completion of Mt. San Antonio College's Associate in Science in Mathematics for Transfer degree requirements, the student will have demonstrated understanding of differential and integral calculus of one and several variables including infinite series, vector analysis, partial derivatives and transcendental functions, as well as demonstrating knowledge of linear algebra and differential equations. This coursework will satisfy the lower division mathematics requirements at the California State University. Guaranteed admission with junior status to the CSU system will be granted in mathematics (or possibly statistics).

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:

Core Courses: (14 Units)

MATH 180	Calculus and Analytic Geometry	4.0
MATH 181	Calculus and Analytic Geometry	5.0
MATH 280	Calculus and Analytic Geometry	5.0

List A: (5 Units)

MATH 285	Linear Algebra and Differential Equations	5.0
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List B select one: (3 - 5 or more Units)

CSCI 140	C++ Language and Object Development	4.0
MATH 110	Elementary Statistics	3.0
	<i>or</i>	
MATH 110H	Elementary Statistics - Honors	3.0
MATH 120	Finite Mathematics	3.0
PHYS 4A	Engineering Physics	5.0

	Total Units for Major	22.0 - 24.0
	CSU General Education	39.0 - 42.0
	or IGETC Pattern	

Courses may be double-counted with either CSU-GE or IGETC.

	Degree Total	60.0
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Associate in Arts in Journalism for Transfer

Humanities and Social Sciences Division Degree A0400

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:

Core Courses: (9 Units)

JOUR 100	Introduction to Mass Media	3.0
JOUR 101	Beginning Newswriting	3.0
JOUR 114	Student News Media Staff	3.0

List A: Select one: (3 Units)

JOUR 116	Multimedia Storytelling	3.0
JOUR 102	Intermediate Newswriting	3.0
JOUR 108	Writing for Public Relations	3.0
JOUR 115	Student News Media Editing Staff	3.0

List B: Select two: (6 Units)

PHOT 10	Basic Digital and Film Photography	3.0
BUSC 1A	Principles of Economics – Macroeconomics	3.0

or

BUSC 1AH	Principles of Economics – Macroeconomics – Honors	3.0
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or

POLI 1	Political Science	3.0
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or

POLI 1H	Political Science – Honors	3.0
POLI 2	Comparative Politics	3.0

or

ENGL 1C	Critical Thinking and Writing	4.0
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or

ENGL 1CH	Critical Thinking and Writing – Honors	4.0
SPCH 20	Argumentation and Debate	3.0

or

SPCH 20H	Argumentation and Debate – Honors	3.0
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or

Total Units for Major 18.0 - 19.0

CSU General Education 39.0 - 42.0

or IGETC Pattern

Courses may be double-counted with either CSU-GE or IGETC.

Degree Total 60.0

Associate in Science in Early Childhood Education for Transfer Degree

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.

Required Courses:

Core Courses:

CHLD 11	Child and Adolescent Development	3.0
CHLD 1	Child, Family, School and Community	3.0
CHLD 5	Principles and Practices in Child Development Programs	3.0
CHLD 6	Survey of Child Development Curriculum	3.0
CHLD 66	Early Childhood Development Observation and Assessment	2.0
and		
CHLD 66L	Early Childhood Development Observation and Assessment Laboratory	1.0
CHLD 67	Early Childhood Education Practicum	2.0
CHLD 67L	Early Childhood Education Practicum Laboratory	1.0
CHLD 64	Health, Safety and Nutrition of Children	3.0
CHLD 50	Teaching in a Diverse Society	3.0

Total Units for Major 24.0

CSU General Education 39.0

or IGETC Pattern

Courses may be double-counted with either CSU-GE or IGETC.

Degree Total 60.0

SECTION 9

Transferring to Four-Year
Colleges and Universities

THE 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 (2.40 for non-California residents) 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 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

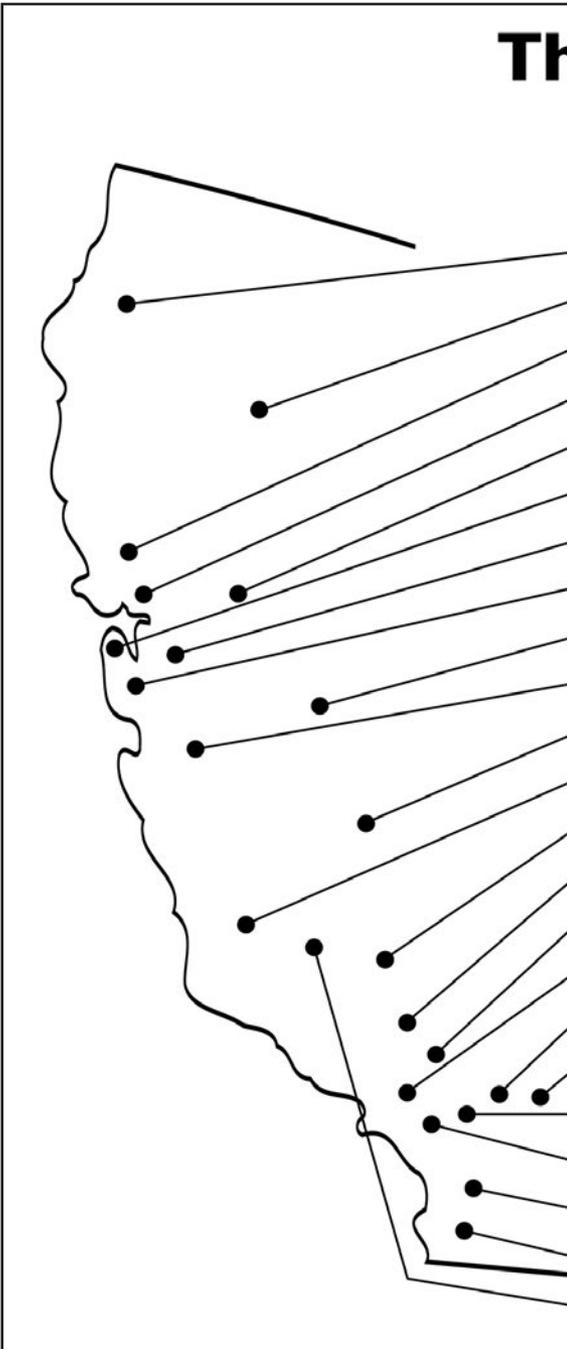
Please be aware that most CSU campuses do not admit lower-division transfer students. California residents may be eligible for CSU admission with fewer than 60 transferable semester units (90 quarter units) if they:

- 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.

The California State University

<http://www.csumentor.edu>



- Humboldt State University**
1 Harpst Street, Arcata, CA 95521-4957 • (707) 826-4402
- California State University, Chico**
400 W. First Street, Chico, CA 95929-0722 • (530) 898-6321
- Sonoma State University**
1801 East Cotati Avenue, Rohnert Park, CA 94928 • (707) 664-2778
- California Maritime Academy**
200 Maritime Academy Drive, Vallejo, CA 94590 • (702) 654-1330
- California State University, Sacramento**
6000 J Street, Sacramento, CA 95819-6112 • (916) 278-7766
- San Francisco State University**
1600 Holloway Avenue, San Francisco, CA 94132-4001 • (415) 338-1113
- California State University, East Bay**
25800 Carlos Bee Blvd., Hayward, CA 94542-3035 • (510) 885-2556
- San Jose State University**
One Washington Square, San Jose, CA 95192-0009 • (408) 283-7500
- California State University, Stanislaus**
One University Circle, Turlock, CA 95382 • (209) 667-3070
- California State University, Monterey Bay**
100 Campus Center Drive, Seaside, CA 93955-8001 • (831) 582-3738
- California State University, Fresno**
5150 North Maple Avenue, Fresno, CA 93740-0057 • (559) 278-2261
- California Polytechnic State University, San Luis Obispo**
San Luis Obispo, CA 93407 • (805) 756-2311
- California State University, Bakersfield**
9001 Stockdale Highway, Bakersfield, CA 93311-1099 • (661) 654-3036
- California State University, Northridge**
18111 Nordoff Street, Northridge, CA 91330-8207 • (818) 677-3700
- California State University, Los Angeles**
5151 State University Drive, Los Angeles, CA 90032-8530 • (323) 343-3901
- California State University, Dominguez Hills**
1000 East Victoria Street, Carson, CA 90247 • (310) 243-3645
- California Polytechnic University, Pomona**
3801 West Temple Avenue, Pomona, CA 91768-4003 • (909) 869-5299
- California State University, San Bernardino**
5500 University Parkway, San Bernardino, CA 92407-2397 • (909) 537-5188
- California State University, Fullerton**
800 N. State College Blvd., Fullerton, CA 92834-9480 • (657) 278-7601
- California State University, Long Beach**
1250 Bellflower Blvd., Long Beach, CA 90840-0106 • (562) 985-5471
- California State University, San Marcos**
333 S. Twin Oaks Valley Rd., San Marcos, CA 92096-0001 • (760) 750-4848
- San Diego State University**
5500 Campanile Drive, San Diego, CA 92182-7455 • (619) 594-6336
- California State University, Channel Islands**
One University Drive, Camarillo, CA 93012 • (805) 437-8500

CALIFORNIA STATE UNIVERSITY GENERAL EDUCATION REQUIREMENTS 2015 16

The requirements listed below are for the 2015-2016 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 five areas, A through E. A maximum of 30 units may be certified from Areas B through D collectively. 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.

Students beginning Fall 2015 must follow 2015-2016 CSU GE-Breadth requirements. Courses are approved for the academic year in which they were completed.

<p>Area A</p> <p>The English Language and Critical Thinking (9 units) <i>Select one course from each group:</i></p> <p>A-1: Oral Communication: SPCH 1A Public Speaking SPCH 1AH Public Speaking – Honors SPCH 2 Fundamentals of Communication SPCH 8 Professional and Organizational Speaking SPCH 8H Professional and Organizational Speaking – Honors</p> <p>A-2: Written Communication: ENGL 1A Freshman Composition ENGL 1AH Freshman Composition – Honors</p> <p>A-3: Critical Thinking: 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 Analysis and Writing PHIL 9H Critical Analysis and Writing – Honors PSYC 5 Psychology of Reasoning and Problem Solving SPCH 1B Intermediate Public Speaking SPCH 20 Argumentation and Debate SPCH 20H Argumentation and Debate – Honors</p> <p>Area B</p> <p>The Physical Universe & Life (9 units minimum): <i>Select one course from each group. Also, one lab (+) course must be included in one of the science groups.</i></p> <p>B-1: Physical Science – <i>Select at least one course from the following list:</i> ASTR 5 Introduction to Astronomy</p>	<p>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 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 GEOG 1 Elements of Physical Geography GEOG 1H Elements of Physical Geography – Honors + GEOG 1L Physical Geography Laboratory + GEOG 1LH Physical Geography Laboratory – Honors + GEOL 1 Physical Geology GEOL 7 Geology of California GEOL 8 Earth Science GEOL 8H Earth Science – Honors + GEOG 8L Earth Science Laboratory GEOL 9 Environmental Geology GEOL 10 Natural Disasters 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 7 Physical Science + PHSC 7L Physical Science Laboratory PHSC 9 Physical Science</p>	<p>+ PHYS 1 Physics + PHYS 2AG General Physics + PHYS 2BG General Physics + PHYS 4A Engineering Physics + PHYS 4B Engineering Physics + PHYS 4C Engineering Physics</p> <p>B-2: Life Science <i>Select at least one course from the following list:</i> 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</p> <p>B-3: Lab Science <i>This requirement is met by taking ONE of the courses above indicated by a "+" sign. Lab must be a corresponding section to the lecture course taken.</i></p>	<p>B-4: Mathematics <i>Select at least one course from the following list:</i> BUSC 17 Applied Business Statistics MATH 100 Survey of College Mathematics MATH 110 Elementary Statistics MATH 110H Elementary Statistics – Honors MATH 110S Integrated Statistics MATH 115 Statway 11 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 280 Calculus and Analytic Geometry MATH 285 Linear Algebra and Differential Equations PSYC 10 Statistics for the Behavioral Sciences</p> <p>Area C</p> <p>Arts, Literature, Philosophy and Foreign Languages (9 units) <i>Select three courses, with at least one course from "Arts" and one course from "Humanities":</i></p> <p>C-1: Arts AHIS 1 Understanding the Visual Arts, <u>or</u> ARTB 1 Understanding the Visual Arts AHIS 3 History of Women and Gender in Art AHIS 3H History of Women and Gender in Art – Honors 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</p>
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CALIFORNIA STATE UNIVERSITY GENERAL EDUCATION REQUIREMENTS 2015 16

<p>AHIS 5H History of Western Art: Renaissance Through Modern – Honors</p> <p>AHIS 6 History of Modern Art</p> <p>AHIS 6H History of Modern Art – Honors</p> <p>AHIS 8 History of Medieval Art and Architecture</p> <p>AHIS 9 History of Asian Art and Architecture</p> <p>AHIS 10 A History of Greek and Roman Art and Architecture</p> <p>AHIS 11 History of African, Oceanic and Native American Art</p> <p>AHIS 12 History of Precolumbian Art and Architecture</p> <p>AHIS 12H History of Precolumbian Art and Architecture – Honors</p> <p>AHIS 14 Rome: The Ancient City</p> <p>AHIS 15 Culture and Art of Pompeii</p> <p>ARCH 250 World Architecture I</p> <p>ARCH 251 World Architecture II</p> <p>ARTB 14 Basic Studio Arts</p> <p>ARTD 15A Drawing: Beginning</p> <p>ARTD 20 Design: Two-Dimensional</p> <p>ARTD 25A Beginning Painting I</p> <p>ARTG 20 Art, Artists and Society</p> <p>ARTS 22 Design: Three-Dimensional</p> <p>ARTS 30A Ceramics: Beginning I</p> <p>ARTS 40A Sculpture: Beginning</p> <p>DN-T 20 History and Appreciation of Dance</p> <p>ID 14 History of Furniture and Decorative Arts</p> <p>MUS 7 Fundamentals of Music</p> <p>MUS 11A Music Literature Survey</p> <p>MUS 11B Music Literature Survey</p> <p>MUS 12 History of Jazz</p> <p>MUS 13 Introduction to Music Appreciation</p> <p>MUS 13H Introduction to Music Appreciation – Honors</p> <p>MUS 14A World Music</p> <p>MUS 14B American Folk Music</p> <p>MUS 15 Rock Music History and Appreciation</p> <p>PHOT 15 History of Photography</p> <p>SPCH 4 Performance of Literature</p> <p>THTR 9 Introduction to Theater Arts</p> <p>THTR 10 History of Theater Arts</p> <p>THTR 11 Principles of Acting I</p>	<p>C-2: Humanities</p> <p>ARAB 1 Elementary Arabic</p> <p>ARAB 2 Continuing Elementary Arabic</p> <p>CHIN 1 Elementary Chinese</p> <p>CHIN 2 Continuing Elementary Chinese</p> <p>CHIN 3 Intermediate Chinese</p> <p>CHIN 4 Continuing Intermediate Chinese</p> <p>ENGL 1B English – Introduction to Literary Types</p> <p>ENGL 1BH English – Introduction to Literary Types – Honors</p> <p>FRCH 1 Elementary French</p> <p>FRCH 2 Continuing Elementary French</p> <p>FRCH 3 Intermediate French</p> <p>FRCH 4 Continuing Intermediate French</p> <p>FRCH 60 French Culture Through Cinema</p> <p>GERM 1 Elementary German</p> <p>GERM 2 Continuing Elementary German</p> <p>GERM 3 Intermediate German</p> <p>* HIST 1 History of the United States</p> <p>* HIST 3 World History: Prehistoric to Early Modern</p> <p>* HIST 3H World History: Prehistoric to Early Modern – Honors</p> <p>* HIST 4 World History: Early Modern to the Present</p> <p>* HIST 4H World History: Early Modern to the Present – Honors</p> <p>* HIST 7 History of the United States to 1877</p> <p>* HIST 7H History of the United States to 1877 – Honors</p> <p>* HIST 8 History of the United States from 1865</p> <p>* HIST 8H History of the United States from 1865 – Honors</p> <p>* HIST 10 History of Premodern Asia</p> <p>* HIST 11 History of Modern Asia</p> <p>* HIST 16 The Wild West – A History, 1800-1890</p> <p>* HIST 19 History of Mexico</p> <p>* HIST 30 History of the African American 1619 - 1877</p> <p>* HIST 31 History of the African American</p> <p>* HIST 35 History of Africa</p> <p>* HIST 36 Women in American History</p> <p>* HIST 39 California History</p> <p>* HIST 40 History of the Mexican American</p>	<p>HUMA1 The Humanities</p> <p>ITAL 1 Elementary Italian</p> <p>ITAL 2 Continuing Elementary Italian</p> <p>ITAL 3 Intermediate Italian</p> <p>ITAL 4 Continuing Intermediate Italian</p> <p>ITAL 60 Italian Culture Through Cinema</p> <p>JAPN 1 Elementary Japanese</p> <p>JAPN 2 Continuing Elementary Japanese</p> <p>JAPN 3 Intermediate Japanese</p> <p>JAPN 4 Continuing Intermediate Japanese</p> <p>JAPN 5 Advanced Japanese</p> <p>LATN 1 Elementary Latin</p> <p>LATN 2 Continuing Elementary Latin</p> <p>LIT 1 Early American Literature</p> <p>LIT 2 Modern American Literature</p> <p>LIT 3 Multicultural American Literature</p> <p>LIT 6A Survey of English Literature</p> <p>LIT 6B Survey of English Literature</p> <p>LIT 10 Survey of Shakespeare</p> <p>LIT 11A World Literature to 1650</p> <p>LIT 11B World Literature from 1650</p> <p>LIT 14 Introduction to Modern Poetry</p> <p>LIT 15 Introduction to Cinema</p> <p>LIT 20 African American Literature</p> <p>LIT 25 Contemporary Mexican American Lit</p> <p>LIT 36 Introduction to Mythology</p> <p>LIT 40 Children's Literature</p> <p>LIT 46 The Bible as Literature: Old Testament</p> <p>LIT 47 The Bible as Literature: New Testament</p> <p>PHIL 5 Introduction to Philosophy</p> <p>PHIL 5H Introduction to Philosophy – Honors</p> <p>PHIL 12 Introduction to Ethics</p> <p>PHIL 12H Introduction to Ethics – Honors</p> <p>PHIL 15 Major World Religions</p> <p>PHIL 15H Major World Religions – Honors</p> <p>PHIL 20A History of Ancient Philosophy</p> <p>PHIL 20AH History of Ancient Philosophy – Honors</p> <p>PHIL 20B History of Modern Philosophy</p> <p>PHIL 20BH History of Modern Philosophy – Honors</p> <p>* POLI 5 Political Theory I – Ancient to Contemporary</p> <p>* POLI 7 Political Theory II – Early Modern to Contemporary</p> <p>SIGN 101 American Sign Language 1</p> <p>SIGN 102 American Sign Language 2</p>	<p>SIGN 103 American Sign Language 3</p> <p>SIGN 104 American Sign Language 4</p> <p>SIGN 202 American Deaf Culture</p> <p>SPAN 1 Elementary Spanish</p> <p>SPAN 2 Continuing Elementary Spanish</p> <p>SPAN 3 Intermediate Spanish</p> <p>SPAN 4 Continuing Intermediate Spanish</p> <p>SPAN 11 Spanish for the Spanish Speaking</p> <p>SPAN 12 Continuing Spanish for the Spanish Speaking</p> <p>Area D</p> <p>Social, Political, and Economic Institutions and Behavior; Historical Background</p> <p><i>Required Courses: Minimum 9 units with courses from at least two disciplines (D0 – D9):</i></p> <p>D-0: Sociology & Criminology</p> <p>CHLD 1 Child, Family, School and Community</p> <p>SOC 1 Sociology</p> <p>SOC 1H Sociology – Honors</p> <p>SOC 2 Contemporary Social Problems</p> <p>SOC 2H Contemporary Social Problems – Honors</p> <p>SOC 4 Introduction to Gerontology</p> <p>SOC 5 Introduction to Criminology</p> <p>SOC 5H Introduction to Criminology – Honors</p> <p>SOC 14 Marriage and the Family</p> <p>SOC 14H Marriage and the Family – Honors</p> <p>* SOC 15 Child Development</p> <p>* SOC 20 Sociology of Ethnic Relations</p> <p>* SOC 20H Sociology of Ethnic Relations – Honors</p> <p>D-1: Anthropology & Archeology</p> <p>ANTH 3 Archeology</p> <p>ANTH 5 Principles of Cultural Anthropology</p> <p>ANTH 22 General Cultural Anthropology</p> <p>ANTH 30 The Native American</p> <p>D-2: Economics</p> <p>AGAG 1 Food Production, Land Use and Politics – A Global Perspective</p> <p>BUSC 1A Principles of Economics – Macroeconomics</p> <p>BUSC 1AH Principles of Economics – Macroeconomics – Honors</p> <p>BUSC 1B Principles of Economics – Microeconomics</p>
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CALIFORNIA STATE UNIVERSITY GENERAL EDUCATION REQUIREMENTS 2015 16

BUSC 1BH Principles of Economics – Microeconomics – Honors
 JOUR 100 Introduction to Mass Media
 R-TV 1 Introduction to Electronic Media

D-3: Ethnic Studies

* HIST 30 History of the African American 1619 - 1877
 * HIST 31 History of the African American
 * HIST 40 History of the Mexican American
 * HIST 44 History of Native Americans
 JOUR 107 Race, Culture, Sex, and Mass Media Images
 * POLI 25 Latino Politics in the United States
 * POLI 35 African American Politics
 * SOC 20 Sociology of Ethnic Relations
 * SOC 20H Sociology of Ethnic Relations – Honors

D-4: Gender Studies

* HIST 36 Women in American History
 * PSYC 25 The Psychology of Women

D-5: Geography

GEOG 2 Human Geography
 GEOG 2H Human Geography – Honors
 GEOG 5 World Regional Geography
 GEOG 8 The Urban World
 GEOG 30 Geography of California
 GEOG 30H Geography of California – Honors

D-6: History

* HIST 1 History of the United States
 * HIST 3 World History: Prehistoric to Early Modern
 * HIST 3H World History: Prehistoric to Early Modern – Honors
 * HIST 4 World History: Early Modern to the Present
 * HIST 4H World History: Early Modern to the Present – Honors
 * 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 10 History of Premodern Asia
 * HIST 11 History of Modern Asia
 * 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

D-7: Interdisciplinary Social or Behavioral Science

* CHLD 10 Child Growth and Lifespan Development
 * CHLD 10H Child Growth and Lifespan Development – Honors
 * CHLD 11 Child and Adolescent Development
 FASH 14 Dress, Culture, and Identity
 * HIST 16 The Wild West – A History, 1800-1890
 SPCH 7 Intercultural Communication
 SPCH 7H Intercultural Communication – Honors
 * SPCH 26 Interpersonal Communication
 * SPCH 26H Interpersonal Communication – Honors
 SPCH 30 Gateway to Communication Studies

D-8: Political Science, Government, and Legal Institutions

POLI 1 Political Science
 POLI 1H Political Science – Honors
 POLI 2 Comparative Politics
 * POLI 5 Political Theory I – Ancient to Contemporary
 * POLI 7 Political Theory II – Early Modern to Contemporary
 POLI 9 Introduction to International Relations
 POLI 10 Environmental Politics
 POLI 25 Latino Politics in the United States
 POLI 35 African American Politics

D-9: Psychology

PSYC 1A Introduction to Psychology
 PSYC 1AH Introduction to Psychology – Honors
 * PSYC 14 Developmental Psychology
 * PSYC 15 Introduction to Child Psychology
 PSYC 19 Abnormal Psychology

* PSYC 25 The Psychology of Women

Lifelong Understanding & Self Development (3 Units)

Select at least one course.

AD 3 Chemical Dependency: Intervention, Treatment and Recovery
 BIOL 5 Contemporary Health Issues
 BIOL 13 Human Reproduction, Development and Aging
 BIOL 15 Human Sexuality
 BIOL 15H Human Sexuality – Honors
 BIOL 24 Introduction to Public Health
 * CHLD 10 Child Growth and Lifespan Development
 * CHLD 10H Child Growth and Lifespan Development – Honors
 * CHLD 11 Child and Adolescent Development
 COUN 5 Career/Life Planning
 FCS 41 Life Management
 KIN 34 Fitness for Living
 LEAD 55 Exploring Leadership
 NF 10 Nutrition for Personal Health and Wellness
 NF 12 Sports Nutrition
 NF 25 Essentials of Nutrition
 NF 25H Essentials of Nutrition – Honors
 NF 28 Cultural and Ethnic Foods
 * PSYC 14 Developmental Psychology
 * PSYC 15 Introduction to Child Psychology
 * PSYC 25 The Psychology of Women
 PSYC 26 Psychology of Sexuality
 PSYC 33 Psychology for Effective Living
 * SOC 15 Child Development

* SPCH 26 Interpersonal Communication
 * SPCH 26H Interpersonal Communication – Honors

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.
- CSULA transfer students are advised to complete ENGL 1C or ENGL 1CH as part of the Area A requirements. CSULA requires completion of ENGL 102 (ENGL 1C or 1CH) as a prerequisite to UNIV 400 (Writing Proficiency Examination).
- Courses on this list have been approved by the CSU Office of the Chancellor for Fall 2015 and beyond. If a course was completed prior to approval, it cannot be certified for CSU General Education–Breadth requirements.
- Some majors at CSU do not allow double counting of major preparation courses and general education requirements. Students are advised to consult with a counselor or advisor to determine if courses can be double counted.
- Some majors require specific general education courses. Students planning to transfer are advised to plan their schedules carefully in order to maintain progress.

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

CSU AMERICAN INSTITUTIONS & U.S. HISTORY GRADUATION REQUIREMENT:

Option 1: HIST 7 (or 7H) + HIST 8 (or 8H)
 If Option #1 is selected, DO NOT select another D6 course as your third Area D course.

Option 2: Completion of one course from U.S. History plus one course from American Institutions:

United States History:

HIST 1 HIST 7H HIST 8H HIST 31 HIST 40
 HIST 7 HIST 8 HIST 30 HIST 36

American Institutions:

POLI 1 POLI 25
 POLI 1H POLI 35

The two courses from Option 1 or Option 2 may be used as part of the 9 units for AREA D.

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 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.

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).

The University of California

<http://www.ucop.edu/pathways>

UC Davis
One Shields Avenue, Davis, CA 95616 • (530) 752-6446

UC San Francisco
San Francisco, CA 94143 • (415) 476-9000

UC Berkeley
Berkeley, CA 94720 • (510) 642-6000

UC Santa Cruz
1156 High Street, Santa Cruz, CA 95064 • (831) 459-0111

UC Merced
5200 N. Lake Road, Merced, CA 95343 • (209) 724-4400

UC Santa Barbara
Santa Barbara, CA 93106 • (805) 893-8000

UC Los Angeles
Los Angeles, CA 90095 • (310) 825-4321

UC Irvine
Irvine, CA 92697 • (949) 824-5011

UC Riverside
Riverside, CA 92521 • (909) 787-1012

UC San Diego
9500 Gilman Drive, La Jolla, CA 92093 • (858) 534-2230

Transferring to Four-Year Colleges and Universities

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The requirements listed below are for the 2015-2016 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 2015 must follow 2015-2016 IGETC requirements. Courses are approved for the academic year in which they were completed.

Area 1

English Communication

Select one course from each group:

Group A: English Composition

- ENGL 1A Freshman Composition
- ENGL 1AH Freshman Composition – Honors

Group B: Critical Thinking – Composition

- ENGL 1C Critical Thinking and Writing
- ENGL 1CH Critical Thinking and Writing – Honors
- PHIL 9 Critical Analysis and Writing
- PHIL 9H Critical Analysis and Writing – Honors

Group C: Oral Communication

CSU requirements only

- SPCH 1A Public Speaking
- SPCH 1AH Public Speaking – Honors
- SPCH 2 Fundamentals of Communication

Area 2

Mathematical Concepts and Quantitative Reasoning

Select one course from:

- MATH110 Elementary Statistics
- MATH110H Elementary Statistics – Honors
- MATH 110S Integrated Statistics
- MATH120 Finite Mathematics
- MATH130 College Algebra
- MATH140 Calculus for Business
- MATH160 Precalculus Mathematics
- MATH180 Calculus and Analytic Geometry
- MATH181 Calculus and Analytic Geometry
- MATH280 Calculus and Analytic Geometry
- MATH285 Linear Algebra and Differential Equations
- PSYC 10 Statistics for the Behavioral Sciences

Area 3

Arts and Humanities

Select three courses minimum, at least one course from the Arts group and one course from the Humanities group:

Arts Courses:

- AHIS 1 Understanding the Visual Arts, or

- ARTB 1 Understanding the Visual Arts
- AHIS 3 History of Women and Gender in Art
- AHIS 3H History of Women and Gender in Art – Honors
- 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 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 12 History of Precolumbian Art and Architecture
- AHIS 12H History of Precolumbian Art and Architecture – Honors
- AHIS 14 Rome: The Ancient City
- AHIS 15 Culture and Art of Pompeii
- ARCH 250 World Architecture I
- ARCH 251 World Architecture II
- DN-T 20 History and Appreciation of Dance
- MUS 11A Music Literature Survey
- MUS 11B Music Literature Survey
- MUS 12 History of Jazz
- MUS 13 Introduction to Music Appreciation
- MUS 13H Introduction to Music Appreciation – Honors
- MUS 14A World Music
- MUS 14B American Folk Music
- MUS 15 Rock Music History and Appreciation
- 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
- GERM3 Intermediate German
- HIST 1 History of the United States
- HIST 3 World History: Prehistoric to Early Modern
- HIST 3H World History: Prehistoric to Early Modern – Honors
- HIST 4 World History: Early Modern to the Present
- HIST 4H World History: Early Modern to the Present – Honors
- 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 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
- HUMA1 The Humanities
- ITAL 3 Intermediate Italian
- ITAL 4 Continuing Intermediate Italian
- ITAL 60 Italian Culture Through Cinema
- JAPN 3 Intermediate Japanese
- JAPN 4 Continuing Intermediate Japanese
- JAPN 5 Advanced Japanese
- 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 History of Ancient Philosophy
- PHIL 20AH History of Ancient Philosophy – Honors
- PHIL 20B History of Modern Philosophy
- PHIL 20BH History of Modern Philosophy – Honors
- * POLI 5 Political Theory I – Ancient to Contemporary
- * POLI 7 Political Theory II – Early Modern to Contemporary
- SIGN 104 American Sign Language 4
- SIGN 202 American Deaf Culture
- SPAN 3 Intermediate Spanish
- SPAN 4 Continuing Intermediate Spanish

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Area 4

Social and Behavioral Sciences

Select three courses total from a minimum of two different subject areas:

- ANTH 3 Archaeology
- ANTH 5 Principles of Cultural Anthropology, or
- ANTH 22 General Cultural Anthropology
- 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
- GEOG 2 Human Geography
- GEOG 2H Human Geography – Honors
- GEOG 8 The Urban World
- GEOG 30 Geography of California
- GEOG 30H Geography of California – Honors
- * HIST 16 The Wild West – A History, 1800-1890
- HIST 44 History of Native Americans
- POLI 1 Political Science
- POLI 1H Political Science – Honors
- * POLI 5 Political Theory I
- * POLI 7 Political Theory II – Early Modern to Contemporary
- POLI 9 Introduction to International Relations
- POLI 10 Environmental Politics
- POLI 25 Latino Politics in the United States
- POLI 35 African American Politics
- PSYC 1A Introduction to Psychology
- PSYC 1AH Introduction to Psychology – Honors
- PSYC 14 Developmental Psychology
- PSYC 15 Introduction to Child Psychology
- PSYC 19 Abnormal Psychology
- PSYC 25 The Psychology of Women
- SOC 1 Sociology
- SOC 1H 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 20 Sociology of Ethnic Relations
- SOC 20H Sociology of Ethnic Relations – Honors
- SPCH 7 Intercultural Communication
- SPCH 7H Intercultural Communication – Honors
- SPCH 26 Interpersonal Communication
- SPCH 26H Interpersonal Communication – Honors
- SPCH 30 Gateway to Communication Studies

Area 5

Physical and Biological Sciences

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. Laboratory courses are underlined.

Physical Science:

- 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 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
- GEOG 1 Elements of Physical Geography
- GEOG 1H Elements of Physical Geography – Honors
- GEOG 1L Physical Geography Laboratory
- GEOG 1LH Physical Geography Laboratory – Honors
- GEOL 1 Physical Geology
- GEOL 8 Earth Science
- GEOL 8H Earth Science – Honors
- GEOL 8L Earth Science Laboratory
- GEOL 9 Environmental Geology
- METO 3 Weather and 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
- PHYS 1 Physics
- PHYS 2AG General Physics
- PHYS 2BG General Physics
- PHYS 4A Engineering Physics
- PHYS 4B Engineering Physics
- PHYS 4C Engineering Physics
- Biological 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 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

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.

- | | |
|---------------------------|--|
| ARAB 1 Elementary Arabic | JAPN 1 Elementary Japanese |
| CHIN 1 Elementary Chinese | LATN 1 Elementary Latin |
| FRCH 1 Elementary French | SIGN 101 American Sign Language 1 |
| GERM 1 Elementary German | SPAN 1 Elementary Spanish |
| ITAL 1 Elementary Italian | SPAN 11 Spanish for the Spanish Speaking |

CSU GRADUATION REQUIREMENTS ONLY IN U.S. HISTORY, CONSTITUTION, AND AMERICAN IDEALS:

Note: UCSB requires a college-level U.S. history or government course.

- Option 1: HIST 7 (or 7H) + HIST 8 (or 8H)
If Option #1 is selected, DO NOT select another D6 course as your third Area D course, or
- Option 2: Completion of one course from U.S. History plus one course from American Institutions.
See the categories below under United States History and American Institutions.

United States History:

- | | |
|---|--|
| HIST 1 History of the United States | HIST 36 Women in American History |
| HIST 7 History of the United States to 1877 | HIST 40 History of the Mexican American |
| HIST 7H History of the United States to 1877 – Honors | |
| HIST 8 History of the United States from 1865 | American Institutions: |
| HIST 8H History of the United States from 1865 – Honors | POLI 1 Political Science |
| HIST 30 History of the African American 1619-1877 | POLI 1H Political Science – Honors |
| HIST 31 History of the African American | POLI 25 Latino Politics in the United States |
| | POLI 35 African American Politics |

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 an educational advisor or international student counselor for language proficiency equivalences.

Transferring to Four-Year Colleges and Universities

ADVANCED PLACEMENT EXAMINATIONS IN CSU/UC GENERAL EDUCATION – BREADTH CERTIFICATION

Advanced Placement examinations may be incorporated into certification of completion of CSU/UC General Education–Breadth requirements by any participating institution. Students must have scored 3, 4, or 5 on an Advanced Placement examination listed on the table to receive the credit indicated. All CSU/UC campuses will accept the minimum units shown on the table toward fulfillment of the designated General Education–Breadth area if the examination is included in a full or subject-area certification; individual CSU/UC campuses may choose to accept more units than those specified towards completion of General Education–Breadth requirements. The CSU/UC campus to which the student is transferring determines the total number of units awarded for successful completion of an Advanced Placement examination and the applicability of the examination to other graduation. A table that lists how Advanced Placement is accepted for Mt. San Antonio College General Education is available in Section 3 (page 15) of this catalog.

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 prerequisites(s) of the class in which they plan to enroll at CSU/UC; and 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 at <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, or Mt. SAC Transfer Services.

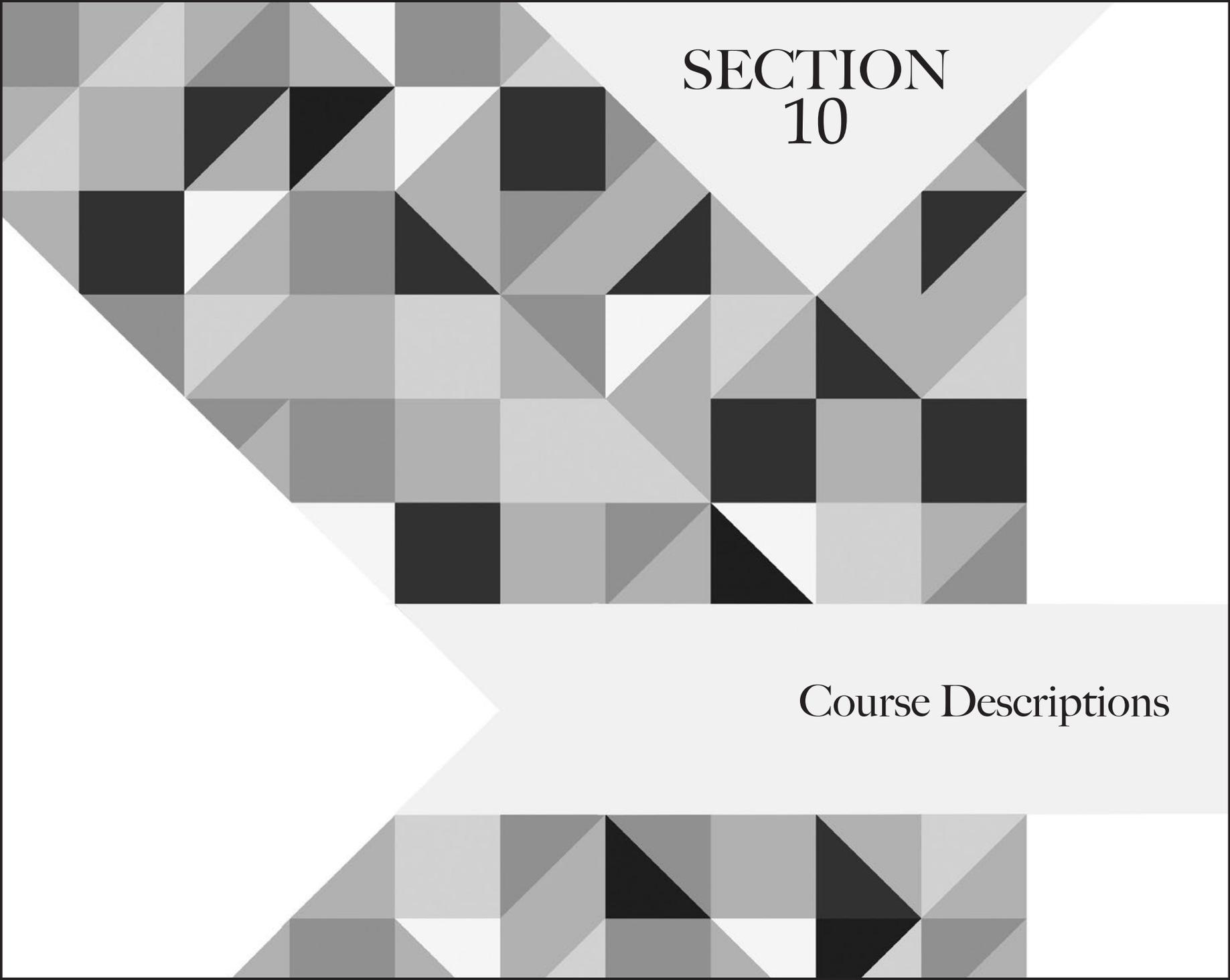
OUT-OF-STATE COLLEGES AND UNIVERSITIES

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.

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 / 2.7 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 / 2.7 semester
Economics — Macroeconomics	3 semester (Area D2)	3 semester	3 semester (Area 4B)	4 quarter / 2.7 semester
Economics — Microeconomics	3 semester (Area D2)	3 semester	3 semester (Area 4B)	4 quarter / 2.7 semester
English — 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 / 2.7 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 D8)	3 semester	3 semester (Area 4H)	4 quarter / 2.7 semester
Government & Politics — U.S.	3 semester (Area D8 and US 2)	3 semester	3 semester (Area 4H)	4 quarter / 2.7 semester
History — European	3 semester (Area C2 or D6)	6 semester	3 semester (Area 3B or 4F)	8 quarter / 5.3 semester
History — U.S.	3 semester (Area C2 or D6 and US 1)	6 semester	3 semester (Area 3B or 4F)	8 quarter / 5.3 semester
History — World	3 semester (Area C2 or D6)	6 semester	3 semester (Area 3B or 4F)	8 quarter / 5.3 semester
Human Geography	3 semester (Area D5)	3 semester	3 semester (Area 4E)	4 quarter / 2.7 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 — Vergil	3 semester (Area C2)	3 semester	3 semester (Area 3B and 6A)	4 quarter / 2.7 semester
Latin — Literature ⁵	3 semester (Area C2)	6 semester	3 semester (Area 3B and 6A)	4 quarter / 2.7 semester
Music Theory ^{6,8,10}	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 / 2.7 semester
Physics C — Magnetism ^{7,8}	4 semester (Area B1 and B3)	4 semester	3 semester (Area 5A with lab)	4 quarter / 2.7 semester
Physics 1 ⁷	4 semester (Area B1 and B3)	4 semester	NA	
Physics 2 ⁷	4 semester (Area B1 and B3)	4 semester	NA	
Psychology Seminar	3 semester (Area D9)	3 semester	3 semester (Area 4I)	4 quarter / 2.7 semester
Seminar	N/A	3 semester	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 2)	4 quarter / 2.7 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

- 1) If a student passes more than one AP exam in calculus or computer science, only one examination may be applied to the baccalaureate.
- 2) 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.
- 3) 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 of GE Breadth. Fall of 09 or later, those credits may only apply to B1+B3.
- 4) 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.
- 5) Students seeking certification in GE Breadth prior to transfer must have passed the test before Fall 2009.
- 6) Students seeking certification in GE Breadth prior to transfer must have passed the test before Fall 2010.
- 7) 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.
- 8) 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.
- 9) 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
- 10) The UC will grant credit for the full Music Theory exam. Students who earn only a subscore will not receive exam credit.



SECTION
10

Course Descriptions

Course Descriptions

DEFINITIONS OF TERMS

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 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 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.

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

UC limits credit for some courses. Students contemplating transfer to UC should consult with a counselor or advisor and review www.assist.org for course credit limitations and changes.

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.

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.

Prerequisite

A prerequisite is a course which must be taken as preparation for enrolling in another course.

Corequisite

A corequisite is a course which is required to be taken simultaneously in order to enroll in another course.

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.

Not Degree Applicable

Courses designated "Not Degree Applicable" are college level classes which are neither a part of an associate degree or certificate program nor transferable to four-year colleges and universities.

Degree Applicable

Courses designated "Degree Applicable" are college-level classes which are a part of an associate degree or certificate program.

COURSE PREFIX LISTING

AD	Alcohol Drug Counseling.....	129	CISP	Computer Information Systems: Programming.....	154	LCOM	Learning Communities.....	190
ADJU	Administration of Justice: Law Enforcement.....	120	CISS	Computer Information Systems: Security.....	155	LEAD	Leadership.....	190
AERO	Aeronautics.....	120	CISW	Computer Information Systems: Web Applications.....	156	LERN	Learning Assistance.....	190
AGAG	Agriculture: General Subjects.....	122	CISX	Computer Information Systems: Auxiliary.....	151	LIBR	Library & Instructional Media.....	191
AGAN	Agriculture: Animal Science – General.....	122	CNET	Computer and Networking Technology.....	158	LIT	English: Literature.....	168
AGHE	Agriculture: Animal Health Technology.....	121	CORS	Correctional Sciences.....	159	MATH	Mathematics.....	191
AGLI	Agriculture: Livestock Production.....	123	COUN	Counseling.....	159	MEDI	Medical Terminology.....	193
AGOR	Agriculture: Ornamental Horticulture.....	123	CSCI	Computer Science.....	157	MENT	Mental Health/Psychiatric Technician.....	193
AGPE	Agriculture: Pet Science.....	125	DN-T	Dance: Theory.....	161	METO	Meteorology.....	194
AIRC	Air Conditioning & Refrigeration.....	126	DNCE	Dance: Activity.....	159	MFG	Manufacturing Technology.....	191
AIRM	Aircraft Maintenance Technology.....	127	DSPS	Disabled Students.....	162	MICR	Microbiology.....	194
AIRT	Air Traffic Control.....	127	EDUC	Education.....	163	MUS	Music.....	195
AMLA	American Language.....	130	EDT	Engineering Design Technology.....	166	NF	Nutrition & Food.....	199
ANAT	Anatomy & Physiology.....	131	ELEC	Electronics.....	163	NURS	Nursing.....	198
ANTH	Anthropology.....	131	EMS	Emergency Medical Service.....	164	OCEA	Oceanography.....	200
ARAB	Arabic.....	132	EMT	Emergency Medical Technician.....	165	PHIL	Philosophy.....	200
ARCH	Architectural Technology.....	132	ENGL	English: Composition.....	167	PHOT	Photography.....	201
ANIM	Art: Animation.....	134	ENGR	Engineering.....	166	PHSC	Physical Science.....	203
ARTB	Art: Basic Studio Arts.....	136	EST	Electronics Systems Technology.....	164	PHYS	Physics.....	203
ARTC	Art: Graphic Design and Illustration.....	136	FCS	Family & Consumer Sciences.....	169	PLGL	Business: Paralegal.....	145
ARTG	Art: Gallery & Professional Practices.....	136	FASH	Fashion Merchandising & Design.....	170	POLI	Political Science.....	204
ARTZ	Art: Special Studio Arts.....	138	FIRE	Fire Technology.....	171	PSYC	Psychology.....	205
ARTS	Art: Three-Dimensional Studio Arts.....	138	FRCH	French.....	173	R-TV	Radio & Television.....	206
ARTD	Art: Two-Dimensional Studio Arts.....	139	GEOG	Geography.....	173	RAD	Radiologic Technology.....	208
AHIS	Art History.....	133	GEOG	Geology.....	174	READ	Reading.....	209
ASTR	Astronomy.....	140	GERM	German.....	175	RESD	Respiratory Therapy.....	210
BIOL	Biology.....	141	HIST	History.....	175	SIGN	Sign Language & Interpreting.....	211
BTNY	Botany.....	142	HRM	Hospitality & Restaurant Management.....	177	SL	Service Learning.....	211
BUSA	Business: Accounting.....	142	HT	Histotechnology.....	177	SOC	Sociology.....	212
BUSC	Business: Economics.....	144	HUMA	Humanities.....	178	SPAN	Spanish.....	214
BUSL	Business: Law.....	144	ID	Interior Design.....	179	SPCH	Speech.....	214
BUSM	Business: Management.....	144	IDE	Industrial Design Engineering.....	178	STDY	Study Techniques.....	216
BUSO	Business: Business Communications.....	143	INSP	Inspection & Estimating, Building.....	179	SURV	Surveying.....	216
BUSR	Business: Real Estate.....	146	ITAL	Italian.....	181	TECH	Technology-Related Courses.....	216
BUSS	Business: Sales, Merchandising & Marketing.....	147	JAPN	Japanese.....	182	THTR	Theater Arts.....	216
CHEM	Chemistry.....	147	JOUR	Journalism.....	183	TUTR	Tutor Training.....	217
CHIN	Chinese.....	151	KIN	Kinesiology: Theory.....	189	WELD	Welding.....	217
CHLD	Child Development.....	148	KIN-A	Kinesiology: Aquatics.....	183			
GRAP	Computer Graphics.....	151	KIN-F	Kinesiology: Fitness.....	186			
CISB	Computer Information Systems: Beginning.....	151	KIN-I	Kinesiology: Individual.....	187			
CISD	Computer Information Systems: Database.....	152	KIN-L	Kinesiology: Adaptive.....	173			
			KIN-S	Kinesiology: Team Sport.....	188			
CISM	Computer Information Systems: Management.....	153	KIN-X	Kinesiology: Athletics.....	174			
CISN	Computer Information Systems: Networking.....	153	LATN	Latin.....	190			

Course Descriptions

ADMINISTRATION OF JUSTICE: LAW ENFORCEMENT**■ ADJU 1 — The Administration of Justice System 3 Units**
(C-ID AJ 110) Degree Applicable, CSU, UC

54 hours lecture

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

(C-ID AJ 122) Degree Applicable, CSU

54 hours lecture

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
(C-ID AJ 120) Degree Applicable, CSU, UC

54 hours lecture

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
(C-ID AJ 124) Degree Applicable, CSU

54 hours lecture

Criminal evidence, including admissibility, witness competency, privileged communication, hearsay, and collection and preservation of evidence.

■ ADJU 5 — Community Relations 3 Units
(C-ID AJ 160) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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 — Concepts of Enforcement Services 3 Units
Degree Applicable

54 hours lecture

Responsibilities, techniques and methods of police patrol with emphasis on the knowledge required in handling common police occurrences.

■ ADJU 13 — Concepts of Traffic Services 3 Units
Degree Applicable

54 hours lecture

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
(C-ID AJ 140) Degree Applicable, CSU

54 hours lecture

Prerequisite: Eligibility for English 68

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

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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

(C-ID AJ 150) Degree Applicable, CSU

54 hours lecture

The science of 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

54 hours lecture

Advisory: Eligibility for ENGL 68, and ADJU 1

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 corrections role in intervention and suppression.

■ ADJU 68 — Administration of Justice Report Writing 3 Units
Degree Applicable

54 hours lecture

Prerequisite: Eligibility for ENGL 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

54 hours lecture

Prerequisite: Eligibility for ENGL 1A

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 to 4 Units

Not Degree Applicable

(May be taken for Pass/No Pass only)

75 to 300 hours lab

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 100 — Primary Pilot Ground School 4 Units**
Degree Applicable, CSU

72 hours lecture

Formerly AERO 23.

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

54 hours lecture

Formerly AERO 26.

Weather elements, atmosphere, weather mechanics, weather disturbances, weather analysis and forecasts. Evaluation of aviation weather reports and forecasts.

■ AERO 104 — Federal Aviation Regulations 2 Units
Degree Applicable, CSU

36 hours lecture

Formerly AERO 29.

Federal Aviation Regulations (FAR), pertaining to pilot certification, aircraft maintenance, general operating rules; air traffic control practices and procedures; reporting of aircraft accidents.

■ AERO 150 — Commercial Pilot Ground School **3 Units**
Degree Applicable, CSU

54 hours lecture
Advisory: AERO 23 or AERO 100
Formerly AERO 25.

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

54 hours lecture
Formerly TRAN 17.

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 200 — Aviation Safety and Human Factors **3 Units**
Degree Applicable, CSU

54 hours lecture
Advisory: AERO 23 or AERO 100
Formerly AERO 27.

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

54 hours lecture
Advisory: AERO 100 or AERO 23
Formerly AERO 28.

Aircraft design, subsystems, repair and maintenance. Principles of internal combustion engines, fuel system, engine construction and design, lubrication and cooling methods, ignition system, basic troubleshooting. Turbine engine basic design and operational characteristics.

■ AERO 206L — Flight Simulator Laboratory **.5 Unit**
Degree Applicable

(May be taken for Pass/No Pass only)
27 hours lab
Advisory: AERO 25 or AERO 150

Formerly AERO 41.
Flight simulator training in the iGATE Computer-based Aviation Training (PC-ATD) simulator in preparation for the instrument rating. Full and partial panel airwork, holding patterns, VHF Omnidirectional Range (VOR) and Automatic Directional Finder (ADF) orientation, and instrument approach procedures.

■ AERO 250 — Navigation **3 Units**
Degree Applicable, CSU

54 hours lecture
Advisory: AERO 23 or AERO 100
Formerly AERO 24.

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

54 hours lecture
Advisory: (AERO 23 or AERO 100) and (AERO 26 or AERO 102)
Formerly AERO 30.

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 256 — Flight Instructor Ground School **3 Units**
Degree Applicable

54 hours lecture
Advisory: (AERO 25 or AERO 150) and (AERO 30 or AERO 252)
Formerly AERO 58.

Basic teaching principles, and application of those principles in teaching student pilots. Analysis of flight maneuvers and instruments. Prepares students for FAA knowledge tests for Flight Instructors.

■ AERO 258 — Multi-Engine Turbine Aircraft Operations **3 Units**
Degree Applicable

54 hours lecture
Advisory: (AERO 23 or AERO 100) and (AERO 30 or AERO 252)
Formerly AERO 45A.

Design features and operational characteristics of a multi-engine turbine aircraft utilized in regional airline operations and corporate aviation, with emphasis on aircraft and engine systems. Off-campus trips maybe required.

AGRICULTURE: ANIMAL HEALTH TECHNOLOGY

■ AGHE 54 — Veterinary Office Procedures **3 Units**
Degree Applicable, CSU

54 hours lecture
Includes veterinary hospital records, client relations, medical terminology, filing of governmental reports, legal responsibilities of registered veterinary technicians and application of veterinary medical ethics.

■ AGHE 60 — Medical Nursing and Animal Care **4 Units**
Degree Applicable, CSU

54 hours lecture
54 hours lab
Prerequisite: AGHE 86 and AGHE 64 and Formal admittance to the Registered Veterinary Technology program

Animal examination for health and disease conditions in the animal hospital, including sanitation, administration of medicine, emergency treatment, therapeutic techniques, dental prophylaxis, venipuncture, electrocardiology, 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 — Surgical Nursing **4 Units**
Degree Applicable, CSU

54 hours lecture
54 hours lab
Prerequisite: AGHE 60 and Formal Admittance to the Registered Veterinary Technology Program

Surgical preparation, surgical assistance, post-operative care, administering and monitoring anesthesia, dentistry, CPR, sterilization and the maintenance of a sterile environment.

■ AGHE 62A — Clinical Pathology **4 Units**
Degree Applicable, CSU

54 hours lecture
54 hours lab
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 **4 Units**
Degree Applicable, CSU

54 hours lecture
54 hours lab
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

54 hours lecture
Prerequisite: AGHE 86, 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.

Course Descriptions

■ AGHE 65 — Veterinary Radiography 2 Units

Degree Applicable, CSU

18 hours lecture
54 hours lab

Prerequisite: AGHE 86 and formal admittance to the registered veterinary technology program

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

36 hours lecture
54 hours lab

Laboratory animal medicine, care and procedures, rules and regulations governing laboratory animals.

■ AGHE 83A — Work Experience in Animal Health 1 to 2 Units

Degree Applicable, CSU

(May be taken for Pass/No Pass only)

75 to 150 hours lab

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. Students who repeat this course will improve skills through further instruction and practice.

■ AGHE 84B — Applied Animal Health Procedures 1 Unit

Degree Applicable

54 hours lab

Prerequisite: Formal Admittance to the Registered Veterinary Technology Program

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

18 hours lecture

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

54 hours lecture

54 hours lab

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 GENERAL
■ AGAN 1 — Animal Science 3 Units

Degree Applicable, CSU, UC

54 hours lecture

Fundamental problems and essential concepts of animal production. Types of domestic animals and their utilization by humans.

■ AGAN 2 — Animal Nutrition 3 Units

Degree Applicable, CSU, UC

54 hours lecture

Composition of feeds and their utilization by domestic animals, including digestive physiology, animal assessment, feed appraisal and compiling of rations.

■ AGAN 51 — Animal Handling and Restraint 3 Units

Degree Applicable, CSU

36 hours lecture

54 hours lab

Methods of proper handling for large and small animals, including chemical and physical techniques of restraint. Field trip required.

■ AGAN 94 — Animal Breeding 3 Units

Degree Applicable

54 hours lecture

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.

AGRICULTURE: GENERAL SUBJECTS
■ AGAG 1 — Food Production, Land Use and Politics - A Global Perspective 3 Units

Degree Applicable, CSU, UC

54 hours lecture

Surveys the world's food producing systems in terms of economic, political and cultural forces. Emphasizes ethical, sustainable food producing agriculture.

■ AGAG 59 — Work Experience in Agriculture 1 to 4 Units

Degree Applicable

(May be taken for Pass/No Pass only)

75 to 300 hours lab

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

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.

■ AGAG 91 — Agricultural Calculations 3 Units

Degree Applicable

54 hours lecture

Prerequisite: Eligibility for MATH 51

Calculating the proper dosages of veterinary drugs, application rates of farm and horticultural chemicals inclusive of fertilizer and pesticide materials, feed rations, land area and volume measurements, calibrating application equipment, plotting production rates and feed conversion, determining proper concentrations and dilutions.

■ AGAG 99 — Special Projects in Agriculture 2 Units

Degree Applicable, CSU

(May be taken for Pass/No Pass only)

36 hours lecture

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.

AGRICULTURE: LIVESTOCK PRODUCTION**■ AGLI 12 — Exotic Animal Management 3 Units**
Degree Applicable

36 hours lecture

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.

■ AGLI 14 — Swine Production 3 Units
Degree Applicable, CSU

36 hours lecture

54 hours lab

Swine enterprises and the ways and means of entering them. Swine management, including handling, feeding, breeding, farrowing, butchering, and marketing. Practical skills are taught using the college farm.

■ AGLI 16 — Horse Production and Management 4 Units
Degree Applicable, CSU, UC

54 hours lecture

54 hours lab

Selection, utilization, and management of the light horse. Emphasis is on evaluation, health care, and handling skills.

■ AGLI 17 — Sheep Production 3 Units
Degree Applicable, CSU

36 hours lecture

54 hours lab

Various types of sheep enterprises and the ways and means of entering them. Sheep management, sheep handling, feeding, shearing, breeding, lambing, and marketing. Practical skills are taught on the school farm and sheep farms in the area. Field trips required.

■ AGLI 18 — Horse Ranch Management 4 Units
Degree Applicable, CSU

54 hours lecture

54 hours lab

Prerequisite: AGLI 16

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.

■ AGLI 19 — Horse Hoof Care 2 Units
Degree Applicable, CSU

18 hours lecture

54 hours lab

Proper horse hoof care; shoeing, trimming and disease recognition and control.

■ AGLI 20 — Horse Behavior and Training 2 Units
Degree Applicable

18 hours lecture

54 hours lab

Corequisite: AGLI 16

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.

■ AGLI 30 — Beef Production 3 Units
Degree Applicable, CSU

36 hours lecture

54 hours lab

Principles and practices in the selection and management of feeder, market, and breeding beef cattle. Economics of production, retail product, utilization of farm-grown feeds, and feedlot operation. Field trip required.

■ AGLI 34 — Livestock Judging and Selection 2 Units
Degree Applicable, CSU, UC

18 hours lecture

54 hours lab

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.

■ AGLI 96 — Animal Sanitation and Disease Control 3 Units
Degree Applicable, CSU

54 hours lecture

Prevention and control of infectious diseases affecting domestic animals, including basic disease concepts, transmission of infectious diseases, principles of sanitation and fundamentals of immunology.

■ AGLI 97 — Artificial Insemination of Livestock 2 Units
Degree Applicable

18 hours lecture

54 hours lab

Theory and application of artificial insemination of domestic animals, including semen evaluation and processing, heat synchronization, and pregnancy diagnosis.

AGRICULTURE: ORNAMENTAL HORTICULTURE**■ AGOR 1 — Horticultural Science 3 Units**
Degree Applicable, CSU

54 hours lecture

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.

■ AGOR 2 — Plant Propagation/Greenhouse Management 3 Units
Degree Applicable, CSU

36 hours lecture

54 hours lab

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 4 — Park Management 3 Units
Degree Applicable

54 hours lecture

Management and operation of municipal park departments. Includes the development of budgets, purchasing, park policies, planning and scheduling.

■ AGOR 5 — Park Facilities 3 Units
Degree Applicable

54 hours lecture

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

36 hours lecture

54 hours lab

Fundamentals and implementation of landscape design. Principles of design, the design process, drafting, graphics, site evaluation, landscaping materials, and plant usage. Projects emphasize residential and small commercial sites. Field trips and off-campus assignments required.

■ AGOR 14 — Advanced Landscape Design 3 Units
Degree Applicable

36 hours lecture

54 hours lab

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.

■ AGOR 15 — Interior Landscaping 3 Units
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Design, installation and maintenance practices used in interior landscaping. Includes identification, culture and care of plants suitable for interior use. Field trip required.

Course Descriptions

■ AGOR 24 — Integrated Pest Management 3 Units
 Degree Applicable, CSU

36 hours lecture
54 hours lab

Identifies common agricultural pests in Southern California and analyzes physical, biological and chemical pest control principles and practices, including integrated pest management (IPM). Stresses use, safety, equipment, laws, and regulations of pesticides.

■ AGOR 29 — Ornamental Plants - Herbaceous 3 Units
 Degree Applicable, CSU, UC

36 hours lecture
54 hours lab

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

36 hours lecture
54 hours lab

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

36 hours lecture
54 hours lab

Operation and management of wholesale and retail nurseries. Includes site location and layout of areas; greenhouse management; soil mixes and proper use of fertilizers, insecticides, fungicides, herbicides and growth regulators; irrigation; mechanization; financing; personnel management; retail displays, advertising and 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

36 hours lecture
54 hours lab

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

36 hours lecture
54 hours lab

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.

■ AGOR 40 — Sports Turf Management 3 Units
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
54 hours lab

Prerequisite: AGOR 39 or equivalent experience

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

36 hours lecture
54 hours lab

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

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
54 hours lab

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 52 — Hydraulics 3 Units
 Degree Applicable, CSU

36 hours lecture
54 hours lab

Operation, maintenance, and repair of hydraulic systems used for agriculture and industrial equipment. Emphasis on pumps, valves, cylinders, flow control, reservoirs, lines, motors, and hydrostatic transmissions.

■ AGOR 53 — Small Engine Repair I 3 Units
 Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
54 hours lab

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 54 — Small Engine Repair II 3 Units
 Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
54 hours lab

Prerequisite: AGOR 53

Advanced repair and maintenance of mid-horsepower gasoline and diesel engines. Multi-cylinder air- and water-cooled engines used in landscape, industrial and agricultural applications. Repair of riding mowers, generator engines, air compressor engines, 2-cycle and 4-cycle engines, spraying equipment, all-terrain vehicles, and other related gas-powered equipment.

■ AGOR 55 — Diesel Engine Repair 3 Units
 Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
54 hours lab

Repair and maintenance of diesel engines used to power industrial, landscape and agricultural equipment.

■ AGOR 56 — Engine Diagnostics 3 Units
 Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
54 hours lab

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.

■ **AGOR 57 — Power Train Repair** **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
54 hours lab
Service, maintenance, and repair of power trains. Includes clutches, transmissions, differentials, power take-off units, and final drives used to transmit power on tractors and other outdoor power equipment.

■ **AGOR 62 — Landscape Irrigation - Design and Installation** **3 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
54 hours lab
Design and installation of turf and ornamental irrigation systems. Design techniques, sprinkler system components and hydraulic principles used in nursery management, interior design, residential and commercial landscaping. Special emphasis is given to water conservation incorporating controlled flow technologies.

■ **AGOR 63 — Landscape Irrigation Systems Management** **3 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
54 hours lab
Systematic approach to water conservation in landscapes. Repair techniques that will allow a current system to efficiently operate to its initial design. Trouble shooting procedures including field testing of valves and controllers. Irrigation efficiency testing will be incorporated to demonstrate proper methods of water audits and system evaluation.

■ **AGOR 64 — Landscape Irrigation - Drip and Low Volume** **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
54 hours lab
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.

■ **AGOR 71 — Landscape Construction Fundamentals** **3 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
54 hours lab
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

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
54 hours lab
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

(May be taken for option of letter grade or Pass/No Pass)
54 hours lecture
Landscape laws, contracting, and estimating as they pertain to landscape construction. Information covered will be helpful for the Landscape Contractors (C-27 classification) licensing exam administered by the state of California. Off campus assignments required.

■ **AGOR 75 — Urban Arboriculture** **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
54 hours lab
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 exams.

■ **AGOR 91 — Work Experience in Nursery Operations 1 to 4 Units**
Degree Applicable

(May be taken for Pass/No Pass only)
75 to 300 hours lab
Prerequisite: 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. This course is available to students achieving advanced standing (minimum 12 units in major or equivalent experience.)

AGRICULTURE: PET SCIENCE

■ **AGPE 70 — Pet Shop Management** **3 Units**
Degree Applicable

54 hours lecture
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.

■ **AGPE 71 — Canine Management** **3 Units**
Degree Applicable

36 hours lecture
54 hours lab
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.

■ **AGPE 72 — Feline Management** **3 Units**
Degree Applicable

54 hours lecture
Advisory: Eligibility for ENGL 68
Care and management of cats including breed identification and characteristics, grooming, showing, nutrition, practical care, behavior, breeding, and housing.

■ **AGPE 73 — Tropical and Coldwater Fish Management** **2 Units**
Degree Applicable

36 hours lecture
Advisory: Eligibility for ENGL 68
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.

■ **AGPE 74 — Reptile Management** **2 Units**
Degree Applicable

36 hours lecture
Advisory: Eligibility for ENGL 68
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.

■ **AGPE 76 — Aviculture - Cage and Aviary Birds** **3 Units**
Degree Applicable

54 hours lecture
Cage and aviary birds marketed in the wholesale and retail pet trade. Identification, nutrition, breeding, disease prevention and control, aviary construction. Psittacines, soft bills, finches, game birds, poultry and ornamental waterfowl.

Course Descriptions

AIR CONDITIONING AND REFRIGERATION		
<p>■ AIRC 10 — Technical Mathematics in Air 2 Units Degree Applicable</p> <p>27 hours lecture 27 hours lab 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.</p>	<p>■ AIRC 26 — Gas Heating Fundamentals 2 Units Degree Applicable</p> <p>36 hours lecture <i>Advisory: AIRC 12 and AIRC 25</i> 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.</p>	<p>■ AIRC 61 — Building Automation Fundamentals 2.5 Units Degree Applicable</p> <p>36 hours lecture 27 hours lab <i>Advisory: AIRC 20, AIRC 25, AIRC 31, AIRC 34, ELEC 11</i> Basics of commercial HVAC control theory as it applies to electric, pneumatic, and digital control systems. Principles of chiller plant operation, air distribution, Variable Air Volume, constant air systems, and multizone systems.</p>
<p>■ AIRC 11 — Welding for Air Conditioning and Refrigeration 2 Units Degree Applicable</p> <p>18 hours lecture 54 hours lab 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.</p>	<p>■ AIRC 30 — Heat Load Calculations and Design 4 Units Degree Applicable</p> <p>72 hours lecture <i>Advisory: AIRC 20 taken prior</i> 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.</p>	<p>■ AIRC 63 — Building Control Networks 3 Units Degree Applicable</p> <p>54 hours lecture <i>Advisories: CISN 11</i> Building Control Network implementations and protocol standards including web based applications, BACnet, Ethernet, LonTalk, and proprietary systems. Routers, installation, and troubleshooting will also be studied.</p>
<p>■ AIRC 12 — Air Conditioning Codes and Standards 3 Units Degree Applicable</p> <p>54 hours lecture 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.</p>	<p>■ AIRC 31 — Commercial Electrical for Air Conditioning and Refrigeration 4 Units Degree Applicable</p> <p>54 hours lecture 54 hours lab <i>Advisory: AIRC 25</i> 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.</p>	<p>■ AIRC 65 — Building Automation Networks and Programming 3 Units Degree Applicable</p> <p>18 hours lecture 108 hours lab <i>Advisories: AIRC 61, AIRC 63, CISN 11</i> Programming HVAC direct digital controllers using line (text) programming, icon based programming, and template programming. Stresses good programming practices including complete program documentation.</p>
<p>■ AIRC 20 — Refrigeration Fundamentals 4 Units Degree Applicable</p> <p>48 hours lecture 71 hours lab 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.</p>	<p>■ AIRC 32A — Air Properties and Measurement 1.5 Units Degree Applicable</p> <p>27 hours lecture <i>Advisory: AIRC 20, AIRC 30 taken prior</i> 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.</p>	<p>■ AIRC 67 — Energy Management 4 Units Degree Applicable</p> <p>72 hours lecture <i>Advisories: AIRC 34, AIRC 61, AIRC 63, AIRC 65</i> 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 LEED programs.</p>
<p>■ AIRC 25 — Electrical Fundamentals for Air Conditioning and Refrigeration 5 Units Degree Applicable</p> <p>66 hours lecture 54 hours lab 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.</p>	<p>■ AIRC 34 — Advanced Mechanical Refrigeration 4 Units Degree Applicable</p> <p>54 hours lecture 54 hours lab <i>Advisory: AIRC 20</i> Principles of mechanical air conditioning and refrigeration based on operating characteristics of working equipment and the interpretation of the pressure-enthalpy chart. Technical aspects of mechanical components will be explored to include compressors, metering devices, pressure regulators, capacity controls, and defrost methods.</p>	<p>■ AIRC 95 — Work Experience in Air Conditioning and Refrigeration 1 to 4 Units Degree Applicable</p> <p>(May be taken for Pass/No Pass only) 75 to 300 hours lab <i>Prerequisite: Approval of college Work Experience supervisor and compliance with Work Experience regulations as designated in the College Catalog.</i> Work experience in Air Conditioning and 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.</p>

AIR TRAFFIC CONTROL

■ **AIRT 151 — Aircraft Recognition and Performance** **3 Units**
Degree Applicable, CSU

54 hours lecture
Advisory: AERO 23 or AERO 100
Formerly AIRT 41.

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

54 hours lecture
Advisory: AERO 23 or AERO 100 and AIRT 41 or AIRT 151
Formerly AIRT 42A.

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

54 hours lab
Advisory: AERO 100
Formerly AIRT 51.

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

54 hours lecture
Advisory: AERO 23 or AERO 100 and AIRT 41 or AIRT 151
Formerly AIRT 42B.

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 and 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

54 hours lab
Advisory: AERO 100
Formerly AIRT 55.

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

27 hours lecture
Advisory: AIRT 201 or AIRT 42A
Formerly AIRT 43.

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.

■ **AIRT 253 — Work Experience in Air Traffic Control** **1 Unit**
Degree Applicable

(May be taken for Pass/No Pass only)
75 hours lab
Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog
Formerly AIRT 47.

On-the-job experience in an approved FAA work station. 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.

AIRCRAFT MAINTENANCE TECHNOLOGY

■ **AIRM 65A — Aircraft Powerplant Maintenance Technology** **13 Units**
Degree Applicable, CSU

108 hours lecture
376 hours lab
Theory and overhaul of aircraft reciprocating and turbine powerplants. Approved and required for the FAA powerplant certification and Airframe and Aircraft Powerplant Maintenance Technology major.

■ **AIRM 65B — Aircraft Powerplant Maintenance Technology: Reciprocating and Turbine** **13 Units**
Degree Applicable, CSU

108 hours lecture
376 hours lab
Prerequisite: AIRM 65A or (AIRM 95A and AIRM 95B and AIRM 96A and AIRM 96B)
Reciprocating and turbine engine systems and components. Approved and required for the Federal Aviation Administration (FAA) powerplant certification and Airframe and Aircraft Powerplant Maintenance Technology major.

■ **AIRM 66A — Aircraft Airframe Maintenance Structures** **13 Units**
Degree Applicable, CSU

108 hours lecture
376 hours lab
This course is approved by the Federal Aviation Administration FAA and required for all Aircraft Powerplant and Airframe Maintenance Technology majors. Topics span aerodynamics, design theory, construction, inspection, maintenance, repair and alteration of aircraft airframe structures.

■ **AIRM 66B — Airframe Maintenance Technology** **13 Units**
Degree Applicable, CSU

108 hours lecture
376 hours lab
Prerequisite: AIRM 66A OR (AIRM 90A and AIRM 90B and AIRM 91A and AIRM 91B)
Airframe systems and components. Approved and required for the Federal Aviation Administration (FAA) and required airframe certification and the Airframe and Aircraft Powerplant Maintenance Technology major.

■ **AIRM 70A — Aircraft Maintenance Electricity and Electronics** **3 Units**
Degree Applicable

36 hours lecture
71 hours lab
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

36 hours lecture
71 hours lab
Advisory: AIRM 70A and AIRM 71
Principles of alternating current electricity with emphasis on components and circuits. Required for FAA certification.

Course Descriptions

■ AIRM 71 — Aviation Maintenance Science 6 Units
Degree Applicable

108 hours lecture
Federal aviation regulations, interpretation of aircraft drawings, basic physics, technical mathematics, and aircraft weight and balance computations. FAA approved course required of all aircraft powerplant and airframe maintenance technology majors.

■ AIRM 72 — Aircraft Materials and Processes 1.5 Units
Degree Applicable

18 hours lecture
36 hours lab
Advisory: AIRM 71 AND AIRM 73
Part 147 Federal Aviation Administration (FAA) approved course covering aviation materials, non-destructive testing, basic heat-treating and machining.

■ AIRM 73 — Aircraft Welding 1.5 Units
Degree Applicable

18 hours lecture
36 hours lab
Advisory: AIRM 71 or AIRM 72
Theory and techniques of gas and inert gas welding used in aircraft construction and repair. Required for Federal Aviation Administration (FAA) airframe and powerplant certification.

■ AIRM 74 — Aircraft Maintenance Technology - Work Experience 2 Units
Degree Applicable

(May be taken for Pass/No Pass only)
120 to 150 hours lab
Prerequisite: AIRM 65A and AIRM 65B or AIRM 66A and AIRM 66B
Combines aircraft maintenance experience in addition to classroom instruction for college credit. Two units of credit will be earned as a result of 120 unpaid or 150 paid work hours. The employer/evaluator will have the student perform aircraft maintenance work under direct supervision at a maintenance facility.

■ AIRM 80 — Laboratory Studies in Aircraft Maintenance Technology .5 to 1 Unit
Degree Applicable

(May be taken for Pass/No Pass only)
27 to 54 hours lab
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 Maintenance Technology 3 Units
Degree Applicable

36 hours lecture
71 hours lab
Advisory: AIRM 70A, AIRM 70B, AIRM 71, AIRM 72, AIRM 73
A Federal Aviation Administration (FAA) approved course covering aircraft flight, flight control and construction methods and procedures

■ AIRM 90B — Airframe Maintenance Technology: Structure and Design 3 Units
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: AIRM 90A or AIRM 66B
Aircraft structural designs, station numbers, aviation nomenclature and definitions. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

■ AIRM 91A — Airframe Maintenance Technology 3 Units
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: (AIRM90A and AIRM 90B) or AIRM 66B
Aircraft wood structures, coverings, finishes, and maintenance. Approved by the FAA and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

■ AIRM 91B — Airframe Maintenance Technology: Aluminum repair 3 Units
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: (AIRM 90A and AIRM 90B and AIRM 91A) or AIRM 66
Metals and composite materials used in aircraft construction, maintenance, and repair. Approved by the FAA and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

■ AIRM 92A — Airframe Maintenance Technology: Hydraulics and Pneu 3 Units
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: (AIRM 90A and AIRM 90B and AIRM 91A and AIRM 91B) or AIRM 66A
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 Power Plant Maintenance Technology major.

■ AIRM 92B — Airframe Maintenance Systems 2 3 Units
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: AIRM 92A or AIRM 66A
Aircraft warning systems, aircraft instrument systems and aircraft fuel storage and transfer systems. Approved by the FAA and required for the Aircraft Airframe and Powerplant Maintenance Technology major.

■ AIRM 93A — Airframe Maintenance Technology: Systems 3 Units
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: (AIRM 92A and AIRM 92B) or AIRM 66A
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 — Airframe Maintenance Technology: Fire Suppression 3 Units
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: (AIRM 92A and AIRM 92B and AIRM 93A) or AIRM 66A
Aircraft fire detection and suppression systems. Aircraft inspection requirements and procedures. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

■ AIRM 95A — Aircraft Powerplant Maintenance Technology 3 Units
Degree Applicable

36 hours lecture
71 hours lab
Advisory: AIRM 70A, AIRM 70B, AIRM 71, AIRM 72, AIRM 73
FAA approved course covering piston powerplant theory. Includes calculations and construction methods.

■ AIRM 95B — Aircraft Powerplant Maintenance Technology: Reciprocating Engines 3 Units
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: AIRM 95A or AIRM 65B
Federal Aviation Administration (FAA) approved course covering piston engine overhaul, inspection, and troubleshooting procedures.

■ **AIRM 96A — Aircraft Powerplant Maintenance Technology: Turbine Engines** **3 Units**

Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: (AIRM 95A and AIRM 95B) or AIRM 65B
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 Powerplant Maintenance Technology: Propellers** **3 Units**

Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: (AIRM 95A and AIRM 95B and AIRM 96A) or AIRM 65B
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 Maintenance Technology: Instrumentation** **3 Units**

Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: (AIRM 95A and AIRM 95B and AIRM 96A and AIRM96B) or AIRM 65B
Federal Aviation Administration (FAA) approved course covering instrumentation and smoke and fire detection/suppression systems used in small and large aircraft. Includes engine starting systems and electrical power generating devices.

■ **AIRM 97B — Aircraft Powerplant Maintenance Technology: Fuel Meter Systems** **3 Units**

Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: AIRM 97A or AIRM 65A
Reciprocating engine and turbine engine fuels, fuel metering devices, and system operation. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

■ **AIRM 98A — Aircraft Powerplant Maintenance Technology: Ignition Systems** **3 Units**

Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: (AIRM 97A and AIRM 97B) or AIRM 65A
Reciprocating and turbine engine ignition system theory and maintenance. Approved by the FAA and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

■ **AIRM 98B — Aircraft Powerplant Maintenance Technology: Lubricating Systems** **3 Units**

Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: (AIRM 97A and AIRM 97B and AIRM 98A) or AIRM 65A
Reciprocating and turbine engine lubricants and lubricating systems. Approved by the Federal Aviation Administration (FAA) and required for the Airframe and Aircraft Powerplant Maintenance Technology major.

ALCOHOL DRUG COUNSELING

■ **AD 1 — Alcohol/Drug Dependency** **3 Units**

Degree Applicable, CSU

54 hours lecture

Presents an overview of alcohol and chemical dependencies and ramifications. Explores the impact these dependencies have upon the individual's social, psychological, economic, physiological well-being, 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/Drugs** **3 Units**

Degree Applicable, CSU

54 hours lecture

Examines effects of alcohol and drugs on the human body. Includes tolerance, habituation, cross-tolerance and synergistic effect.

■ **AD 3 — Chemical Dependency: Intervention, Treatment and Recovery** **3 Units**

Degree Applicable, CSU

54 hours lecture

Examines techniques used in chemical dependency treatment. Analyzes types of treatment programs and the essentials of recovery.

■ **AD 4 — Issues in Domestic Violence** **3 Units**

Degree Applicable

54 hours lecture

Examines the history, law and psychology of domestic violence; cultural/social aspects; relationship to substance abuse.

■ **AD 5 — Chemical Dependency: Prevention and Education** **1.5 Units**

Degree Applicable, CSU

27 hours lecture

Reviews and examines drug prevention effectiveness, at both the private and public level. Appraises personal attitudes, past and present, and their influence on societal norms. Evaluates current prevention programs and the necessary steps for developing, funding and managing a program.

■ **AD 6 — Dual Diagnosis** **3 Units**

Degree Applicable, CSU

54 hours lecture

Overview of the complex interactions of mental disorders and chemical dependency. Reviews and examines the key areas involving dual diagnosis: definition, diagnosis, treatment and aftercare.

■ **AD 8 — Group Process and Leadership** **3 Units**

Degree Applicable

54 hours lecture

Advisory: AD 1, AD 2, AD 3 taken prior and AD 4, AD 5, AD 6 taken prior or concurrently
Introduces the theory and practice of group counseling, the group process and dynamics of group interaction.

■ **AD 9 — Family Counseling** **3 Units**

Degree Applicable

54 hours lecture

Advisory: AD 1, AD 2, AD 3 taken prior and AD 4, AD 5, AD 6 taken prior or concurrently
Introduces the theory and practice of family counseling. Topics include, family systems and dynamics, effects of chemical dependency, and counseling techniques.

■ **AD 10 — Client Record and Documentation** **1.5 Units**

Degree Applicable

27 hours lecture

Advisory: AD 1, AD 2, AD 3 taken prior and AD 4, AD 5, AD 6 taken prior or concurrently
Documentation methods required by government regulatory bodies in clinical records. Emphasis on biopsychosocial history.

■ **AD 11 — Techniques of Intervention and Referral** **3 Units**

Degree Applicable

54 hours lecture

Advisory: AD 1, AD 2, AD 3 taken prior and AD 4, AD 5, AD 6 taken prior or concurrently
Practice techniques used for crisis intervention, counseling, intake and referral. Experiential format, allows participants to practice skills in attentive listening, and responding to levels of client communication.

Course Descriptions

■ **AD 13 — Internship/Seminar** **4 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)
27 hours lecture
126 hours lab
Advisory: AD 1, AD 2, AD 3, AD 4, AD 5, AD 6, and six units of Restricted Electives taken prior and AD 8, AD 9, AD 10, AD 11 taken prior or concurrently

The first of a two-semester sequence which places students in Alcohol/Drug Abuse agencies and organizations. This first semester emphasizes growth in self-awareness and professionalism, interviewing skills and group process skills.

■ **AD 14 — Advanced Internship/Seminar** **4 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)
27 hours lecture
126 hours lab
Prerequisite: AD 10 and AD 13

Second semester course focusing on the application of values, concepts and skills learned to actual process of helping chemically dependent persons.

AMERICAN LANGUAGE

■ **AMLA 21S — Accent Reduction** **2 Units**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture

Pronunciation and listening for non-native speakers with emphasis on analysis of individual strengths and weaknesses. Focus on improving articulation, stress and intonation patterns, and listening.

■ **AMLA 22S — American Language Interpersonal Communication** **2 Units**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture

Enhances ability of non-native speakers to communicate in personal and academic situations. Emphasis on grammatical accuracy and sophistication as well as confidence in communications.

■ **AMLA 23S — American Language Formal Speaking** **2 Units**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
Advisory: Eligibility for AMLA 43W

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.

■ **AMLA 24 — Idiomatic English** **2 Units**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
Advisory: Eligibility for AMLA 42W

Intermediate course in the study of idiomatic language, including common American idioms and proverbs, as used in everyday language situations.

■ **AMLA 31R — American Language Basic Reading** **4 Units**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
72 hours lecture
Prerequisite: Satisfactory score on appropriate Reading Placement Test or successful completion of noncredit ESL Level 4

Basic reading and vocabulary for non-native speakers.

■ **AMLA 32R — American Language Intermediate Reading** **4 Units**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
72 hours lecture
Prerequisite: Successful completion of AMLA 31R, or satisfactory score on appropriate Reading Placement Test, or successful completion of noncredit ESL Level 5, 6, or VESL

Intermediate reading and vocabulary for non-native speakers.

■ **AMLA 33R — American Language Advanced Reading** **4 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
72 hours lecture
Prerequisite: Successful completion of AMLA 32R or satisfactory score on appropriate Reading Placement Test

Advanced reading and vocabulary for non-native speakers.

■ **AMLA 41W — American Language Basic Writing** **4 Units**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
72 hours lecture
Prerequisite: Satisfactory score on the English Placement Test or successful completion of noncredit ESL Level 4
Advisory: AMLA 31R taken previously or concurrently

Basic grammar and writing for non-native speakers.

■ **AMLA 42W — American Language Intermediate Writing** **4 Units**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
72 hours lecture
Prerequisite: Satisfactory score on the English Placement Test or successful completion of AMLA 41W or noncredit ESL Level 5 or 6 or VESL
Advisory: AMLA 32R taken prior or concurrently

Intermediate grammar and writing for non-native speakers.

■ **AMLA 43W — American Language Advanced Writing** **4 Units**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
72 hours lecture
Prerequisite: Satisfactory score on the English Placement Test or successful completion of AMLA 42W
Advisory: AMLA 33R taken prior or concurrently

Advanced grammar and writing for non-native speakers.

■ **AMLA 56 — American Language Nouns and Articles** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

Concentrates on count and non-count nouns, article usage and other determiners for non-native learners of English. Writing practice and exercises will emphasize correct usage of these structures in writing and speaking.

■ **AMLA 57 — American Language Verb Review I** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

Concentrates on verb tense, form, and use for non-native learners of English. Practice in present, past, and future verb tense forms, meaning, and use in both spoken and written English, with special emphasis on writing for college courses.

■ **AMLA 58 — American Language Verb Review II** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

Advanced work on modals, passive voice, passive modals, and conditionals for non-native English students. Exercises and writing practice will emphasize improved verb usage in writing.

■ **AMLA 59 — American Language Prepositions** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

Spoken and written practice in prepositions for non-native English learners. Students will analyze prepositions and idiomatic expressions through reading and will apply their knowledge to written work.

■ **AMLA 60 — American Language Verb Review III** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

Advanced work on gerunds, infinitives and participles for non-native English students. Exercises and writing practice will emphasize improved verb usage in writing.

- **AMLA 61 — American Language Word Forms** **1 Unit**
Not Degree Applicable
(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture
Spoken and written practice in noun, verb, adjective, and adverb word forms for non-native English students.

ANATOMY AND PHYSIOLOGY

- **ANAT 10A — Introductory Human Anatomy** **4 Units**
Degree Applicable, CSU, UC
54 hours lecture
54 hours lab
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.
- **ANAT 10B — Introductory Human Physiology** **4 Units**
Degree Applicable, CSU, UC
54 hours lecture
54 hours lab
Prerequisite: ANAT 10A or ANAT 35
Advisory: CHEM 10 or CHEM 40
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
54 hours lecture
108 hours lab
Prerequisite: BIOL 1 or BIOL 4 or BIOL 4H
Structure of the organ systems at the gross, subgross, and microscopic levels based on human material and dissection of the cat. Designed to serve as an introduction to vertebrate embryology.
- **ANAT 36 — Human Physiology** **5 Units**
Degree Applicable, CSU, UC
54 hours lecture
108 hours lab
Prerequisite: ANAT 35 and CHEM 10 or CHEM 40
Extensive study of 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 40A — Human Prosection** **2 Units**
Degree Applicable, CSU
108 hours lab
Prerequisite: ANAT 35
Techniques for human prosection. Regional exploration of superficial and deep human muscles at the gross level. Anatomy 40A and 40B must be taken in sequence in order to receive credit for college level prosection.

- **ANAT 40B — Human Prosection** **2 Units**
Degree Applicable, CSU
108 hours lab
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**
Not Degree Applicable, CSU
36 hours lecture
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 1 — Biological Anthropology** **3 Units**
Degree Applicable, CSU, UC
54 hours lecture
Prerequisite: Eligibility for ENGL 68
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
54 hours lecture
Prerequisite: Acceptance into the Honors Program
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
54 hours lab
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 3 — Archaeology** **3 Units**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
54 hours lecture
Prerequisite: Eligibility for ENGL 1A
Advisory: READ 90
Aims, methods and ethics of archaeological research and their application to the archaeological record, in contrast to popular depictions of archaeology. Evolution of culture from the earliest stone toolmakers to the primary civilizations of the Old and New Worlds, emphasizing invention and spread of agriculture and the impact of this change on prehistoric cultures.

- **ANTH 5 — Principles of Cultural Anthropology** **3 Units**
Degree Applicable, CSU, UC
54 hours lecture
The anthropological approach to the study of human behavior from a cross cultural, comparative, and an evolutionary perspective. An exploration into the languages, economics, sociopolitical systems, religions, and world views of diverse world cultures. A technical presentation is stressed as this course is designed for Social Sciences majors.

- **ANTH 22 — General Cultural Anthropology** **3 Units**
Degree Applicable, CSU, UC
54 hours lecture
An introductory course to explore the nature of culture and how cultural anthropologists study cultural phenomena such as language, personality, subsistence, economics, social and political organization, marriage, kinship systems, religion, the arts, and culture change. A substantial amount of case material will be drawn from at least three of the following: African Americans, indigenous peoples of the United States, Asian Americans, Chicanos/Latino Americans, and European Americans. This course may meet the cultural diversity requirement at transfer universities.

Course Descriptions

■ **ANTH 30 — The Native American** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: Eligibility for ENGL 1A
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 99 — Special Projects in Anthropology** **2 Units**
Degree Applicable, CSU

36 hours lecture
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.

ARABIC

■ **ARAB 1 — Elementary Arabic** **4 Units**
Degree Applicable, CSU, UC

72 hours lecture
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

72 hours lecture
Prerequisite: ARAB 1 or equivalent
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 Formal Spoken Arabic.

ARCHITECTURAL TECHNOLOGY

■ **ARCH 101 — Design I - Elements of Design** **4 Units**
Degree Applicable, CSU, UC

54 hours lecture
54 hours lab
Formerly ARCH 10.
Fundamentals of design and design process. Elements include conceptualization, visualization, form making, presentation, expression, and site analysis of physical, contextual, and cultural aspects of design and/or the urban environment. Portfolio will be produced.

■ **ARCH 102 — Design II - Architectural Design** **4 Units**
Degree Applicable, CSU, UC

54 hours lecture
54 hours lab
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

54 hours lecture
54 hours lab
Formerly ARCH 16.
CADD Level 1 (Computer Aided Design and Drafting) and computer application in architecture, engineering and related fields, including spreadsheet, CAD, and presentation application. Field trips required.

■ **ARCH 122 — Architectural Presentations** **4 Units**
Degree Applicable, CSU

54 hours lecture
54 hours lab
Corequisite: ARCH 21 or ARCH 102
Advisory: ARCH 10, ARCH 11 OR ARCH 101, ARCH 141
Formerly ARCH 23.
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

54 hours lecture
54 hours lab
Formerly ARCH 11.
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

54 hours lecture
54 hours lab
Advisory: Eligibility for MATH 51
Formerly ARCH 12.
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

54 hours lecture
Advisory: ARCH 141 or ARCH 11
Formerly ARCH 14.
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

36 hours lecture
71 hours lab
Advisory: ARCH 141 (formerly ARCH 11)
Formerly ARCH 15.
Architectural working drawings and construction documents for light frame construction. Field trips required.

■ **ARCH 147 — Architectural CAD and BIM** **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab
Advisory: ARCH 141 or ARCH 11, or ARCH 121 or ARCH 16
Formerly ARCH 18.
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 201 — Design III - Environmental Design** **4 Units**
Degree Applicable, CSU, UC

54 hours lecture
54 hours lab
Advisory: ARCH 21, ARCH 23 or equivalent experience
Formerly ARCH 27.
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 - Advanced Project** **4 Units**
Degree Applicable, CSU

54 hours lecture
54 hours lab

Advisory: ARCH 23 or ARCH 122 and ARCH 27 or ARCH 201

Formerly ARCH 29.

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, advance 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 Illustration** **3 Units**
Degree Applicable, CSU, UC

36 hours lecture
71 hours lab

Advisory: ARCH 141 or ARCH 11

Formerly ARCH 13.

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 Design, Illustration and Animation** **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab

Advisory: ARCH 18 or ARCH 147

Formerly ARCH 28.

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.

■ **ARCH 247 — Architectural CAD Working Drawings** **3 Units**
Degree Applicable

36 hours lecture
71 hours lab

Advisory: ARCH 15 or ARCH 146, or ARCH 147 or ARCH 18

Formerly ARCH 26.

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 I** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Formerly ARCH 31.

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 II** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Formerly ARCH 32.

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 290 — Architectural Work Experience** **1 to 2 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

60 to 150 hours lab

Prerequisite: Compliance with work experience regulations as designated in the College Catalog

Formerly ARCH 89.

Provide actual on-the-job 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.

ART HISTORY

■ **AHIS 1 — Understanding the Visual Arts** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Fundamentals of visual art forms and the role art plays in various historical periods and cultures. Off-campus 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

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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

54 hours lecture

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. An honors course designed to provide an enriched experience. Students may not receive credit for both AHIS 3 (formerly ARTA 3) and AHIS 3H. Field trips may be required.

■ **AHIS 4 — History of Western Art: Prehistoric Through Gothic** **3 Units**

(C-ID ARTH 110)

Degree Applicable, CSU, UC

54 hours lecture

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**

(C-ID ARTH 110)

Degree Applicable, CSU, UC

54 hours lecture

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 (formerly ARTA 4) and AHIS 4H.

■ **AHIS 5 — History of Western Art: Renaissance Through Modern** **3 Units**

(C-ID ARTH 120)

Degree Applicable, CSU, UC

54 hours lecture

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**

(C-ID ARTH 120)

Degree Applicable, CSU, UC

54 hours lecture

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 (formerly ARTA 5) and AHIS 5H. Off-campus assignments may be required.

Course Descriptions

■ AHIS 6 — History of Modern Art **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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

54 hours lecture

Prerequisite: Acceptance into the Honors Program

Artistic movements, influences, and individuals who have formed the Modern tradition. Emphasis is on the 20th century and the international and multicultural character of Modern art. An honors course designed to provide an enriched experience. Students may not receive credit for both AHIS 6 (formerly ARTA 6) and AHIS 6H. Off-campus trips may be required.

■ AHIS 8 — History of Medieval Art and Architecture **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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**
(C-ID ARTH 130) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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

54 hours lecture

Advisory: Eligibility for ENGL 68

A critical history of Greek and Roman art and architecture before 500 CE will be examined in their cultural contexts. Historical perceptions of Classical art and culture and their impact on Europe and America will be studied.

■ AHIS 11 — History of African, Oceanic, and Native American Art **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Traditional arts of African tribes and kingdoms, Oceania and Australia, and Native North America. Visual arts including painting, sculpture, architecture, body decoration, and ritual objects will be studied in their cultural contexts.

■ AHIS 12 — History of Precolumbian Art and Architecture **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Advisory: Eligibility for ENGL 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

54 hours lecture

Prerequisite: Acceptance into the Honors Program

The arts of Precolumbian 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 (formerly ARTA 12) and AHIS 12H.

■ AHIS 14 — Rome: The Ancient City **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Art, architecture, and culture of Pompeii and neighboring cities destroyed in the volcanic eruption of 79 CE. Major monuments and archeological 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)

36 hours lecture

Advisory: AHIS 1

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.

ART: ANIMATION

■ ANIM 100 — Digital Paint and Ink **3 Units**
Degree Applicable

36 hours lecture

71 hours lab

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

36 hours lecture

71 hours lab

Contemporary and traditional approaches to sketching objects and 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

36 hours lecture

71 hours lab

Prerequisite: ANIM 101A (formerly ANIM 101)

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 - Design **3 Units**
Degree Applicable

36 hours lecture

71 hours lab

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

36 hours lecture

71 hours lab

Emphasizes 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

36 hours lecture
71 hours lab
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

36 hours lecture
71 hours lab
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

36 hours lecture
71 hours lab
Prerequisite: ANIM 108
Advanced principles of animation including 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 animation.

■ ANIM 111A — Animal Drawing **1.5 Units**
Degree Applicable

18 hours lecture
36 hours lab
Prerequisite: ARTD 15A or ANIM 104
Explores traditional and contemporary approaches to sketching and drawing animals. Gesture, anatomical structure, proportion, line and action analysis will be explored. Requires several off-campus field trips.

■ ANIM 111B — Animal Drawing **1.5 Units**
Degree Applicable

18 hours lecture
36 hours lab
Prerequisite: ANIM 111A
Contemporary and traditional approaches to sketching animals using drawing techniques for rapid visualization. Emphasizes and develops elements of design for the purposes of visual communication and storytelling. Requires several off-campus field trips.

■ ANIM 115 — Storyboarding **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab
Prerequisite: ARTD 15A or ANIM 104
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

18 hours lecture
36 hours lab
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 117 — Animation Background Layout **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab
Prerequisite: ANIM 115 or ARTD 16
Drawing and painting techniques as applied to layout and background design.

■ ANIM 130 — Introduction to 3D Modeling **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab
Corequisite: ANIM 100 (May have been taken previously)
Introduction to 3D modeling techniques using animation and gaming industry-standard software.

■ ANIM 131 — Introduction to Gaming **3 Units**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
71 hours lab
The field of game design including the principles, tools, and strategies for designing various types of games.

■ ANIM 132 — Intermediate 3D Modeling **3 Units**
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: ANIM 130 and ANIM 100
Advisory: ANIM 104
3D modeling and texturing methods used in the film and game industries using Maya software. Topics covered include UV unwrapping, Photoshop texture painting, and organic modeling techniques.

■ ANIM 136 — Animation Environment and Level Design **3 Units**
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: ANIM 130 and ANIM 132
3D digital environment including designing, modeling, texturing, and lighting for computer graphic games, television programs, or films. Includes environment levels for computer graphic games.

■ ANIM 137A — Work Experience in New Digital Media **1 to 3 Units**
Degree Applicable

(May be taken for Pass/No Pass only)
75 to 225 hours lab
Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog AND ANIM 132
This course provides college credit and instructional guidance in conjunction with work experience in areas of New Digital Media at an approved work site related to a certificate or degree program of study. 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. Instructor approval required.

■ ANIM 141 — 2D Game Level Design **3 Units**
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: ANIM 131
Design of game levels based upon storytelling, platform and theme. Includes asset development of background, user interface, and character art.

■ ANIM 145 — Advanced 3-D Modeling **3 Units**
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: ANIM 130
Advisory: ANIM 132
3-D modeling with a focus on designing and rigging a character for animation. Includes UV texture mapping, character control for animation, and facial expressions using blend-shape animation.

■ ANIM 146 — Advanced 3-D Animation **3 Units**
Degree Applicable

36 hours lecture
71 hours lab
Prerequisite: ANIM 130
Advisory: ANIM 132
3D character animation principles and procedures used in computer graphics, games, film, and television. Includes walk, run, and action sequences for rigged characters using graph editor.

Course Descriptions

■ ANIM 148 — Demo Reel **3 Units**
Degree Applicable

36 hours lecture
71 hours lab

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 149 — 3-D Character Rigging **3 Units**
Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: ANIM 145

The principles, techniques and processes of 3D character rigging. Character Rigging is the industry technique of setting up controls on a 3D mesh so that it is animatable. The principles, techniques and processes of 3D character rigging as done primarily for computer games and movie industry will be explored. Building a set of animatable character rigs built using forward kinematics, inverse kinematics, constraints, expressions, blend shapes among other techniques. No prior knowledge of rigging is necessary for this class.

■ ANIM 151 — Game Prototype Production **3 Units**
Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: ANIM 131

Creation of game prototypes based upon specific game features and mechanics. Includes the four main game production cycles of: Designing the game, building the art, technical production, and marketing of the game.

■ ANIM 167 — Visual Development **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab

Prerequisite: ARTC 163 or (ANIM 101A AND ARTD 16)

Development of visual concepts and storytelling for entertainment illustration through use of value, design, color and composition as symbolic tools for communication. Students cannot receive credit for both ARTC 167 and ANIM 167.

■ ANIM 172 — Motion Graphics, Compositing and Visual Effects **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab

Prerequisite: ARTC 100 or ANIM 100

Elements of motion graphics and visual effects including design, typography, animation, 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 — Web Animation With Flash **3 Units**
Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: ARTC 70 or ARTC 100

Principles of animation using Adobe Flash for web and multimedia.

ART: BASIC STUDIO ARTS

■ ARTB 1 — Understanding the Visual Arts **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Fundamentals of visual art forms and the role art plays in various historical periods and cultures. Off-campus trips may be required. Students may not earn credit for both ARTB 1 and AHIS 1 or AHIS 1H.

■ ARTB 14 — Basic Studio Arts **3 Units**
Degree Applicable, CSU, UC

36 hours lecture
71 hours lab

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 AND PROFESSIONAL PRACTICES

■ ARTG 20 — Art, Artists and Society **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab

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

36 hours lecture
71 hours lab

Prerequisite: ARTG 20 and Eligibility for ENGL 68

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

36 hours lecture
71 hours lab

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 to 3 Units**
Degree Applicable

75 to 225 hours lab

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.

ART: GRAPHIC DESIGN AND ILLUSTRATION

■ ARTC 100 — Graphic Design I **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab

Advisory: ARTD 15A and ARTD 20

Contemporary graphic design for the commercial art industry. Covers technology, creativity, design, and production. Focuses on using Adobe Photoshop to produce effective commercial art. Additional exposure to Adobe Illustrator and other professional production tools.

■ **ARTC 120 — Graphic Design II** **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab

Prerequisite: ARTC 100

Corequisite: ARTD 20 (May be taken previously)

Graphic design concepts, theories, and strategies for the design and layout of printed commercial art. Covers typical printed products including advertisements, flyers, brochures, posters, newsletters, books, and catalogs. Focuses on using Adobe InDesign with additional exposure to Photoshop and Illustrator.

■ **ARTC 140 — Graphic Design III** **3 Units**
Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: ARTC 100 and ARTD 20

Digital illustration, design, skills, and concepts working primarily with vector art. Focuses on using Adobe Illustrator as the primary development tool.

■ **ARTC 160 — Typography** **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab

Prerequisite: ARTC 100 and ARTD 20

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

36 hours lecture
71 hours lab

Prerequisite: ARTD 15A or ANIM 104

Essential 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.

■ **ARTC 165 — Illustration** **3 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
71 hours lab

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

36 hours lecture
71 hours lab

Prerequisite: ARTC 163 or (ANIM 101A AND ARTD 16)

Development of visual concepts and storytelling for entertainment illustration through use of value, design, color and composition as symbolic tools for communication. Students cannot receive credit for both ARTC 167 and ANIM 167.

■ **ARTC 169 — Conceptual Illustration** **3 Units**
Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: ARTD 15A and (ARTD 25A or ARTC 165)

Advisory: ANIM 101A

Development of visual concepts and vocabulary to create unique and provocative editorial illustration interpretations 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

36 hours lecture
71 hours lab

Prerequisite: ARTC 100 and ARTD 20

Design, usability, production and marketing of web sites using contemporary development methods including HTML 5 and CSS 3.

■ **ARTC 220 — Graphic Design IV** **3 Units**
Degree Applicable

36 hours lecture
71 hours lab

Prerequisite: ARTC 100 and ARTD 20

Advisory: ARTC 140

Intermediate to advanced graphic design concepts, composition, photo editing, and photo retouching. Focuses on using Adobe Photoshop as the primary development tool.

■ **ARTC 272 — Motion Graphics, Compositing and Visual Effects** **3 Units**
Degree Applicable, CSU

36 hours lecture
71 hours lab

Prerequisite: ARTC 100 or ANIM 100

Elements of motion graphics and visual effects including design, typography, animation, 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 280 — Commercial Art Studio** **3 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

36 hours lecture
71 hours lab

Prerequisite: Completion of a minimum of 15 semester units in Graphic Design, Illustration, Web Design, Animation, Architectural Design, Art, Fashion Merchandising, Industrial Design, Interior Design or Computer Graphics.

Collaborative and interdisciplinary teams will research, design, produce, and deliver commercial art projects. Projects will be “real world” and complex in scope, typically involving clients from the college or community. Professor approval required.

■ **ARTC 290 — Portfolio** **3 Units**
Degree Applicable

36 hours lecture
71 hours lab

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.

Course Descriptions

■ ARTC 299 — Work Experience in Graphic Design 1 to 3 Units
 Not Degree Applicable

(May be taken for Pass/No Pass only)

75 to 225 hours lab

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Advisory: ARTC100 AND ARTC 120 AND ARTC 140 AND ARTC 200 AND ART 20 AND PHOT 5

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 50 — Specialized Studio-Art Studies 2 Units
 Degree Applicable, CSU

18 hours lecture

54 hours lab

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 22 — Design: Three-Dimensional 3 Units
 (C-ID ARTS 101) Degree Applicable, CSU, UC

36 hours lecture

71 hours lab

Prerequisite: Eligibility for ENGL 68

Develops perception and enhances 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 various media.

■ ARTS 30A — Ceramics: Beginning I 3 Units
 Degree Applicable, CSU, UC

36 hours lecture

71 hours lab

Clay, glazes 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, 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)

36 hours lecture

71 hours lab

Prerequisite: ARTS 30A

Clay, glazes 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: Advanced Studio 2 Units
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

108 hours lab

Prerequisite: ARTS 30B

Advanced study of ceramics with emphasis on integrating form and surface with content and developing a personal style. Loading, firing and unloading kilns included. Field trips required.

■ ARTS 33 — Ceramics: Hand Construction 3 Units
 Degree Applicable, CSU, UC

36 hours lecture

71 hours lab

Clay, glazes and firing through projects that are hand built. Emphasis on developing skills, vocabulary and analysis of form, function, and craftsmanship through projects, discussion, 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)

18 hours lecture

108 hours lab

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

36 hours lecture

71 hours lab

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)

36 hours lecture

71 hours lab

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)

36 hours lecture

71 hours lab

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

36 hours lecture

71 hours lab

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

36 hours lecture

71 hours lab

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)

36 hours lecture

71 hours lab

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)

36 hours lecture

71 hours lab

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)
36 hours lecture
71 hours lab
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 99 — Sculpture Special Studies** **2 Units**
Degree Applicable
107 hours lab
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.

ART: TWO DIMENSIONAL STUDIO ARTS

■ **ARTD 15A — Drawing: Beginning** **3 Units**
(C-ID ARTS 110) Degree Applicable, CSU, UC
36 hours lecture
71 hours lab
An entry level course emphasizing creative expression through the use of drawing media. Emphasis is placed on basic drawing methods and skills, composition and exploration of drawing media.

■ **ARTD 15B — Drawing: Intermediate** **3 Units**
(C-ID ARTS 205) Degree Applicable, CSU, UC
36 hours lecture
71 hours lab
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
36 hours lecture
71 hours lab
Prerequisite: ARTD 15A or ANIM 104
Linear perspective drawing techniques for artists and illustrators.

■ **ARTD 17A — Drawing: Life** **3 Units**
(C-ID ARTS 200) Degree Applicable, CSU, UC
36 hours lecture
71 hours lab
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-Advanced** **3 Units**
Degree Applicable, CSU, UC
36 hours lecture
71 hours lab
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
36 hours lecture
71 hours lab
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**
(C-ID ARTS 100) Degree Applicable, CSU, UC
36 hours lecture
71 hours lab
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**
(C-ID ARTS 270) Degree Applicable, CSU, UC
36 hours lecture
71 hours lab
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: Head and Hands** **1.5 Units**
Degree Applicable, CSU, UC
18 hours lecture
36 hours lab
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.

■ **ARTD 23B — Drawing: Advanced Heads and Hands** **1.5 Units**
Degree Applicable
18 hours lecture
36 hours lab
Prerequisite: ARTD 23A
Explores contemporary and traditional approaches to drawing the human head and hands. Emphasizes and develops techniques for rendering as well as capturing a likeness.

■ **ARTD 23C — Drawing: Expressive Heads and Hands** **1.5 Units**
Degree Applicable
18 hours lecture
36 hours lab
Prerequisite: ARTD 23A
Explores contemporary and traditional approaches to sketching the human head and hands. Emphasis is placed on personal interpretation, individual expression, and media exploration.

■ **ARTD 25A — Beginning Painting I** **3 Units**
(C-ID ARTS 210) Degree Applicable, CSU, UC
36 hours lecture
71 hours lab
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
36 hours lecture
71 hours lab
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
36 hours lecture
71 hours lab
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.

Course Descriptions

■ ARTD 26B — Intermediate Painting II 3 Units
 Degree Applicable, CSU, UC

36 hours lecture
71 hours lab

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)

36 hours lecture
71 hours lab

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

36 hours lecture
71 hours lab

Creative techniques in fine art printmaking using relief and intaglio processes. Emphasis is on 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/Relief 3 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
71 hours lab

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

36 hours lecture
71 hours lab

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 44B — Printmaking: Intermediate Lithography 3 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
71 hours lab

Prerequisite: ARTD 44A

Single and multi-color composition in lithographic printmaking. Focus is on techniques in stone lithography, color registration, and composition issues. Field trips may be required.

■ ARTD 45A — Printmaking: Introduction to Screenprinting 3 Units
 Degree Applicable, CSU, UC

36 hours lecture
71 hours lab

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)

36 hours lecture
71 hours lab

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

36 hours lecture
71 hours lab

Painterly printmaking with a focus on monotype, monoprint, and collography printing. Field trips may be required.

■ ARTD 46B — Intermediate Painterly Printmaking 3 Units
 Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
71 hours lab

Prerequisite: ARTD 46A

Painterly printmaking techniques such as viscosity etchings and the complexities of simultaneous relief and intaglio printing inherent in collography. Emphasis on achieving personal artistic expression. Field trips may be required.

■ ARTD 47A — Printmaking: Photo and Alternative Processes 3 Units
 Degree Applicable, CSU, UC

36 hours lecture
71 hours lab

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 99 — Figure Drawing Special Studies 2 Units
 Degree Applicable

108 hours lab

Prerequisite: ARTD 17A, ANIM 101A, or ARTD 23A

Specialized studies exploring advanced and complex figure drawing 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.

ASTRONOMY
■ ASTR 5 — Introduction to Astronomy 3 Units
 Degree Applicable, CSU, UC

54 hours lecture

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

54 hours lecture

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

54 hours lab
Corequisite: ASTR 5 or 5H OR 7 or 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

54 hours lecture
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

54 hours lecture
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 99 — Special Projects in Astronomy 2 Units
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
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.

BIOLOGY

■ BIOL 1 — General Biology 4 Units
Degree Applicable, CSU, UC

54 hours lecture
54 hours lab
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

54 hours lecture
54 hours lab
Prerequisite: BIOL 1 or BIOL 4; and MATH 71
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

54 hours lecture
54 hours lab
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

54 hours lecture
71 hours lab
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

54 hours lecture
71 hours lab
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

54 hours lecture
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

54 hours lecture
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

108 hours lab
Corequisite: BIOL 6 (may have been taken previously)
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 field trip. Taking BIO 6 prior to BIO 6L is highly recommended.

■ BIOL 8 — Cell and Molecular Biology 4 Units
Degree Applicable, CSU, UC

54 hours lecture
54 hours lab
Prerequisite: BIOL 4 or BIOL 4H, and CHEM 50
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

54 hours lecture
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

Course Descriptions

■ **BIOL 15 — Human Sexuality** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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

54 hours lecture

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

54 hours lecture

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

54 hours lecture

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

54 hours lab

Corequisite: BIOL 20 (may have been taken previously)

An introduction to the 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. Field trips required.

■ **BIOL 24 — Introduction to Public Health** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Public health concepts and practice by examining 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.

■ **BIOL 25 — Conservation Biology** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

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

54 hours lecture

Prerequisite: BIOL 4 or BIOL 4H

Explores 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 DNA technology.

■ **BIOL 34L — Fundamentals of Genetics Lab** **1 Unit**
Degree Applicable, CSU, UC

54 hours lab

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 PCR and electrophoresis, population genetics, and bioinformatics.

■ **BIOL 50 — Biology Basic Skills** **.5 Unit**
Not Degree Applicable

(May be taken for Pass/No Pass only)

9 hours lecture

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.

■ **BIOL 99A — Special Projects in Biology** **1 to 2 Units**
Degree Applicable, CSU

18 to 36 hours lecture

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 3 — Plant Structures, Functions, and Diversity** **5 Units**
Degree Applicable, CSU, UC

54 hours lecture

108 hours lab

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 7 — Principles of Accounting - Financial** **5 Units**
(C-ID ACCT 110) Degree Applicable, CSU, UC

90 hours lecture

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**
(C-ID ACCT 120) Degree Applicable, CSU, UC

90 hours lecture
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 or decision making in business.

■ BUSA 11 — Fundamentals of Accounting **3 Units**
Degree Applicable

54 hours lecture
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, investments.

■ BUSA 21 — Cost Accounting **4.5 Units**
Degree Applicable

72 hours lecture
18 hours lab
Prerequisite: 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 **3 Units**
Degree Applicable

54 hours lecture
Prerequisite: BUSA 8

Accounting concepts and principles and an in-depth analysis of the balance sheet and income statement. Emphasis is placed on the changing nature of principles and practices, the application of present-value concepts, the complexity of transactions that arise in a multifaceted economic environment and the use of accounting information in decision making

■ BUSA 58 — Federal Income Tax Law **3 Units**
Degree Applicable

54 hours lecture
Prerequisite: BUSA 7 or BUSA 72

Federal income tax law as related to individuals, with comparison to partnerships, corporations and state. Emphasis is placed on individual income taxes and related problems including research through the use of a federal tax reporting service.

■ BUSA 68 — Business Mathematics **3 Units**
Not Degree Applicable

54 hours lecture
Addition, subtraction, multiplication, division, decimals, percentages, fractions, sign numbers, equations and problem solving.

■ BUSA 70 — Payroll and Tax Accounting **3 Units**
Degree Applicable

54 hours lecture
Prerequisite: Eligibility for BUSA 11

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

54 hours lecture
Personal and family financial planning for those who wish to understand their own finances across the lifespan and assist others in money management. Topics include financial goal setting, budgeting, consumer credit, debt management, banking functions, income taxes, home ownership, insurance, investing, and retirement planning. Students may not earn credit for both BUSA 71 and FCS 80.

■ BUSA 72 — Bookkeeping - Accounting **5 Units**
Degree Applicable

90 hours lecture
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 — Using Microcomputers in Financial Accounting **1 Unit**
Degree Applicable

18 hours lecture
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. Completion of a computerized accounting practice set will be required.

■ BUSA 76 — Using Microcomputers in Managerial Accounting **1 Unit**
Degree Applicable

18 hours lecture
Prerequisite: BUSA 7 or BUSA 72

Analysis of financial data and preparation of managerial accounting reports using Excel software. Development of what-if formulas to be used as an aid in decision-making. Includes manufacturing and consolidation worksheets, financial statement analysis, and statement of cash flows.

■ BUSA 81 — Work Experience in Accounting **1 to 4 Units**
Degree Applicable

(May be taken for Pass/No Pass only)
75 to 300 hours lab
Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog
Advisory: BUSA 7 or BUSA 72

Provides accounting students with actual 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 is required for each one 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 COMMUNICATIONS

■ BUSO 5 — Business English **3 Units**
Degree Applicable

54 hours lecture
Prerequisite: Eligibility for ENGL 68
Skills and techniques of English, as applied to business situations, with emphasis on effective document structure.

■ BUSO 25 — Business Communications **3 Units**
(C-ID BUS 115) Degree Applicable, CSU

54 hours lecture
Prerequisite: ENGL 1A
Written communications including letters and memos meeting 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.

Course Descriptions

■ **BUSO 26 — Oral Communications for Business** **3 Units**
Degree Applicable
(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Oral communication used in business situations such as training sessions, presentations, professional discussions, and telephone interactions.

BUSINESS: ECONOMICS

■ **BUSC 1A — Principles of Economics - Macroeconomics** **3 Units**
(C-ID ECON 202) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 1A, and successful completion of MATH 71B or MATH 71X

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**
(C-ID ECON 202) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Acceptance into the Honors Program and MATH 71, or MATH 71B, or MATH 71X

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**
(C-ID ECON 201) Degree Applicable, CSU, UC

54 hours lecture

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)
54 hours lecture

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

54 hours lecture

Prerequisite: MATH 71

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 18 — Business Law** **3 Units**
(C-ID BUS 125) Degree Applicable, CSU, UC

54 hours lecture

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 18H — Business Law - Honors** **3 Units**
(C-ID BUS 125) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Acceptance into the Honors Program

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. An honors course designed to provide an enriched experience. Students may not receive credit for both BUSL 18 and BUSL 18H.

■ **BUSL 19 — Advanced Business Law** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Advisory: BUSL 18

Principles of business law emphasizing commercial paper, agency, partnerships, corporations, bankruptcy, regulation of trade and real property.

■ **BUSL 20 — International Business Law** **3 Units**
Degree Applicable

54 hours lecture

Advisory: Eligibility for ENGL 68

A comparative approach to the study of the international legal environment for business. Cultural, political, economic and ethical issues are emphasized as well as traditional business law subjects such as sales, commercial paper, corporate law, agency, licensing, employment, crimes, trade regulation and technology transfers.

■ **BUSL 100 — Everyday Law** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 1A

Practical aspects of current U.S. law, including the court system and civil procedures, the U.S. Constitution, legal ethics, tort law, criminal law and procedures, contracts, real estate law, family law, and careers in law. Required for 2+2+3 articulation.

BUSINESS: MANAGEMENT

■ **BUSM 10 — Principles of Continuous Quality Improvement** **3 Units**
Degree Applicable

54 hours lecture

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

54 hours lecture

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

54 hours lecture

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

54 hours lecture
Advisory: Eligibility for ENGL 68 or BUSO 5
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

54 hours lecture
Advisory: Eligibility for ENGL 68 or BUSO 5
Practical information needed to participate in activities related to the exporting and importing of goods and services. Includes vocabulary, acronyms and information needed for an understanding of and participating in the exporting and importing of goods and services.

■ **BUSM 60 — Human Relations in Business** 3 Units
Degree Applicable, CSU

54 hours lecture
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

54 hours lecture
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

54 hours lecture
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

54 hours lecture
Organizing, starting, and operating a small business enterprise. Emphasis on entrepreneurial applications in a small business environment.

■ **BUSM 81 — Work Experience in Business** 1 to 4 Units
Degree Applicable

(May be taken for Pass/No Pass only)
75 to 300 hours lab
Corequisite: BUSM 20 (may have been taken previously)
Provides business 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 non-paid clock hours per semester is required for each one 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)
36 hours lecture
Provide business majors with a forum to gain knowledge, develop techniques, problem solve and implement solutions in an actual business situation.

BUSINESS: PARALEGAL

■ **PLGL 30 — Introduction to Paralegal/Legal** 3 Units
Degree Applicable, CSU

54 hours lecture
Prerequisite: Eligibility for ENGL 1A
Federal and state legal systems, the relationship of paralegals to attorneys, legal writing and research, investigation of claims, and legal ethics for paralegals.

■ **PLGL 31A — Legal Analysis and Writing** 3 Units
Degree Applicable, CSU

54 hours lecture
Corequisite: PLGL 30 (May have been taken previously)
Use of a law library for legal research and references, reading and analyzing codes and statutes, and preparation of case briefs and research reports.

■ **PLGL 31B — Advanced Legal Analysis and Writing** 3 Units
Degree Applicable, CSU

54 hours lecture
Prerequisite: PLGL 30 and PLGL 31A
Preparation of research memoranda, trial briefs, appellate briefs and other paralegal documents.

■ **PLGL 33A — Civil Procedure I** 3 Units
Degree Applicable, CSU

54 hours lecture
Corequisite: PLGL 30 (May have been taken previously)
Analysis of the pretrial procedural steps to litigating a cause of action. Examines the concepts of jurisdiction, venue, parties to the action, summons, default judgments, and pleadings.

■ **PLGL 33B — Civil Procedure II** 3 Units
Degree Applicable, CSU

54 hours lecture
Prerequisite: PLGL 33A
Preparing for litigation. Includes discovery, preparation of law and motion documents, remedies, summary judgments, motions to dismiss, settlements, and arbitration.

■ **PLGL 35A — Law Office Procedures** 3 Units
Degree Applicable, CSU

54 hours lecture
Corequisite: PLGL 30 (may have been taken previously)
Examines 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 such areas as estate planning, real estate, divorce, unlawful detainer, adoption, corporations, conservatorships and guardianships.

■ **PLGL 35B — Automated Law Office Procedures** 3 Units
Degree Applicable

54 hours lecture
Prerequisite: PLGL 30 and PLGL 35A
Advisory: CISB 15
Use of the personal computer for special purposes in the law office; includes the drafting of pleadings, document control, preparation of billing, law office and case load management, and tax reports.

■ **PLGL 36 — Paralegal Internship** 1 Unit
Degree Applicable

(May be taken for Pass/No Pass only)
75 hours lab
Prerequisite: PLGL 31A, PLGL 33A, and PLGL 35A
Corequisite: PLGL 31B, PLGL 33B, PLGL 35B, PLGL 37, PLGL 39 (may have been taken previously)
Designed to provide the student with actual 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

54 hours lecture
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.

Course Descriptions

■ PLGL 38 — Employment and Ethical Issues in Paralegalism **2 Units**

Degree Applicable

36 hours lecture

*Prerequisite: PLGL 31A, PLGL 33A, and PLGL 35A**Corequisite: PLGL 31B, PLGL 33B, PLGL 35B, PLGL 37, PLGL 39 (may have been taken previously)*

Job search skills including preparation of resumes and cover letters, interviewing, networking, and paralegal and attorney ethics.

■ PLGL 39 — Contract Law **3 Units**

Degree Applicable, CSU

54 hours lecture

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 40 — Landlord-Tenant Law **3 Units**

Degree Applicable, CSU

54 hours lecture

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.

■ PLGL 41 — Property Law **3 Units**

Degree Applicable, CSU

54 hours lecture

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

54 hours lecture

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

54 hours lecture

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

54 hours lecture

Creation, scope, and administrative function of federal bankruptcy proceedings and arrangements. Includes wage earner plans and insolvency proceedings.

■ PLGL 45 — Creditors' Rights **3 Units**

Degree Applicable, CSU

54 hours lecture

Creation, perfection, and enforcement of security interests in property. Unsecured creditors and their methods of enforcing rights and obtaining judgments.

■ PLGL 47A — Litigation Procedures **3 Units**

Degree Applicable, CSU

54 hours lecture

Overview of litigation procedures. Description of a trial and trial presentations are emphasized. Preparation of opening statements, direct and cross examinations, and closing statements. Elements of oral argument are examined. Methods of responding to questioning are analyzed.

■ PLGL 47B — Litigation Practice **1.5 Units**

Degree Applicable, CSU

27 hours lecture

Corequisite: PLGL 47A (May have been taken previously)

Litigation practice including the mechanics of trial, opening statements and closing arguments, and direct and cross-examinations.

■ PLGL 48 — Criminal Law and Procedures **3 Units**

Degree Applicable, CSU

54 hours lecture

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

54 hours lecture

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 50 — Comparative Law **3 Units**

Degree Applicable

54 hours lecture

Advisory: Eligibility for ENGL 1A

A comparison of the traditions and legal systems of various nations. Specific legal concepts and principles relating to areas of business, substantive law, and procedural law are compared to illustrate and distinguish those systems from the U.S. system. Ethics, language, and management issues are considered with regard to doing business abroad.

BUSINESS: REAL ESTATE

■ BUSR 50 — Real Estate Principles **3 Units**

Degree Applicable, CSU

54 hours lecture

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 (AWB) requirements for certified-residential/certified-general appraiser license. Also provides 30 hours toward Office of Real Estate Appraisers (OREA) requirements for state licensing.

■ BUSR 51 — Legal Aspects of Real Estate **3 Units**

Degree Applicable

54 hours lecture

Prerequisite: 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

54 hours lecture

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 52D — Real Estate Practice Work Experience **3 Units**

Degree Applicable

225 hours lab

Corequisite: BUSR 50 and not possessing a permanent California real estate license at time of enrollment. Student must be enrolled in seven units minimum including work experience units.

Provides a minimum of 180 hours of on-site real estate office and/or field work experience under the supervision of a licensed California real estate professional and a college instructor/coordinator. Designed to satisfy Department of Real Estate licensing requirements serving as an equivalent to BUSR 52. Students who repeat this course will improve their skills through further instruction and practice.

■ BUSR 53 — Real Estate Finance **3 Units**

Degree Applicable

54 hours lecture

Prerequisite: 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

54 hours lecture

Prerequisite: BUSR 50

Analysis of international, national and local factors which determine the value of real estate.

■ **BUSR 57 — Income Tax Aspects of Real Estate Investments** **3 Units**
Degree Applicable

54 hours lecture

Income tax principles governing the acquisition, ownership, operation and disposition of real property investments with special emphasis on tax planning and integration of tax concepts with procedural aspects. May be used as an elective course to satisfy one of the California Department of Real Estate's requirements for the salesperson or broker license.

■ **BUSR 59 — Real Estate Property Management** **3 Units**
Degree Applicable

54 hours lecture

Prerequisite: 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

54 hours lecture

Prerequisite: BUSR 50

Investment strategies, techniques, systems, and theories involving all forms of real estate with particular emphasis on research methods needed for successful investing.

■ **BUSR 62 — Mortgage Loan Brokering and Lending** **3 Units**
Degree Applicable

54 hours lecture

Prerequisite: BUSR 50

State and Federal laws that govern the practice of mortgage loan brokerage and lending in the State of 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

54 hours lecture

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

63 hours lecture

Advisory: BUSR 50

Principles and procedures of appraising real property with emphasis on residential properties. Required by Office of Real Estate Appraisers (OREA) for all appraisal licenses and by the Department of Real Estate (DRE) for real estate broker license. Provides 60 hours toward OREA 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, AND MARKETING

■ **BUSS 33 — Advertising and Promotion** **3 Units**
Degree Applicable, CSU

54 hours lecture

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 35 — Professional Selling** **3 Units**
Degree Applicable, CSU

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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

54 hours lecture

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

54 hours lecture

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 to 4 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

75 to 300 hours lab

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)

36 hours lecture

Prerequisite: BUSS 33 or BUSS 35 or BUSS 36 or BUSS 50

Provides marketing students with an opportunity to problem solve and develop a marketing plan or related project as requested by a local business.

CHEMISTRY

■ **CHEM 10 — Chemistry for Allied Health Majors** **5 Units**
Degree Applicable, CSU, UC

72 hours lecture

54 hours lab

Prerequisite: Eligibility for MATH 71

Principles of inorganic chemistry including measurements, structure, nomenclature, reactions, radioactivity, energy, properties of matter, acids/bases and solutions. For Allied Health majors such as nursing, dental hygiene, radiation technology. Completion does not give eligibility for CHEM 50.

■ **CHEM 20 — Introductory Organic and Biochemistry** **5 Units**
Degree Applicable, CSU, UC

54 hours lecture

108 hours lab

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 and proteins. Structure and function of vitamins, coenzymes and enzymes. Metabolic pathways and biochemical energy.

Course Descriptions

■ CHEM 40 — Introduction to General Chemistry 5 Units
 (C-ID CHEM 101) Degree Applicable, CSU, UC

 72 hours lecture
 54 hours lab

Prerequisite: Eligibility for MATH 71
Advisory: Eligibility for ENGL 1A

Measurements, structure and properties of matter, writing/balancing equations, stoichiometry, properties and behavior of gases, and properties of solutions. For science/ engineering majors preparing for admission into General Chemistry (CHEM 50.)

■ CHEM 50 — General Chemistry I 5 Units
 (C-ID CHEM 110) Degree Applicable, CSU, UC

 54 hours lecture
 108 hours lab

Prerequisite: CHEM 40 or satisfactory score on Chemistry Placement Examination; and MATH 71, 71B or 71X or equivalent.

In depth treatment of chemical formulas, equations, nomenclature, reactions, stoichiometry, thermochemistry, periodic trends, atomic structure, chemical bonding and structure, 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
 (C-ID CHEM 110) Degree Applicable, CSU, UC

 54 hours lecture
 108 hours lab

Prerequisite: Acceptance into the Honors Program. CHEM 40 or satisfactory score on Chemistry Placement Examination, and MATH 71, 71B, or 71X or equivalent.

In depth treatment of chemical formulas, equations, nomenclature, reactions, stoichiometry, thermochemistry, periodic trends, atomic structure, chemical bonding and structure, 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

 54 hours lecture
 108 hours lab

Prerequisite: CHEM 50 or CHEM 50H

Application of the laws, theories and principles presented in CHEM 50 to a variety of chemical systems. Topics include 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 use computer-based technologies in data acquisition and analysis.

■ CHEM 80 — Organic Chemistry 5 Units
 (C-ID CHEM 160S) Degree Applicable, CSU, UC

 54 hours lecture
 108 hours lab

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. Structure/reactivity relationships, energetics, reactions, reaction mechanisms, synthesis, separation, characterization and spectroscopic methods for organic compounds. To assure that all content material is covered, it is recommended that students complete the entire one-year sequence at one campus prior to transfer.

■ CHEM 81 — Organic Chemistry II 5 Units
 (C-ID CHEM 160S) Degree Applicable, CSU, UC

 54 hours lecture
 108 hours lab

Prerequisite: CHEM 80

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. Structure/ reactivity relationships, energetics, reactions, reaction mechanisms, synthesis, separation, characterization and spectroscopic methods. Structure, synthesis and representative reactions of carbohydrates, lipids and proteins.

■ CHEM 99 — Special Projects in Chemistry 2 Units
 Degree Applicable, CSU

36 hours lecture

Prerequisite: CHEM 50

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.

CHILD DEVELOPMENT

■ CHLD 1 — Child, Family, School and Community 3 Units
 (C-ID CDEV 110) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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 3 Units
Child Development Programs

(C-ID ECE 120) Degree Applicable, CSU

54 hours lecture

Examine programs, appropriate practices, regulations, inclusive environments for diverse learners. Theoretical principles of developmentally appropriate practices applied to programs, environments, emphasizing the key role of relationships, constructive adult-child interactions, and teaching strategies in supporting physical, social, creative and intellectual development for children. Review of the historical roots of Early Childhood Education (ECE) programs and evolution of the professional practices promoting advocacy, ethics, and professional identity. TB test/10 hrs. observations

■ CHLD 6 — Introduction to Child Development Curriculum 3 Units
 (C-ID ECE 130) Degree Applicable, CSU

54 hours lecture

Advisory: CHLD 5 or CHLD 10 or CHLD 10H

Curriculum designs, content areas and environments related to early education programs appropriate for children ages birth-8 years old. Explores materials and resources used when planning and implementing developmentally appropriate curriculum for children ages birth to 8 years old. Examines the teacher's role in the on-going process of observation and assessment to support development, play, and learning. TB test and observations required.

■ CHLD 10 — Child Growth and Lifespan Development 3 Units
 Degree Applicable, CSU, UC

54 hours lecture

Human lifespan and developmental influences. Developmental approach to the study of the person identifying forces affecting growth processes from conception through adulthood. Meets requirements for Title 22 and Title V Regulations pertaining to Child Development Permit. Out-of-class observations and interviews required. TB test required.

■ CHLD 10H — Child Growth and Lifespan Development - Honors **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: Acceptance into the Honors Program
Human lifespan and developmental influences. Developmental approach to the study of the person identifying forces affecting growth processes from conception through adulthood. Meets requirements for Title 22 and Title V Regulations pertaining to Child Development Permit. Out-of-class observations and interviews required. TB test required. An honors course designed to provide an enriched experience for accelerated students. Students may not receive credit for both CHLD 10 and CHLD 10H.

■ CHLD 11 — Child and Adolescent Development **3 Units**
(C-ID CDEV 100) Degree Applicable, CSU, UC

54 hours lecture
Examines major physical, psychosocial, cognitive, language and brain developmental processes prenatal through adolescence. Emphasis on developmental theory, research methodologies, maturational processes and environmental factors. 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

54 hours lecture
Advisory: CHLD 1
Development of social identities in diverse societies of young children in classroom settings. Various classroom strategies will be explored emphasizing culturally and linguistically appropriate anti-bias approaches teaching all children in becoming competent members of a diverse society. Course utilizes theories and teaching strategies that include self-examination, reflection and opportunity to address issues related to social identity, stereotypes and bias, oppression, social and educational access, media and schooling. Out-of-class observations required. TB test required.

■ CHLD 51 — Early Literacy in Child Development **3 Units**
Degree Applicable, CSU

54 hours lecture
Advisory: CHLD 61
Examines the developmental continuum of literacy from birth through early childhood. Considerations of cultural and linguistic diversity are applied to the study of how children become competent in all areas of language. An appreciation of the importance of interaction and cooperation between home and school underlies the exploration of language and literacy acquisition. Issues of early literacy in public policy are reviewed. TB test/observations required.

■ CHLD 61 — Language Arts and Art Media for Young Children **3 Units**
Degree Applicable

54 hours lecture
Exploration of activities and techniques to develop artistic creativity and literacy skills in young children. Participation in art and literacy experiences to evaluate materials and approaches used in the early education setting. Discussion of the creative process and other relevant literacy activities within diverse cultures that support learning. Development of a culturally and linguistically appropriate learning environment which encourages children's use of senses and builds children's awareness of aesthetic materials through art and language arts activities.

■ CHLD 62 — Music and Motor Development for Young Children **3 Units**
Degree Applicable, CSU

54 hours lecture
Exploration of the role of music and movement in a young child's sensory motor development. Emphasizes student development in practical activities including making music, movement, singing and musical instruments. Out of class observation at a child development center required. TB test required.

■ CHLD 63 — Creative Sciencing and Math for Young Children **3 Units**
Degree Applicable, CSU

54 hours lecture
Advisory: Eligibility for ENGL 68
Exploration of children's thinking processes and problem-solving abilities as they become aware of the physical world. Includes planning and creating science and math experiences that emphasize the creative aspects of math and science.

■ CHLD 64 — Health, Safety and Nutrition of Children **3 Units**
(C-ID ECE 220) Degree Applicable, CSU

54 hours lecture
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

36 hours lecture
Prerequisite: CHLD 5 and (CHLD 10 or CHLD 10H or CHLD 11)
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. CHLD 66L must be taken concurrently.

■ CHLD 66L — Early Childhood Development Observation and Assessment Laboratory **1 Unit**
Degree Applicable, CSU

54 hours lab
Prerequisite: CHLD 5 and (CHLD 10 or CHLD 10H or CHLD 11)
Corequisite: CHLD 66
Understanding of 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. TB Test required. CHLD 66 must be taken concurrently.

■ CHLD 67 — Early Childhood Education Practicum **2 Units**
Degree Applicable, CSU

36 hours lecture
Prerequisite: CHLD 1 and CHLD 66 and CHLD 66L
Corequisite: CHLD 67L
Child development principles in the preschool classroom setting and recognition of skills necessary for the teacher of young children. Evaluation of participation experiences.

■ CHLD 67L — Early Childhood Education Practicum Laboratory **1 Unit**
Degree Applicable, CSU

63 hours lab
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. Negative TB test result required.

Course Descriptions

■ CHLD 68 — Children With Special Needs 3 Units
 Degree Applicable, CSU

54 hours lecture

Prerequisite: Eligibility for ENGL 68 AND (CHLD 10 or CHLD 10H or CHLD 11)

Typical and atypical characteristics in physical, cognitive, and social-emotional development for those planning to work with 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, and community resources. TB test required for off-campus observations.

■ CHLD 69 — Early Childhood Development Field Work Seminar 2 Units
 Degree Applicable, CSU

36 hours lecture

Prerequisite: CHLD 67 and CHLD 67L

Corequisite: CHLD 91

Selected student teaching problem-solving topics related to placement in 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

54 hours lecture

Advisory: CHLD 1 and CHLD 5 and CHLD 6 and CHLD 10 or CHLD 10H

Administration of children's programs including laws governing children's programs in California, site development and supervision, administrator's duties, program budget and management, personnel selection and standards, records and reports, health and safety supervision and staff policies.

■ CHLD 71B — Management/Marketing/Personnel for ECD Programs 3 Units
 Degree Applicable, CSU

54 hours lecture

Prerequisite: CHLD 71A

Strategic planning for childhood programs, including financial administration, marketing strategies and staff development. Personnel management practices designed to facilitate administrator and staff relationships, skill building in leadership, and team work.

■ CHLD 72 — Teacher, Parent, and Child Relationships 3 Units
 Degree Applicable

54 hours lecture

Child-parent-teacher relationships to better understand family dynamics and to recognize influences in the child development setting. Theories of sequential changes in parent-child-school relations within the large social context. Strategies dealing with issues that emerge when working with children and their families in the school setting.

■ CHLD 73 — Infant/Toddler Care and Development 3 Units
 Degree Applicable, CSU

54 hours lecture

Advisory: CHLD 10

Developmentally appropriate caregiving practices for infants and toddlers from birth to three. Includes teaching practices that support theories and practical application of attachment, cognition and relationship based learning. Student assignments involve up to ten hours of observations and participation with infants and toddlers outside of class time. TB test required for observations.

■ CHLD 74 — Program Planning for the School Age Child 3 Units
 Degree Applicable

54 hours lecture

Advisory: CHLD 10 or CHLD 10H or CHLD 11

Principles of child development related to working with school-age children. Program planning and legal requirements for school-age programs emphasized. Explores discipline and conflict resolution. Methods of integrating after-school activities with California content standards. TB test required for observations.

■ CHLD 75 — Supervising Adults in Early Childhood Settings 2 Units
 Degree Applicable

36 hours lecture

Advisory: CHLD 1 and CHLD 5

Methods and principles of working with and supervising adults in the early childhood setting. Emphasis is on the role of the experienced children's teacher who functions as a model and mentor to new teachers as s/he addresses the needs of children, parents and staff.

■ CHLD 81 — Current Curriculum Models in Child Development 1 Unit
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

Provides students with working knowledge of specific curriculum models appropriate for child development programs. Origins, classroom practices, pros, cons, and evaluation methods discussed. Curriculum model will change with course offering.

■ CHLD 82 — Advocacy in Child Development 1 Unit
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

Current issues in Child Development; explores process of advocacy on behalf of children.

■ CHLD 83 — Current Issues in Child Development 1 Unit
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

Advisory: CHLD 5, CHLD 10 or CHLD 10H

Provides students with a working knowledge of current research in child development and helps them apply that research to their programs and teaching. Issues covered will change with course offerings.

■ CHLD 84 — Guidance and Discipline in Child Development Settings 1 Unit
 Degree Applicable, CSU

18 hours lecture

Advisory: CHLD 5

Problem solving approach to guidance and discipline of children in child development settings. Investigation of appropriate developmental and attitudinal aspects of producing a respectful environment between children, caregivers and parents.

■ CHLD 85 — Infants At Risk 3 Units
 Degree Applicable

54 hours lecture

Prerequisite: CHLD 10

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 91 — Early Childhood Development Field Work 1 Unit
 Degree Applicable, CSU

(May be taken for Pass/No Pass only)

75 hours lab

Prerequisite: CHLD 67 and CHLD 67L

Corequisite: CHLD 69

A teacher-supervised work experience course which permits students to apply early childhood development principles in community preschools. CHLD 69 Seminar will supplement student's progress. A minimum of 75 paid or 60 non-paid clock hours per semester of supervised work is required for each unit of credit. Hours per week should be equally distributed throughout the semester. TB test is required.

CHINESE

■ CHIN 1 — Elementary Chinese **4 Units**
Degree Applicable, CSU, UC

72 hours lecture

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

72 hours lecture

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

72 hours lecture

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

72 hours lecture

Prerequisite: CHIN 3

Using Mandarin in traveling, telling stories, describing experiences and discussing Chinese literary works, festivals, food and advanced grammar.

COMPUTER GRAPHICS

■ GRAP 8 — Fundamentals of Digital Media **3 Units**
Degree Applicable, CSU

36 hours lecture

54 hours lab

Introductory course for all disciplines interested in learning scientific concepts, terminology, and basic techniques used to produce digital media content. Includes software such as Adobe Photoshop, Apple iPhoto and iMovie, and computer and other electronic hardware techniques necessary to acquire, store, edit, transfer, or output digital media files.

■ GRAP 10 — Photoshop Imagery **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

54 hours lab

Adobe Photoshop software skills, techniques and digital workflow practices from digital image editing and retouching to the composited imagery commonly created for use in photography, commercial design, printing and publishing, the internet and multimedia authoring production.

■ GRAP 12 — Photoshop Imagery Extended **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

54 hours lab

Prerequisite: GRAP 10

Adobe Illustrator software skills, techniques and digital workflow from essential digital drawing basics to creatively conceived illustrative imagery and renderings commonly created for use in commercial design, printing and publishing, the internet, and multimedia authoring production.

■ GRAP 15 — InDesign Graphics **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

54 hours lab

Adobe InDesign software skills, techniques and digital workflow practices commonly created for use in essential computer graphics production processes for commercial design, printing and publishing, the Internet and multimedia authoring production.

■ GRAP 16 — Illustrator Graphics **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

54 hours lab

Adobe Illustrator software skills, techniques and digital workflow from essential digital drawing basics to creatively conceived illustrative imagery and renderings commonly created for use in commercial design, printing and publishing, the internet, and multimedia authoring production.

■ GRAP 18 — 3D Graphics Imagery **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

54 hours lab

3D graphics modeling software skills and production techniques from 2D orthographic drawing to the creatively conceived 3D imagery and animated environments commonly created for self-expression, entertainment, commercial design, printing and publishing, the internet, and multimedia authoring production.

■ GRAP 20 — Multimedia Graphics **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

54 hours lab

Multimedia graphics software skills and production techniques for combining text, image, audio, video, animation and scripting media to author multimedia projects commonly created for self-expression, entertainment, commercial design, the internet, and multimedia production.

■ GRAP 30 — Digital Productions **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

54 hours lab

Computer graphics production techniques and practices used in media creation and authoring professional projects commonly created for use in photography, commercial design, printing and publishing, the Internet and multimedia authoring production.

■ GRAP 40 — Computer Graphics Special Topics **2 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

18 hours lecture

54 hours lab

Special topics expanding the essential knowledge, skills, production techniques and proficiency of Computer Graphics commonly created for self-expression, entertainment, commercial design, the Internet, and multimedia production.

COMPUTER INFORMATION SYSTEMS: AUXILIARY

■ CISX 94 — Special Projects in Computer Information Systems **1 to 3 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)

54 to 162 hours lab

Prerequisite: Instructor Approval

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.

COMPUTER INFORMATION SYSTEMS: BEGINNING

■ CISB 10 — Office Skills **3 Units**
Degree Applicable

54 hours lecture

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, telephone techniques.

Course Descriptions

■ CISB 11 — Computer Information Systems 3.5 Units
 (C-ID BUS 140)(C-ID ITIS 120) Degree Applicable, CSU, UC

54 hours lecture
27 hours lab

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

54 hours lecture
27 hours lab

Windows operating system 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

27 hours lecture
27 hours lab

Apple's Macintosh computer, Mac OS X operating system, and related word processing, database, spreadsheet, and multimedia applications.

■ CISB 21 — Microsoft Excel 3 Units
 Degree Applicable, CSU

54 hours lecture

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)

54 hours lecture

Advisory: Ability to type 25 words a minute or CISI 11

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

54 hours lecture

Using PowerPoint to plan, design, and produce effective presentations. Includes creating charts, diagrams, and storyboards; developing appropriate text content; adding sound, animation, and movies.

COMPUTER INFORMATION SYSTEMS: DATABASE
■ CISD 11 — Database Management - Microsoft Access 3 Units
 Degree Applicable, CSU

54 hours lecture

Corequisite: CISD 11L

Advisory: CISB 15 or CISB 11

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 .5 Unit
 Degree Applicable, CSU

27 hours lab

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

54 hours lecture

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 — VBA for Excel and Access Lab .5 Unit
 Degree Applicable

27 hours lab

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

54 hours lecture

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 .5 Unit
 Degree Applicable, CSU

27 hours lab

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

54 hours lecture

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 .5 Unit
 Degree Applicable, CSU

27 hours lab

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

54 hours lecture

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.

COMPUTER INFORMATION SYSTEMS: MANAGEMENT
■ CISM 11 — Systems Analysis and Design 3.5 Units

Degree Applicable, CSU, UC

54 hours lecture

27 hours lab

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 11 — Telecommunications/Networking 3 Units

Degree Applicable, CSU

54 hours lecture

*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 .5 Unit

Degree Applicable, CSU

27 hours lab

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

54 hours lecture

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

54 hours lecture

*Corequisite: CISN 24L**Advisory: CISN 11*

Computer Network Administration and Security Management (CNASM) core. Microsoft Certified Systems Engineer (MCSE) topics, Active Directory security and policy management, Hyper-V virtual server installation, Dynamic Host Configuration Protocol (DHCP), Domain Name Service (DNS), file system security, logon script, network printing, web and terminal server, Network Address Translation (NAT), IPsec and secure Virtual Private Network (VPN).

■ CISN 24L — Window Server Network and Security Administration Laboratory .5 Unit

Degree Applicable, CSU

27 hours lab

Corequisite: CISN 24

Laboratory applications for Microsoft Certified Systems Engineer (MCSE) topics, Active Directory security and policy management, Hyper-V virtual server installation, Dynamic Host Configuration Protocol (DHCP), Domain Name Service (DNS), file system security, logon script, network printing, web and terminal server, Network Address Translation (NAT), IPsec and secure Virtual Private Network (VPN). 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

54 hours lecture

*Corequisite: CISN 31L**Advisory: CISB 11*

Concepts and skills in planning and installing Linux Operating System and its graphical user interface; 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 .5 Unit

Degree Applicable, CSU

27 hours lab

Corequisite: CISN 31

Laboratory for planning, installing and managing Linux Operating System and its graphical user interface; 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

54 hours lecture

*Corequisite: CISN 34L**Advisory: CISN 31*

Installation and management of Linux operating system networks and security modules. Concept study and installation of: TCP/IP protocols, 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 .5 Unit

Degree Applicable, CSU

27 hours lab

Corequisite: CISN 34

Laboratory for installation and management of Linux operating system networks and security modules. Concept study and installation of: TCP/IP protocols, 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.

Course Descriptions

■ CISN 51 — Cisco CCNA Networking and Routing 3 Units
 Degree Applicable, CSU

54 hours lecture

*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 .5 Unit
 Degree Applicable, CSU

27 hours lab

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 — Virtualization Technology 3 Units
 Degree Applicable

54 hours lecture

Advisory: CISB 11 or CISN 21 or CISN 31

Plan, configure, secure, install, and maintain latest virtual systems from prominent vendors.

COMPUTER INFORMATION SYSTEMS: PROGRAMMING
■ CISP 10 — Principles of Object-Oriented Design 2 Units
 Degree Applicable, CSU

27 hours lecture

27 hours lab

Advisory: Advisory corequisites - CISP 11 or CISP 21 or CISP 31 or CISP 41

Object-oriented design, patterns, and use of UML in different programming languages that will enable students to build large packages and business applications.

■ CISP 11 — Programming in Visual Basic 3 Units
 Degree Applicable, CSU, UC

54 hours lecture

*Corequisite: CISP 11L**Advisory: CISB 11 or CISB 15 or CISP 10*

Visual Basic 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. Student must be concurrently enrolled in CISP 11L - Programming in Visual Basic Lab.

■ CISP 11L — Programming in Visual Basic Laboratory .5 Unit
 Degree Applicable, CSU, UC

27 hours lab

Corequisite: CISP 11

Laboratory for CISP 11 - Programming in Visual Basic. 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. Concurrent enrollment in the lecture course CISP 11 - Programming in Visual Basic is required.

■ CISP 14 — Advanced Visual Basic .NET 3 Units
 Degree Applicable, CSU, UC

54 hours lecture

*Corequisite: CISP 14L**Advisory: CISP 11 and CISP 11L*

Advanced programming concepts using Visual Basic .NET: designing, coding, testing and implementing object-oriented multi-tier applications; displaying, searching, and updating SQL/Client databases with both Windows Forms and Web Forms; creating user controls, Web Services, and container classes; creating help files, deploying applications, and developing mobile applications. Student must be enrolled in CISP 14L, a concurrent lab co-requisite.

■ CISP 14L — Advanced Visual Basic.NET Laboratory .5 Unit
 Degree Applicable, CSU, UC

27 hours lab

*Corequisite: CISP 14**Advisory: CISP 11 and CISP 11L*

Laboratory for advanced programming concepts using Visual Basic .NET: designing, coding, testing and implementing object-oriented multi-tier applications; displaying, searching, and updating SQL/Client databases with both Windows Forms and Web Forms; creating user controls, Web Services, and container classes; creating help files, deploying applications, and developing mobile applications. Student must be enrolled in CISP 14, a concurrent lecture co-requisite.

■ CISP 21 — Programming in Java 3 Units
 Degree Applicable, CSU, UC

54 hours lecture

*Corequisite: CISP 21L**Advisory: CISP 10 AND CISP 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 .5 Unit
 Degree Applicable, CSU, UC

27 hours lab

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

54 hours lecture

*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** .5 Unit
Degree Applicable, CSU, UC

27 hours lab

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

54 hours lecture

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** .5 Unit
Degree Applicable, CSU, UC

27 hours lab

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

54 hours lecture

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. Also graphical-user interface (GUI), database access and web services. Student must be enrolled in CISP 34L, a concurrent lab co-requisite.

■ **CISP 34L — Advanced C++ Programming Laboratory** .5 Unit
Degree Applicable, CSU, UC

27 hours lab

Corequisite: CISP 34

Laboratory for object-oriented programming in C++ concepts. Covers principles covers data structures: vectors, linked lists, queues, stacks and hash tables. Also graphical-user interface (GUI), database access and web services. Student must be enrolled in CISP 34, a concurrent lecture co-requisite.

■ **CISP 41 — Programming in C#** 3 Units
Degree Applicable, CSU

54 hours lecture

Corequisite: CISP 41L

Advisory: CISP 10, CISB 11, CISB 15

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** .5 Unit
Degree Applicable, CSU

27 hours lab

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

54 hours lecture

Corequisite: CISP 52L

Advisory: CISP 10 and CISW 21

Mobile device programming covers user interface patterns and design, connectivity, and application architecture design. Student must be enrolled in CISP 52L, a concurrent lab co-requisite.

■ **CISP 52L — Mobile Device Programming Laboratory** .5 Unit
Degree Applicable

27 hours lab

Corequisite: CISP 52

Mobile device programming laboratory: user interface, connectivity, and application architecture and design. Student must be enrolled in CISP 52, a concurrent lecture co-requisite.

■ **CISP 61 — Introduction to Game Programming** 3 Units
Not Degree Applicable

54 hours lecture

Corequisite: CISP 61L

Advisory: CISP 31 and CISP 34

Game programming technologies and techniques, including programming languages and IDEs (Integrated Development Environment), libraries and engines, development design and principles, and application of game specific programming techniques. Student must be enrolled in CISP 61L concurrently.

■ **CISP 61L — Introduction to Game Programming Laboratory** .5 Unit
Not Degree Applicable

27 hours lab

Corequisite: CISP 61

Provides practical implementation of game development using different software packages. Student must be enrolled in CISP 61, a concurrent lecture co-requisite.

■ **CISP 62 — Introduction to OpenGL** 3 Units
Not Degree Applicable

54 hours lecture

Corequisite: CISP 62L

Advisory: CISP 34 and CISP 34L

Programming and creating 3D animated games with OpenGL

■ **CISP 62L — Introduction to OpenGL Laboratory** .5 Unit
Not Degree Applicable

27 hours lab

Corequisite: CISP 62

The course provides practical implementation of OpenGL programming. Student must take CISP 62, a concurrent lecture co-requisite.

COMPUTER INFORMATION SYSTEMS: SECURITY

■ **CISS 11 — Practical Computer Security** 2 Units
Degree Applicable

27 hours lecture

27 hours lab

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

72 hours lecture

Advisory: CISS 11 AND CISB 11

Certified Information Systems Security Professional (CISSP) exam course preparation including legal, business, and ethical topics.

Course Descriptions

■ CISS 15 — Operating Systems Security 3 Units
 Degree Applicable

54 hours lecture

Advisory: CISB 11 or CISON 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

54 hours lecture

*Corequisite: CISS 21L**Advisory: CISN 11 or CISN 24 or CISN 51*

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 .5 Unit
 Degree Applicable, CSU

27 hours lab

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

54 hours lecture

*Corequisite: CISS 23L**Advisory: CISN 11 or CISN 24 or CISN 51*

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 .5 Unit
 Degree Applicable, CSU

27 hours lab

Corequisite: CISS 23

Laboratory course using 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 23, a concurrent lecture co-requisite.

■ CISS 25 — Network Security and Firewalls 3 Units
 Degree Applicable, CSU

54 hours lecture

*Corequisite: CISS 25L**Advisory: (CISN 11 and CISN 11L) or (CISN 24 and CISN 24L) or (CISN 51 and CISN 51L)*

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 .5 Unit
 Degree Applicable, CSU

27 hours lab

Corequisite: CISS 25

Laboratory 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

54 hours lab

Advisories: 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)

54 hours lab

Integrate knowledge learned from Computer Network Administration and Security Management courses through lab activities and community services.

**COMPUTER INFORMATION SYSTEMS:
WEB APPLICATIONS**
■ CISW 15 — Web Site Development 3.5 Units
 Degree Applicable, CSU

54 hours lecture

27 hours lab

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

54 hours lecture

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

54 hours lecture
Corequisite: CISW 21L
Advisory: CISB 15

Secure Web 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) for designing user interfaces, processing user input, and accessing Web servers and databases. Student must be enrolled in CISW 21L, a concurrent lab co-requisite

■ **CISW 21L — Secure Web Programming with ASP.NET Laboratory** .5 Unit
Degree Applicable, CSU

27 hours lab
Corequisite: CISW 21

Laboratory for secure Web 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) 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 Server Side Web Programming** 3 Units
Degree Applicable

54 hours lecture
Corequisite: CISW 24L

Secure web programming to create user interfaces, extract information and manage databases, manage files, format reports, and access web servers by using Practical Extraction and Report Language (PERL), Python, Ruby or any Web scripting or programming language. Student must be enrolled in CISW 24L, a concurrent lab co-requisite.

■ **CISW 24L — Secure Server Side Web Programming Laboratory** .5 Unit
Degree Applicable

27 hours lab
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 by using Practical Extraction and Reporting Language (PERL), Python, Ruby or any Web scripting or programming language. Student must be enrolled in CISW 24, a concurrent lecture co-requisite.

■ **CISW 31 — Secure Web Servers** 3 Units
Degree Applicable

54 hours lecture
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 Servers Laboratory** .5 Unit
Degree Applicable

27 hours lab
Corequisite: CISW 31

Plan, install and manage secure Apache Web servers using server side programming language like PHP to access, manage and secure MySQL databases. Student must be enrolled in CISW 31, a concurrent lecture co-requisite.

■ **CISW 41 — XML Secure Programming** 3 Units
Degree Applicable

54 hours lecture
Advisory: CISW 21 and CISW 21L

Principles, components and secure programming of Extensible Markup Language (XML). Also includes Extensible Stylesheet Language Transformation (XSLT), XML Path Language (XPath), Extensible Stylesheet Language Formatting Objects (XSL-FO), Document Type Definition (DTD), XML Schema, and XML Namespaces.

COMPUTER SCIENCE

■ **CSCI 110 — Fundamentals of Computer Science** 3.5 Units
Degree Applicable, CSU, UC

54 hours lecture
27 hours lab
Prerequisite: MATH 71 or MATH 71B or MATH 71X
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 (C, C++ or Java.)

■ **CSCI 140 — C++ Language and Object Development** 4 Units
(C-ID COMP 122) Degree Applicable, CSU, UC

54 hours lecture
54 hours lab
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

54 hours lecture
54 hours lab
Prerequisite: CSCI 110

Java language and object oriented programming 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 I/O, applets, 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

54 hours lecture
27 hours lab
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 150L — Assembly Language Laboratory** 1 Unit
Degree Applicable, CSU, UC

(May be taken for Pass/No Pass only)
54 hours lab
Corequisite: CSCI 150
Advisory: CSCI 140 or CSCI 145

Complements the lecture material in CSCI 150. Development/debugging of assembly language programs.

Course Descriptions

■ CSCI 170 — Introduction to Unix Operating System 3.5 Units
 Degree Applicable, CSU, UC

54 hours lecture
27 hours lab

Prerequisite: CSCI 110

For computer science, mathematics, engineering and other science students. Introduction to the UNIX operating system, system administration and networking. Topics include: process synchronization and communication mechanisms, process management, scheduling and protection, memory organization and management, virtual memory, I/O devices management, file systems, networking, system administration for UNIX.

■ CSCI 190 — Discrete Mathematics Applied to Computer Science 4 Units
 Degree Applicable, CSU, UC

72 hours lecture

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

54 hours lecture
27 hours lab

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 220L — Data Structures I Laboratory 1 Unit
 Degree Applicable, CSU, UC

(May be taken for Pass/No Pass only)

54 hours lab

Corequisite: CSCI 220

An independent study program designed to complement the lecture material presented in CSCI 220, Data Structures I. Hands-on computer work on topics including abstract data types, running time analysis tools, linear data structures, 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

54 hours lecture
27 hours lab

Prerequisite: CSCI 220

Basic searching/sorting algorithms, hashing, graphs, memory/disk management, indexing, B-trees, advanced tree structures and analysis.

■ CSCI 230L — Data Structures II Laboratory 1 Unit
 Degree Applicable, CSU, UC

(May be taken for Pass/No Pass only)

54 hours lab

Corequisite: CSCI 230

An independent study program designed to complement the lecture material presented in CSCI 230, Data Structures II. Hands on computer work will include problem solving in basic searching/sorting algorithms, hashing, graphs, memory/disk management, indexing, B-trees, advanced tree structures and analysis.

COMPUTER AND NETWORKING TECHNOLOGY
■ CNET 50 — PC Servicing 4 Units
 Degree Applicable

54 hours lecture
54 hours lab

Advisory: ELEC 50A and ELEC 50B taken prior or concurrently

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

54 hours lecture
54 hours lab

Advisory: CNET 50 taken prior

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

54 hours lecture
54 hours lab

Advisory: CNET 50 taken prior

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

54 hours lecture
54 hours lab

Advisory: CNET 54 taken prior

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

54 hours lecture
54 hours lab

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

36 hours lecture

Advisory: CNET 54

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

36 hours lecture

Advisory: CNET 56

Prepares the student and/or A+ certified technician for the Network+ Certification Examination. Individuals preparing for a job in the computer networking industry or who wish to become Network+ certified will find this course invaluable.

■ CNET 64 — Server+ Certification Preparation 2 Units
 Degree Applicable

36 hours lecture

Advisory: CNET 58

Prepares the computer/network service technician for the CompTIA Server+ certification examination.

■ **CNET 66 — Security+ Certification Preparation** **2 Units**
Degree Applicable

36 hours lecture

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.

CORRECTIONAL SCIENCES

■ **CORS 10 — Introduction to Correctional Sciences** **3 Units**
Degree Applicable, CSU

54 hours lecture

The field of corrections: county jail, probation, the California Youth Authority and the Department of Corrections as members of the Criminal Justice System. Includes philosophy, past and present practices and the criminal justice and correctional processes.

COUNSELING

■ **COUN 1 — Introduction to College** **1 Unit**
Degree Applicable, CSU, UC

(May be taken for Pass/No Pass only)

18 hours lecture

Higher education and the college experience including orientation to college life and higher education resources. Explores graduation, transfer, career options, factors in educational decision making, and educational planning.

■ **COUN 1H — Introduction to College - Honors** **1 Unit**
Degree Applicable, CSU, UC

18 hours lecture

Prerequisite: Acceptance into Honors Program.

Higher education and the college experience. Orientation to college life and resources. Explores graduation, transfer, career options, factors in educational decision making and educational planning.

■ **COUN 2 — College Success Strategies** **3 Units**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Strategies and techniques to be an effective college student including time management, study skills, college resources, career exploration and educational planning. Develop skills necessary to reach educational and career goals.

■ **COUN 5 — Career/Life Planning** **3 Units**
Degree Applicable, CSU

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Evaluates career options using a systematic approach to self-exploration and the career and life planning process including identification of values, interests, skills and self-management style. Develop decision making and goal setting skills and identify barriers to success. Explores 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)

36 hours lecture

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. Field trips are required.

■ **COUN 20 — Peer Counselor Training** **2 Units**
Degree Applicable, CSU

36 hours lecture

Prerequisite: Eligibility for ENGL 68

Group experience with interpersonal communication and approaches to peer counseling and advising at Mt. SAC. Provide opportunities to develop skills with a variety of communication styles that include open expression, active listening, and feedback. Opportunities may be available for students to become employed as peer counselors.

■ **COUN 51 — Career Planning** **1 Unit**
Degree Applicable, CSU

18 hours lecture

An abbreviated 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 — Single Parent Academy** **3 Units**
Degree Applicable

54 hours lecture

Explores and develops strategies and techniques to be an effective college student as a single parent. Strategies include time management, study skills, college resources, decision making, goal setting, career exploration and educational planning.

■ **COUN 99A — Special Projects in Counseling** **.5 to 3 Units**
Degree Applicable, CSU

8 to 48 hours lecture

Opportunity to explore academic interest and aspirations in greater depth. Instructor's authorization is required. A field trip may be required.

DANCE: ACTIVITY

■ **DNCE 1 — Ballet Fundamentals** **.5 to 2 Units**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 108 hours lab

Introduces fundamental vocabulary, technique, and movement combinations for ballet. Includes floor work, barre work, center work, floor progressions, and musicality and phrasing.

■ **DNCE 2A — Ballet I** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours lab

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** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours lab

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** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours lab

Introduces the experienced dance student to the performance aspect of ballet. Includes advanced barre work, center work, floor progressions and performance of classical ballet variations.

■ **DNCE 4 — Choreography** **.5 to 2 Units**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 108 hours lab

Prerequisite: DNCE 12A or DNCE 12B or DNCE 13

Designed for the experienced dancer to learn the techniques of choreography, forms and compositional design.

■ **DNCE 8 — Latin Dance I** **.5 to 1 Unit**
Not Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours lab

Latin styles of dance. Includes Cha Cha, Samba, Rumba, Pasodoble and Jive.

Course Descriptions

■ DNCE 10 — Modern Fundamentals .5 to 1 Unit
 Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 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 .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 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. Off-campus assignment may be required.

■ DNCE 11B — Social Dance Forms II .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Advanced social dance techniques. Improve 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. Off-campus assignment may be required.

■ DNCE 12A — Modern I .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Basic vocabulary, technique, and movement combinations for modern dance.

■ DNCE 12B — Modern II .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken four times for credit)
 (May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Intermediate technique and movement combinations for modern dance. Students who repeat this course will improve skills through further instruction and practice.

■ DNCE 13 — Modern Performance .5 to 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)
 36 to 108 hours lab
 The experienced dance student studies the performance aspects of modern dance including advanced technique, choreographic elements and performance. Students who repeat this course will improve proficiency through continued instruction and practice.

■ DNCE 14A — Jazz I .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Beginning vocabulary, technique, and movement combinations for jazz dance. Includes warm-up, progressions and center floor routines.

■ DNCE 14B — Jazz II .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Intermediate vocabulary, technique, and movement combinations for jazz dance. Includes warm-up, progressions and center floor routines.

■ DNCE 15 — Jazz Performance .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 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 .5 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours lab
 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 .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Beginning level technique, rhythms and routines for tap dance.

■ DNCE 18B — Tap II .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Intermediate technique, rhythms and routines for tap dance.

■ DNCE 19 — Tap Performance .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Introduces the experienced dancer to the performance aspects of tap by providing advanced techniques leading to the performance of compositions.

■ DNCE 22 — Dance Rehearsal .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Designed for the experienced dancer to work in a rehearsal environment and to be a participant in the beginning elements of concert production.

■ DNCE 24 — Dance Production 1 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 54 to 108 hours lab
 Designed for the experienced dancer to apply previously learned choreographic skill, to conduct stage rehearsals and learn costuming techniques.

■ DNCE 28 — Theater Dance I .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Simple dance excerpts from various theater musicals and/or movies.

■ DNCE 29 — Theater Dance II .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Advanced theatre dance variations for the technically skilled dancer drawn from a variety of theater musicals and/or movies. Includes concepts of acting and staging incorporated with musical theatre choreography.

■ DNCE 30 — Contemporary Dance .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Opportunity for the beginning to advanced dancer to experience different techniques of leading contemporary dancers and choreographers.

■ DNCE 31 — Classical Dance .5 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours lab
 Advanced ballet repertoire focusing on the different schools of technique including Balanchine, Bournonville, and Vaganova.

■ DNCE 32 — Commercial Dance .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours lab
 Provides the intermediate to advanced jazz dancer the opportunity to experience the different techniques of leading commercial dancers, teachers and choreographers.

■ **DNCE 33 — Improvisation** **.5 to 1 Unit**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours lab
Improvisation in dance and choreography. For all levels of dance. Students who repeat this course will improve proficiency through continued instruction and practice.

■ **DNCE 34 — Dance Directives** **.5 to 1 Unit**
Degree Applicable, CSU
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours lab
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)
108 hours lab
Prerequisite: Admission by audition
Provides the opportunity for the advanced dancer to learn choreography and to perform repertory pieces at workshops and special events. Students who repeat this course will improve skills through further instruction and practice.

■ **DNCE 36 — Commercial Dance II** **.05 to 1 Unit**
Degree Applicable, CSU
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours lab
Styles of Hip Hop dance. Intermediate and advanced levels of Hip Hop dance routines. Includes Hip Hop choreographic skills.

■ **DNCE 39A — Alignment and Correctives I** **.5 to 1 Unit**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours lab
Pilates method of conditioning. Includes mat-work, Reformer and special conditioning exercises and body awareness resulting in improved alignment, strength, flexibility, control, coordination and breathing.

■ **DNCE 39B — Alignment and Correctives II** **.5 to 1 Unit**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours lab
Advisory: DNCE 39A
Pilates method of conditioning. Intermediate mat-work, Reformer and basic Wunda Chair repertoire focusing on developing improved body alignment, strength, flexibility and control.

■ **DNCE 40 — Conditioning Through Dance** **.5 to 1 Unit**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours lab
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** **.5 to 1 Unit**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours lab
Advisory: DNCE 39A
Pilates beginning and intermediate Mat work and beginning Reformer. Includes Pilatesstick and the Magic Circle.

■ **DNCE 42 — Pilates II** **.5 to 1 Unit**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours lab
Advisory: DNCE 41
Pilates intermediate mat, Reformer and Pilatesstick. Beginning Wunda Chair, Step Barrel and Ped-a-Pul. Includes use of physio-ball in Mat work.

■ **DNCE 43 — Pilates III** **.5 to 1 Unit**
Degree Applicable, CSU, UC
36 to 54 hours lab
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 18 — Introduction to Dance** **3 Units**
Degree Applicable, CSU, UC
54 hours lecture
Advisory: Eligibility for ENGL 68
A survey of the profession of dance and its various art forms through lecture, discussion, demonstration, and participation. Includes multi-cultural dance interpretations.

■ **DN-T 20 — History and Appreciation of Dance** **3 Units**
Degree Applicable, CSU, UC
54 hours lecture
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
54 hours lecture
Prerequisite: DNCE 39A
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
36 hours lecture
Functional human anatomy as applied to the Pilates method of conditioning.

■ **DN-T 29 — Teaching Pilates Mat Repertoire** **1.5 Units**
Degree Applicable
18 hours lecture
36 hours lab
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
18 hours lecture
36 hours lab
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
18 hours lecture
108 hours lab
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
18 hours lecture
36 hours lab
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.

Course Descriptions

■ **DN-T 33 — Teaching Pilates Ped-a-Pul, Barrels and Auxiliary Equipment Repertoire** **1.5 Units**
Degree Applicable

18 hours lecture
36 hours lab

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 and Auxiliary Equipment** **3 Units**
Degree Applicable

18 hours lecture
108 hours lab

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

36 hours lecture
54 hours lab

Corequisite: DNCE 2B or DNCE 12B or DNCE 14B

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.

DISABLED STUDENTS

■ **DSPS 12 — Career Exploration and Planning for Students with Disabilities** **3 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lecture

Advisory: Eligibility for ENGL 67 and READ 80

Assists students with a systematic approach to self-exploration, occupational research and career decision-making. Students will identify interests, personality style, and skills. Educational and functional limitations, as well as reasonable accommodations will be explored. Designed for students with disabilities.

■ **DSPS 13 — Orientation to College for Students with Disabilities** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

Examine the college experience in relationship to disabilities. Develop an understanding of how disability related factors may influence the educational decision-making process.

■ **DSPS 15 — Career Exploration for Students with Disabilities** **1 Unit**
Not Degree Applicable

(May be taken for Pass/No Pass only)

18 hours lecture

Self-evaluation including interests, experiences, personality, values, and disability-related limitations as they relate to educational and career decisions. Identification of skills and resources, including those that relate to disability factors. Students who repeat this course will improve skills through further instruction and practice.

■ **DSPS 20 — Improving Spelling and Reading of Words** **3 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lecture

Improve reading and spelling skills for multi-syllabic words. Includes sounding out letters, oral movements, and common "rules" for reading and spelling words. Designed for students with learning disabilities. Students who repeat this course will improve skills through further instruction and practice.

■ **DSPS 25 — Language Development for Deaf Students in ASL and English** **2 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)

108 hours lab

Language Development for Deaf or hard of hearing students who use sign language to improve written English and ASL communication.

■ **DSPS 26 — Language Enhancement for Deaf Students in ASL and English** **2 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)

108 hours lab

Advisory: DSPS 25

Language Enhancement for Deaf or hard of hearing students who use sign language to improve written English and ASL communication.

■ **DSPS 30 — Academic Success Strategies for Students with Disabilities** **1 Unit**
Not Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lab

Strategies for academic success intended for students with physical or learning-related disabilities. Addresses language, memory and reasoning with subject-specific techniques.

■ **DSPS 31 — Memory Strategies for Students with Disabilities** **3 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lecture

Advisory: Eligibility for READ 80. Student should have at least one other academic class for application of strategies.

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.

■ **DSPS 32 — Technology for Students with Learning Disabilities** **3 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lecture

Advisory: Eligibility for ENGL 67 or AMLA 42W and READ 80 or AMLA 32R. Concurrent enrollment in an academic class that requires reading and writing.

Students with Learning Disabilities can improve their reading comprehension and written expression as applied to assignments in academic classes through the use of technology. A variety of strategies using technology will be introduced to students that will aid them in understanding and learning reading assignments and in expressing their ideas in written assignments. They will select several strategies for more in-depth use and will apply them functionally in academic classes. Concurrent enrollment in an academic class that requires reading and writing is advised.

■ **DSPS 33 — Strategies for Success in Math for Students with Disabilities** **3 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lecture

Advisory: Concurrent enrollment in MATH 50 to MATH 130

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.

■ **DSPS 34 — Writing Strategies for Students with Disabilities** **3 Units**

Not Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lecture

Strategies for success in writing for students with disabilities concurrently enrolled in ENGL 67, 68, 1A, 1B, and 1C classes. These strategies are applied to their English writing assignments by supporting the student's strengths and compensating for their weaknesses in writing.

EDUCATION

■ **EDUC 10 — Introduction to Education** **3 Units**

Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Concepts and issues related to teaching diverse learners in contemporary public schools (K-12). Topics include historical and philosophical foundations of America education, teaching as a profession and career, contemporary education issues, California content standards, and teacher performance standards. In addition to class time, the course requires 45 hours of structured classroom observations. Proofs 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

54 hours lecture

Advisory: Eligibility for ENGL 68

Survey of the teaching profession, including teaching and learning styles, state content standards and testing, recent California and national legislation, social issues, school funding and teacher and student rights and responsibilities. Off-site assignments may be required.

ELECTRONICS

■ **ELEC 10 — Introduction to Mechatronics** **2 Units**

Not Degree Applicable

18 hours lecture

54 hours lab

An introduction to the field of mechatronics, 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

36 hours lecture

54 hours lab

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

18 hours lecture

54 hours lab

Advisory: ELEC 51 and ELEC 56 taken prior

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

54 hours lecture

54 hours lab

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

54 hours lecture

54 hours lab

Advisory: ELEC 50A taken prior

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

54 hours lecture

54 hours lab

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

54 hours lecture

54 hours lab

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

54 hours lecture

54 hours lab

Advisory: ELEC 51 taken prior

Industrial electronic components and basic control circuits. Includes time delay controls, thyristor controls, relays, opto devices, DC and AC motor control, transducers, silicon controlled rectifier (SCR), and unijunction transistor (UJT) devices.

■ **ELEC 54B — Industrial Electronic Systems** **3 Units**

Degree Applicable, CSU

36 hours lecture

54 hours lab

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

54 hours lecture

54 hours lab

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

54 hours lecture

54 hours lab

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.

Course Descriptions

■ ELEC 61 — Electronic Assembly and Fabrication 3 Units
 Degree Applicable, CSU

36 hours lecture
54 hours lab

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

18 hours lecture
54 hours lab

Advisory: ELEC 61

Advanced course in assembly and repair (soldering) on surface mount assemblies (SMT). Prepares for the IPC surface mount assembly and rework certifications.

■ ELEC 74 — Microcontroller Systems 4 Units
 Degree Applicable, CSU

54 hours lecture
54 hours lab

Advisory: ELEC 56 taken prior

Microcontroller systems and programming methods; program-able 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
 Not Degree Applicable

18 hours lecture
54 hours lab

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 to 2 Units
 Degree Applicable

54 to 108 hours lab

Advisory: ELEC 50B taken prior or concurrently

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 to 4 Units
 Degree Applicable

(May be taken for Pass/No Pass only)

75 to 300 hours lab

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Advisory: ELEC 56

Provides actual 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.

ELECTRONICS SYSTEMS TECHNOLOGY
■ EST 50 — Electrical Fundamentals for Cable Installations 4 Units
 Degree Applicable

54 hours lecture
54 hours lab

Electrical fundamentals for cable and wire installations, and other low voltage systems. Includes DC/AC, solid-state devices, digital and microprocessor devices and their application to cable installations. Prepares students for the California State Contractors C-7 low voltage systems license.

■ EST 52 — Fabrication Techniques for Cable Installations 4 Units
 Degree Applicable

54 hours lecture
54 hours lab

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 State Contractors C-7 low voltage systems license.

■ EST 54 — Cabling and Wiring Standards 4 Units
 Degree Applicable

54 hours lecture
54 hours lab

Advisory: EST 50

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. Prepares students for the California State Contractors C-7 low voltage systems license.

■ EST 56 — Home Theater, Home Integration, and Home Security Systems 4 Units
 Degree Applicable

54 hours lecture
54 hours lab

Advisory: EST 54

Home theater, home integration, home management Power Line Carriers (PLCs), security hardware and programming, and the installation and servicing of such systems. Prepares students for the California State Contractors C-7 low voltage systems license.

■ EST 62 — Electronic Troubleshooting- I 4 Units
 Degree Applicable

54 hours lecture
54 hours lab

Advisory: EST 56

Troubleshooting basic electronic circuits and systems to component level. Circuits include: power supplies, amplifiers, audio circuits, home theater audio (Dolby 5.1), and video circuits (analog TV).

■ EST 64 — Electronic Troubleshooting - II 4 Units
 Degree Applicable

54 hours lecture
54 hours lab

Advisory: EST 62

Troubleshooting advanced electronic video circuits and systems to component level. Includes HDTV (plasma, LCD, LED).

EMERGENCY MEDICAL SERVICE
■ EMS 1 — Paramedic Fundamentals and Selection 4 Units
 Degree Applicable

72 hours lecture

Prerequisite: Completed Paramedic Program application, current California EMT I (Basic) certificate, and 1200 hours employment as an EMT I, Eligibility for ENGL 68, Eligibility for READ 90, and Eligibility for MATH 51

Assessment and review of required Emergency Medical Technician (EMT) competencies as part of the selection process for the Emergency Medical Technician Paramedic (EMT-P) program. Includes current practices, medical terminology, mathematical skills for drug calculations, and applied physiology and anatomy of human body systems.

EMERGENCY MEDICAL TECHNICIAN

■ EMS 2 — Preparation for Paramedic Program 1 Unit
 Not Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lab

Prerequisite: Acceptance into the paramedic program AND EMS 1
 Emergency Medical Technician (EMT)-Basic Skills development and practice for patient assessment and treatment decision-making in preparation for the paramedic program. Focuses on life support, trauma response, and immobilization techniques for healthcare providers. Includes the American Heart Association Healthcare Provider (AHA HCP) Basic Life Support (BLS) skills, Basic Trauma Life Support (BTLS) and the Los Angeles County Emergency Medical Services (EMS) standards and resuscitation policies. Ride-alongs with 911 call response teams are highly recommended.

■ EMS 10 — Anatomy and Physiology for Paramedics 3.5 Units
 Degree Applicable

61 hours lecture

Prerequisite: Admission to Paramedic Program and EMS 1 and EMS 2

Corequisite: EMS 20, EMS 30, EMS 40, EMS 50, and EMS 60

Gross anatomy and physiology of the human body, with applications to paramedic practices.

■ EMS 20 — Emergency Cardiac Care for Paramedics 2 Units
 Degree Applicable

18 hours lecture

48 hours lab

Prerequisite: Admission to the Paramedic Program

Corequisite: EMS 10, EMS 30, EMS 40, EMS 50, and EMS 60
 (courses may have been taken previously)

Certifies students in Pediatric Advanced Life Support (PALS), and Advanced Cardiac Life Support (ACLS) according to the standards of the American Heart Association (AHA). Enhances advanced assessment and treatment skills according to national and Los Angeles County Treatment Guidelines.

■ EMS 30 — Pharmacology for Paramedics 3 Units
 Degree Applicable

44 hours lecture

44 hours lab

Prerequisite: Admission to the Paramedic Program

Corequisite: EMS 10, EMS 20, EMS 40, EMS 50, EMS 60

Paramedic drugs with emphasis on dosages supplied and ordered, routes of administration, expected therapeutic outcomes and possible adverse reactions.

■ EMS 40 — Cardiology for Paramedics 3 Units
 Degree Applicable

54 hours lecture

Prerequisite: Admission to the Paramedic Program

Corequisite: EMS 10, EMS 20, EMS 30, EMS 50, and EMS 60

Familiarizes the paramedic with the normal, abnormal, and diseased heart, assessments, assessment tools, interpretation of dysrhythmias, and paramedic interventions.

■ EMS 50 — Paramedic Skills Competency 5.5 Units
 Degree Applicable

67 hours lecture

80 hours lab

Prerequisite: Admission to the Paramedic Program

Corequisite: EMS 10, EMS 20, EMS 30, EMS 40, EMS 60

Paramedic skills required for field operation as a paramedic and for licensing in competency-based exams.

■ EMS 60 — EMS Theory for Paramedics 9 Units
 Degree Applicable

157 hours lecture

Prerequisite: Admission to the Paramedic Program

Corequisite: EMS 10, EMS 20, EMS 30, EMS 40, and EMS 50

Paramedic theories, principles, and practices including assessment skills, care of the sick and injured at a paramedic level, with applications to anatomy and physiology, pathologic processes, and mechanisms of injury.

■ EMS 70 — Paramedic Clinical Internship 4 Units
 Degree Applicable

(May be taken for Pass/No Pass only)

192 hours lab

Prerequisite: EMS 1

Corequisite: EMS 60 (May have been taken previously)

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 9.5 Units
 Degree Applicable

(May be taken for Pass/No Pass only)

479 hours lab

Prerequisite: EMS 1 and successful completion of Los Angeles County accreditation exam

Corequisite: EMS 70 (may have been taken previously)

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.

■ EMT 90 — Emergency Medical Technician 8 Units
 Degree Applicable

105 hours lecture

115 hours lab

Prerequisite: EMT 90-A High school graduation or equivalent and minimum of 18 years of age

Approved by the Los Angeles County and Emergency Medical Services (EMS) Agencies. 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.

■ EMT 90-A — Introduction to EMS System 2 Units
 Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

24 hours lecture

20 hours lab

Prerequisite: High school graduation or equivalent

Prerequisite for 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.

■ EMT 91 — Emergency Medical Technician I Refresher 1.5 Units
 Not Degree Applicable

(May be taken for Pass/No Pass only)

16 hours lecture

16 hours lab

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.

Course Descriptions

■ **EMT 95 — EMT for Fire Technology** **8 Units**
Degree Applicable

100 hours lecture
100 hours lab
Prerequisite: Must be at least 18 years old
Advisory: FIRE 1 AND FIRE 13

Designed for pre-Fire Academy students, this course is approved by the L.A. County and State EMS Agencies and prepares students to take the National Registry of EMTs certifying exam. Develops knowledge and skills needed for recognition of illnesses and injuries and emphasizes proper pre-hospital emergency care per local and national protocols.

ENGINEERING

■ **ENGR 1 — Introduction to Engineering** **1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

Engineering and surveying professions including academic requirements, articulation agreements with four-year institutions, transfer, engineering study as a preparation for other careers, and academic and employment strategies. Also includes professional engineering licensure and engineering ethics. Field trips are required.

■ **ENGR 7 — Programming Applications for Engineers** **4 Units**
Degree Applicable, CSU

54 hours lecture
54 hours lab
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

(May be taken for option of letter grade or Pass/No Pass)

72 hours lecture
Prerequisite: CHEM 40 or CHEM 50 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 18 — Introduction to Engineering Graphics** **3 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
54 hours lab

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

36 hours lecture
108 hours lab
Prerequisite: MATH 150 AND (ENGR 18 or eligibility for ENGR 24)
Advisory: CISB 15

2D and 3D Computer-aided design (CAD) for engineering students. The principles of engineering drawing and sketching for mechanical design, the use of computer graphics and solid modeling in design representation of 3D objects, assembly and simulation as well as ASME standards on geometric dimensioning and tolerances.

■ **ENGR 40 — Statics** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: PHYS 4A

Vector approach to static equilibrium of rigid bodies, forces, 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, distributed and concentrated loads. Forces in cables and beams. Fluid statics. Introduction to virtual work.

■ **ENGR 41 — Dynamics** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
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

72 hours lecture
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.

■ **ENGR 44 — Electrical Engineering** **4 Units**
Degree Applicable, CSU, UC

54 hours lecture
54 hours lab
Prerequisite: PHYS 4B

Electrical circuit analysis including applications of Kirchoff's Laws and Thevenin's Theorems to DC and 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)

108 hours lab
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 99 — Special Projects in Engineering** **1 to 2 Units**
Not Degree Applicable

54 to 108 hours lab
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.

ENGINEERING DESIGN TECHNOLOGY

■ **EDT 16 — Basic CAD and Computer Applications** **4 Units**
Degree Applicable, CSU

54 hours lecture
54 hours lab
Advisory: Eligibility for MATH 51

Basic CAD (Computer Aided Design and Drafting) and computer application in engineering and related fields (including basic word processing, spreadsheet, CAD and presentation applications).

■ **EDT 18 — Engineering CAD Applications** **4 Units**
Degree Applicable, CSU

54 hours lecture

54 hours lab

Advisory: EDT 16

Intermediate CAD for engineering, explores the 2-D and 3-D environments, 3-D parametric solid modeling.

■ **EDT 24 — Engineering CAD 3-D Solids and Surfaces** **3 Units**
Degree Applicable, CSU

36 hours lecture

71 hours lab

Advisory: EDT 18

Advanced engineering CAD for developing detailed working drawings in 3D environments, incorporating 3D parametric solid modeling, bill of materials, and surface development.

■ **EDT 26 — Civil Engineering Technology and CAD** **3 Units**
Degree Applicable, CSU

36 hours lecture

71 hours lab

Advisory: EDT 11 AND EDT 16

Theory of civil engineering projects with hands-on instruction in civil drawings and Computer Aided Drafting and Design (CAD) applications. Layout, topography maps, grading plans, sections, street improvements, and interpretation of surveyor's data are covered. Set of CAD drawings produced for a final portfolio.

■ **EDT 89 — Engineering Design Technology Work Experience** **1 to 2 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

75 to 150 hours lab

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 work site 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 hours per month will be required as part of the 60 hour total.

ENGLISH: COMPOSITION

■ **ENGL 1A — Freshman Composition** **4 Units**
(C-ID ENGL 100) Degree Applicable, CSU, UC

72 hours lecture

Prerequisite: ENGL 68 or satisfactory score on the English Placement Test

Develops effective expository writing skills and investigates the principles and methods of composition as applied to the writing of essays and the research paper. Emphasizes critical reading of academic material.

■ **ENGL 1AH — Freshman Composition - Honors** **4 Units**
(C-ID ENGL 100) Degree Applicable, CSU, UC

72 hours lecture

Prerequisite: Acceptance into the Honors Program

Develops effective expository writing skills and investigates the principles and methods of composition as applied to the writing of essays and the research paper. 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 1B — English - Introduction to Literary Types** **3 Units**
(C-ID ENGL 120) Degree Applicable, CSU, UC

54 hours lecture

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**
(C-ID ENGL 120) Degree Applicable, CSU, UC

54 hours lecture

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

72 hours lecture

Prerequisite: ENGL 1A or ENGL 1AH

Develops critical thinking, reading, and writing skills. Focuses on logical analysis and argumentative writing.

■ **ENGL 1CH — Critical Thinking and Writing - Honors** **4 Units**
(C-ID ENGL 105) Degree Applicable, CSU, UC

72 hours lecture

Prerequisite: ENGL 1A or ENGL 1AH and acceptance into the Honors Program

Develops critical thinking, reading, and writing skills. Focuses on logical analysis and argumentative writing. 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)

54 hours lecture

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)

54 hours lecture

Prerequisite: ENGL 1A or ENGL 1AH

Emphasizes the student's development as a poet.

■ **ENGL 8C — Creative Writing - Novel** **3 Units**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: ENGL 8A

Elements, processes, and techniques of novel writing. Includes genre, setting, point of view, character development, plot development, description, and dialogue with an emphasis of student development as a writer of novels through practice and discussion.

■ **ENGL 8D — Creative Writing - Poetry Collection** **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: ENGL 8B

Elements, processes, and techniques for creating and writing poetry collections. Includes theme, imagery, line breaks, diction, and prosody, with an emphasis on student development as a creator of poetry collections through practice, writing, and discussion.

■ **ENGL 8E — Creative Writing - Memoir** **3 Units**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: English 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)

54 hours lecture

Prerequisite: ENGL 1A

Analysis and writing of creative nonfiction including stylistic and syntactic forms and composition strategies used when writing creative nonfiction.

Course Descriptions

■ ENGL 8G — Creative Writing-Memoir Collection 3 Units
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: ENGL 8E

Development of memoir writing with emphasis on developing a memoir collection. Includes setting, character development, dialogue, theme, voice, laws and ethics, and publication with an emphasis of student development as a writer of a complete book length memoir collection through reading, practice and discussion.

■ ENGL 8I — Creative Writing - Nonfiction Collections 3 Units
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: ENGL 8F

Elements, processes, and techniques for creating and writing creative nonfiction collections. Includes forms, theme, voice, style, with an emphasis on student development as a creator of creative nonfiction collections through reading, practice, writing, and discussion.

■ ENGL 9A — Writing the Personal Journal 3 Units
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: Eligibility for ENGL 1A

Personal exploration, development of creativity, increased comfort with the writing process, and expanded awareness of others' lives through journal writing.

■ ENGL 9B — Expanding the Personal Journal 3 Units
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: ENGL 9A

Emphasizes advanced techniques for journal writing. Students will develop techniques that allow them to turn private work into public pieces. Processes and techniques will be improved through practice and discussion.

■ ENGL 64 — Writing Effective Sentences 1 Unit
 Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

Prerequisite: Eligibility for ENGL 67

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 65 — Grammar Review 1 Unit
 Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

Review fundamentals of English for the student who needs a practical course focusing on usage and grammar: case, agreement, verbs, verbals, fragments, shifts in construction, dangling modifiers, diction, parallelism, comma-splice, and punctuation.

■ ENGL 66 — Paragraph Writing 1 Unit
 Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

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)

72 hours lecture

Prerequisite: Satisfactory score on the English Placement Test or completion of AMLA 42W 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
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

72 hours lecture

Prerequisite: ENGL 67 or AMLA 43W or satisfactory score on the English Placement Test

Development of the academic essay based on critical reading of texts. Reviews paragraph structure and introduces 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)

54 hours lecture

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

54 hours lecture

Prerequisite: ENGL 1A

Language structure, linguistics, 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 99 — Special Projects in English 2 Units
 Not Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

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.

ENGLISH: LITERATURE
■ LIT 1 — Early American Literature 3 Units
 (C-ID ENGL 130) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: ENGL 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
 (C-ID ENGL 135) Degree Applicable, CSU, UC

54 hours lecture

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

54 hours lecture

Prerequisite: Eligibility for ENGL 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 African Americans, Hispanic Americans, Native Americans, Asian Americans, Gay and Lesbian Americans, people with differing abilities and religions.

■ LIT 6A — Survey of English Literature 3 Units
 (C-ID ENGL 160) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: ENGL 1A

A chronological study of major works from Beowulf and the Anglo-Saxon period to the mid-18th century.

FAMILY AND CONSUMER SCIENCES

■ LIT 6B — Survey of English Literature 3 Units
 Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: ENGL 1A

Major works from the Romantic Era through the Victorian and Modern periods to contemporary texts.

■ LIT 10 — Survey of Shakespeare 3 Units
 Degree Applicable, CSU, UC

54 hours lecture

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
 (C-ID ENGL 140) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: ENGL 1A

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

54 hours lecture

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

54 hours lecture

Prerequisite: ENGL 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

54 hours lecture

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

54 hours lecture

Prerequisite: ENGL 1A

Surveys Eighteenth through Twenty-first Century writings of African Americans. Emphasizes the oral tradition, development of protest literature and major modern and contemporary writers such as Wright, Ellison, Baldwin, Walker, and Morrison.

■ LIT 25 — Contemporary Mexican American Literature 3 Units
 Degree Applicable, CSU, UC

54 hours lecture

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

54 hours lecture

Prerequisite: ENGL 1A

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 may be included.

■ LIT 40 — Children's Literature 3 Units
 (C-ID ENGL 180) Degree Applicable, CSU

54 hours lecture

Prerequisite: ENGL 1A

Children's fiction and non-fiction books from around the world. 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

54 hours lecture

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

54 hours lecture

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.

■ FCS 41 — Life Management 3 Units
 Degree Applicable, CSU

54 hours lecture

Life skills for effective self-management now and in the future. Examine 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 — Consumer Skills, Issues, and Strategies 3 Units
 Degree Applicable, CSU

54 hours lecture

Consumer skills with an emphasis on practical applications in the marketplace. Topics include history of the consumer movement, consumer rights and responsibilities, financial wellness, consumer debt, behavior, fraud, and redress. Explores the relationship between consumer skills, careers, and job skills.

■ FCS 80 — Personal Financial Planning 3 Units
 Degree Applicable, CSU

54 hours lecture

Personal and family financial planning for those who wish to understand their own finances across the lifespan and assist others in money management. Topics include financial goal setting, budgeting, consumer credit, debt management, banking functions, income taxes, home ownership, insurance, investing, and retirement planning. Students may not earn credit for both BUSA 71 and FCS 80.

■ FCS 91 — Work Experience in Family and Consumer Sciences 1 to 3 Units

Degree Applicable

(May be taken for Pass/No Pass only)

75 to 225 hours lab

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.

Course Descriptions

FASHION MERCHANDISING AND DESIGN**■ FASH 8 — Introduction to Fashion** **3 Units**
Degree Applicable, CSU

54 hours lecture

Fashion industry from concept to consumer, industry background, and technology. Includes design, manufacturing, distribution, sales, and promotion with emphasis on career opportunities and qualifications.

■ FASH 9 — History of Costume and Fashion **3 Units**
Degree Applicable, CSU

54 hours lecture

Survey of Western costume and fashion from antiquity to contemporary times. Emphasis is placed on styledevelopment 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

36 hours lecture

54 hours lab

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

36 hours lecture

54 hours lab

Prerequisite: FASH 10

Advanced industry construction techniques using overlock and single needle machines.

■ FASH 14 — Dress, Culture, and Identity **3 Units**
Degree Applicable, CSU

54 hours lecture

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

54 hours lecture

Prerequisite: FASH 25

Design principles and influences in apparel selection and fashion design. Projects applying design elements and principles using CAD software

■ FASH 17 — Textiles **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Manufacturing of textiles and fabrics and the factors that determine the suitability for end use. Topics include natural and synthetic fibers, yarns, fabric construction, dyes, finishes, legislation, and care. Emphasis is on selection criteria for textile product design and recent developments in the textile field.

■ FASH 21 — Patternmaking I **3 Units**
Degree Applicable, CSU

36 hours lecture

54 hours lab

Prerequisite: FASH 10

Theory and application of basic flat patternmaking techniques to create garment designs using industry standards. By means of dart and seam manipulation, patterns will be created, constructed and fitted.

■ FASH 22 — Fashion Design By Draping **3 Units**
Degree Applicable

36 hours lecture

54 hours lab

*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

36 hours lecture

54 hours lab

Prerequisite: FASH 21 and FASH 25

Intermediate pattern drafting and flat patternmaking, with an introduction to the grading of patterns and technical packages. Development of patternmaking skills to include drafting flat patterns from measurements, creating advanced sleeves and collars. Students apply patternmaking theories to create ready-to-wear sportswear designs for missies and women's wear.

■ FASH 24 — Fashion Patternmaking by Computer **3 Units**
Degree Applicable

36 hours lecture

54 hours lab

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 Computer-Assisted Drawing **3 Units**
Degree Applicable, CSU

36 hours lecture

54 hours lab

Technical fashion drawing techniques using Adobe Illustrator and Photoshop. Includes drawing production flats, colorization and scanning images using computer as a drafting tool. Exploration of popular computer techniques and methods suitable for use in apparel industry.

■ FASH 30 — Fashion Design and Product Development I **3 Units**
Degree Applicable

54 hours lecture

Advisory: FASH 15 and FASH 8

Overview of the global environment for product development for fashion. Applies the concepts and methods by which retailers create special store-branded merchandise for targeted customer segments. Students will develop financial and design goals, create product concept and line-boards, and evaluate the aesthetic and commercial results.

■ FASH 59 — Fashion Retailing **3 Units**
Degree Applicable, CSU

54 hours lecture

Principles that focus on the fashion segment of the retailing industry and the merchandising of fashion products. Includes an overview of fashion retailing, on site environments, online fashion stores, and retail management.

■ FASH 62 — Retail Buying and Merchandising **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: MATH 51

Principles and practices used in the retail buying and merchandising environment. This course emphasizes the buyer's role in merchandising management, pricing strategies, promotion, retail formulas, and costing calculations.

■ FASH 63 — Fashion Promotion **3 Units**
Degree Applicable, CSU

54 hours lecture

Principles and techniques of advertising and promoting apparel wholesale and retail products. Emphasis placed on promotional mix, trend and forecast research, branding, special events, integrated marketing, promotional media, and communication strategy.

■ FASH 66 — Visual Merchandising Display **3 Units**
Degree Applicable, CSU

36 hours lecture

54 hours lab

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 to 3 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

75 to 225 hours lab

Prerequisite: FASH 8

Provides fashion merchandising students with actual 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/ or retail business required for each one unit of credit. Students are responsible for securing their own internships and must be ready for the first week of class. Students who repeat this course will improve skills through further instruction and practice.

FIRE TECHNOLOGY

■ **FIRE 1 — Fire Protection Organization** **3 Units**
Degree Applicable, CSU

54 hours lecture

Careers in fire protection and related fields, history of fire protection, fire loss analysis, and public, quasi-public, and private fire protection services. Also includes specific fire protection functions and fire behavior, suppression, and extinguishment.

■ **FIRE 2 — Fire Prevention Technology** **3 Units**
Degree Applicable, CSU

54 hours lecture

History of fire prevention, including codes, ID and correction of hazards, investigation, and public safety education.

■ **FIRE 3 — Fire Protection Equipment and Systems** **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: FIRE 1

Portable fire extinguishing equipment, sprinkler and standpipe systems, protection systems for special hazards, fire alarm and detection systems and maintenance, design and operation of sprinkler systems, water supply, pump, tanks and connections.

■ **FIRE 4 — Building Construction for Fire Protection** **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: FIRE 1

Building construction and fire code safety effects on pre-planning, engineering, inspections, fire ground operations, fire and building codes relationships.

■ **FIRE 5 — Fire Behavior and Combustion** **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: FIRE 1

Theory 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

54 hours lecture

Advisory: FIRE 1

Hazardous chemicals, their physical properties, use in industry, characteristics when involved in spills, fire and accidents. Information regarding emergency procedures, legal requirements, compliance to regulations, health effects and treatment, protocols that meet OSHA requirements.

■ **FIRE 7 — Fire Fighting Tactics and Strategy** **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: FIRE 1 or equivalent taken prior

Principles of fire control through utilization of staff, equipment and extinguishing agents, fire command and control procedures, understanding types of building construction as it relates to fire control, review of fire chemistry, pre-fire planning, organized approach to decision making on the fire scene, basic firefighting strategy and tactics.

■ **FIRE 8 — Fire Company Organization and Management** **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: FIRE 1

Fire department company organization, management, leadership, company officer responsibilities, personnel issues, administration, communication, firefighter safety and wellness, firefighting capability, records, and reports.

■ **FIRE 9 — Fire Hydraulics** **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: FIRE 1 or equivalent taken prior and eligibility for MATH 51

Mathematics, hydraulic laws and formulas as applied to fire service. Application of formulas and mental calculation to hydraulic problems, water supply problems, and underwriter requirements for pumps.

■ **FIRE 10 — Arson and Fire Investigation** **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: FIRE 1 or equivalent taken prior

Cause, origin, arson, incendiaries, related laws and types of incendiary fires. Methods of determining fire cause, recognizing and preserving evidence, interviewing and detaining witnesses, adult and juvenile fire setters, court procedure and testimony.

■ **FIRE 11 — Fire Apparatus and Equipment** **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: FIRE 1 or equivalent taken prior

Mechanized equipment operated by the 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

79 hours lecture

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

54 hours lecture

Advisory: FIRE 1

Fire Technology principles. History of the National Firefighter Life Safety Initiative and need for cultural and behavioral change. This course meets 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

135 hours lecture

383 hours lab

Prerequisite: FIRE 1 through 5 and FIRE 13 or equivalent, KIN 50, approved EMT course completion, and either KINF 51 or KINF 52 (or equivalent).

Corequisite: KINF 53

Standard fire department apparatus and equipment, salvage covers and fire extinguishment techniques in accordance with the State Board of Fire Services. Prepares students to meet manipulative skills standards established by the local fire agencies, associations and unions.

Course Descriptions

■ FIRE 91 — Fire Academy Ladder Orientation 1 Unit
Not Degree Applicable

(May be taken for Pass/No Pass only)

8 hours lecture
32 hours lab

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)

4 hours lecture
36 hours lab

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 to 4 Units
Not Degree Applicable

(May be taken for Pass/No Pass only)

75 to 300 hours lab

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

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 — Fire Prevention 1: Company Officer's Fire and Life Safety Inspections 1.5 Units
Degree Applicable

24 hours lecture
8 hours lab

Company Officer certification track and Capstone Task Book process including knowledge and skills related to the Company Officer's role in fire prevention, the relationship between life safety and building construction, the elements of a quality company inspection program, and how to address complex hazards encountered during an inspection.

■ FIRE 101 — Command 1A: Structure Fire Command Operations for Company Officers 1.5 Units
Degree Applicable

24 hours lecture
16 hours lab

Prerequisite: Fire Academy Course Completion Certificate/Fire Prevention 1 I-200 online certificate

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 — Fire Command 1B: Incident Management for Company Officers 1.5 Units
Degree Applicable

24 hours lecture
16 hours lab

Prerequisite: Command 1A I-200 online certificate AND Fire 101

Tactics, strategies, and scene management for multi-casualty incidents, hazardous materials incidents, and wildland fires. Each student also has the opportunity to increase his or her knowledge and skills by handling initial operations at these types of incidents through simulation and class activities.

■ FIRE 103 — Command 1C: Wildland Urban Interface Operations for Company Officer 1.5 Units
Degree Applicable

24 hours lecture
16 hours lab

Prerequisite: Fire Academy Course Completion Certificate AND FIRE 101 AND I-200 (FEMA online certificate course) AND S-290 (NWCg online course is accepted)

Principles of command in the wildland urban interface environment. An overview of the concepts of command safety and the risk management process, preincident 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 — Training Instructor 1A: Cognitive Lesson Delivery 1.5 Units
Degree Applicable

24 hours lecture
16 hours lab

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. This course is part of the Company Officer Certification track for the California State Fire Marshal.

■ FIRE 105 — Training Instructor 1B: Psychomotor Lesson Delivery 1.5 Units
Degree Applicable

24 hours lecture
16 hours lab

Prerequisite: FIRE 104

Training Instructor 1B is part of the State Fire Marshal Fire Officer Certification track. Methods/techniques for training with the latest concepts in career education; selecting, adapting, organizing, and using instructional materials appropriate for teaching psychomotor lessons; criteria and methods to evaluate teaching and learning efficiency; and an opportunity to apply major principles of learning through teaching demonstrations.

■ FIRE 106 — Fire Investigation 1A: Fire Origin and Cause Determination 1.5 Units
Degree Applicable

24 hours lecture
16 hours lab

Fire Investigation 1A: Fire Origin and Cause Determination is a component of the Fire Marshal Fire Officer certification track including fire scene investigation. The focus of the course is to provide information on fire scene indicators and to determine the fire's origin.

■ FIRE 107 — Fire Management 1: Management/Supervision for Company Officer 1.5 Units
Degree Applicable

24 hours lecture
16 hours lab

Fire Management 1: Management/Supervision for Company Officers course prepares or enhances the first line supervisor's ability to supervise subordinates. Key management concepts and practices utilized and including discussions about decision making, time management, leadership styles, personnel evaluations, and counseling guidelines.

■ **FIRE 108 — ICS 300: Advance Incident Command** **1 Unit**
Degree Applicable

16 hours lecture
8 hours lab

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 1 — Elementary French** **4 Units**
Degree Applicable, CSU, UC

72 hours lecture

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

72 hours lecture

Prerequisite: FRCH 1 or equivalent

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)

72 hours lecture

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)

72 hours lecture

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)

54 hours lecture

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)

54 hours lecture

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)

54 hours lecture

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 1 — Elements of Physical Geography** **3 Units**
(C-ID GEOG 110) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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 — Elements of Physical Geography - Honors** **3 Units**
(C-ID GEOG 110) Degree Applicable, CSU, UC

54 hours lecture

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**
(C-ID GEOG 111) Degree Applicable, CSU, UC

54 hours lab

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**
(C-ID GEOG 111) Degree Applicable, CSU, UC

54 hours lab

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**
(C-ID GEOG 120) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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**
(C-ID GEOG 120) Degree Applicable, CSU, UC

54 hours lecture

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.

Course Descriptions

■ **GEOG 5 — World Regional Geography** **3 Units**
(C-ID GEOG 125) Degree Applicable, CSU, UC
54 hours lecture

Prerequisite: Eligibility for ENGL 68

Developmental study of the world's regions, addressing the major regions of the world in terms of population, resources, economic development, physical environment, and geographic problems.

■ **GEOG 8 — The Urban World** **3 Units**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Geographical analysis of past and current patterns of world urbanization. Emphasis is on city origins, growth, development, and current problems. Off-campus assignments may be required.

■ **GEOG 10 — Introduction to Geographic Information Systems** **3 Units**

(C-ID GEOG 155) Degree Applicable, CSU, UC

36 hours lecture

54 hours lab

Advisory: Eligibility for ENGL 68

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 11 — Intermediate Geographic Information Systems (GIS)** **3 Units**

Degree Applicable

54 hours lecture

Prerequisite: GEOG 10

Geographic Information Systems (GIS) concepts such as spatial analysis, editing, and raster data sets. Includes hands on experience using hardware and software and emphasizes vector-based and raster-based data models using ArcGIS software the software extensions.

■ **GEOG 30 — Geography of California** **3 Units**
(C-ID GEOG 140) Degree Applicable, CSU, UC

54 hours lecture

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. Field trip required.

■ **GEOG 30H — Geography of California - Honors** **3 Units**
(C-ID GEOG 140) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Acceptance into the Honors Program

Thematic approach to issues, processes, and topics relevant to the study of California geography. 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. An honors course designed to provide an enriched experience. Students may not receive credit for both GEOG 30 and GEOG 30H. Field trip required.

■ **GEOG 91 — Service Learning for Geography** **1 Unit**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

Increases awareness and appreciation for civic responsibility to the environment through service learning. Students will assess the need for restoring significant habitats damaged by pollution, fire, erosion, or invasive species and learn the importance of being good stewards of the environment. Field trips required.

■ **GEOG 91L — Geography Service Learning Laboratory** **.5 to 2 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

27 to 108 hours lab

Corequisite: GEOG 91 (May be taken previously)

Environmental needs of the community through service learning projects. Students will perform work needed for restoring significant habitats damaged by pollution, fire, erosion or invasive species. Examples of some of the work include planting trees, building trails, or collecting litter. Field trips required.

■ **GEOG 99 — Special Projects in Geography** **2 Units**
Degree Applicable, CSU

36 hours lecture

Offers students recognition for their academic interests in geography and the opportunity to explore the discipline of geography in greater depth. The content and methods of the course vary from semester to semester depending on the particular project under consideration.

GEOLOGY

■ **GEOL 1 — Physical Geology** **4 Units**
Degree Applicable, CSU, UC

54 hours lecture

54 hours lab

Prerequisite: Eligibility for MATH 51

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

54 hours lecture

54 hours lab

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

54 hours lecture

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

54 hours lecture

Fundamentals of geology, oceanography, meteorology, and astronomy. The companion Earth Science laboratory (GEOL 8L) is recommended for students needing a lab to transfer to a 4-year college/university. Field trips are required.

■ **GEOL 8H — Earth Science - Honors** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Acceptance into the Honors Program

An honors course designed to provide an enriched experience. Fundamentals of geology, oceanography, meteorology, and astronomy. The companion Earth Science laboratory (GEOL 8L) is recommended for students needing a lab to transfer to a 4-year college or university. Field trips are required. Students may not receive credit for both GEOL 8 and GEOL 8H.

■ **GEOL 8L — Earth Science Laboratory** **1 Unit**
Degree Applicable, CSU, UC

54 hours lab

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/university.

■ **GEOL 9 — Environmental Geology** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Advisory: ENGL 1A

Human interactions with the geological environment for non-science majors. 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, 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 10 — Natural Disasters** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

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)

54 hours lecture

54 hours lab

Field studies of selected central California geological provinces and surrounding areas. Overnight field trips required. Trips require significant hiking.

■ **GEOL 25 — Geologic Field Studies: Southern California** **4 Units**
Degree Applicable, CSU

54 hours lecture

54 hours lab

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

18 hours lecture

108 hours lab

Advisory: GEOL 1 or GEOL 8

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 99 — Special Projects in Geology** **2 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

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 course.

GERMAN

■ **GERM 1 — Elementary German** **4 Units**
Degree Applicable, CSU, UC

72 hours lecture

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

72 hours lecture

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

(May be taken for option of letter grade or Pass/No Pass)

72 hours lecture

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.

HISTORY

■ **HIST 1 — History of the United States** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

History of the United States from Native American and colonial times to the present. Designed for transfer students who need a one-semester course in United States history to meet general education requirements. History and social science majors should take History 7 and 8. 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 3 — World History: Prehistoric to Early Modern** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 1A

Human societies from their origins to the Early Modern period from a global and comparative perspective including social, political, economic, and cultural institutions and changes.

■ **HIST 3H — World History: Prehistoric to Early Modern - Honors** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

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, 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**
(C-ID HIST 160) Degree Applicable, CSU, UC

54 hours lecture

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**
(C-ID HIST 160) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Acceptance into the Honors Program

Social, political, economic, and cultural change during the modern period from a global and comparative perspective. Includes extensive reading and writing assignments. Students may not receive credit for both HIST 4 and HIST 4H.

Course Descriptions

■ HIST 7 — History of the United States to 1877 **3 Units**
 Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 1A

Survey of American history from Native American origins through post-Civil War Reconstruction with an encompassing approach to 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. Also examines political, philosophical, and intellectual influences on the founding fathers, American political institutions, and the citizens of the country. 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

54 hours lecture

Prerequisite: Acceptance into the Honors Program

Survey of American history from Native American origins through post-Civil War Reconstruction with an encompassing approach to 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. Also examines political, philosophical, and intellectual influences on the founding fathers, American political institutions, and the citizens of the country. 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

54 hours lecture

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

54 hours lecture

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 10 — History of Premodern Asia **3 Units**
 Degree Applicable, CSU, UC

54 hours lecture

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 11 — History of Modern Asia **3 Units**
 Degree Applicable, CSU, UC

54 hours lecture

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 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)

54 hours lecture

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 19 — History of Mexico **3 Units**
 Degree Applicable, CSU, UC

54 hours lecture

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

54 hours lecture

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

54 hours lecture

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

54 hours lecture

Prerequisite: Eligibility for ENGL 68

History of Africa from prehistoric times to the present with a focus on cultural, social, political, and economic changes. Topics include ancient African societies, European colonialism, and the reemergence of independent African states in recent decades.

■ HIST 36 — Women in American History **3 Units**
 Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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

54 hours lecture

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

54 hours lecture

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

54 hours lecture

Prerequisite: Eligibility for ENGL 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

36 hours lecture

Prerequisite: Eligibility for ENGL 1A

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 1 — Introduction to Histotechnology** **1 Unit**
Degree Applicable

18 hours lecture

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

54 hours lecture

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

36 hours lecture

54 hours lab

Advisory: 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

54 hours lecture

108 hours lab

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 and E), and microorganism staining. Quality control as it relates to routine histological techniques and equipment.

■ **HT 14 — Advanced Histotechniques** **5 Units**
Degree Applicable

54 hours lecture

108 hours lab

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

54 hours lecture

54 hours lab

Prerequisite: HT 12 and HT 10

Practical applications of enzyme and immunological reactions as they relate to tissue staining. Field trip required.

■ **HT 17 — Work Experience in Histotechnology** **1 to 4 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

75 to 300 hours lab

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.

HORTICULTURE

See Agriculture: Ornamental Horticulture

HOSPITALITY AND RESTAURANT MANAGEMENT

■ **HRM 51 — Introduction to Hospitality** **3 Units**
Degree Applicable, CSU

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Hospitality industry segments and types of operations with an emphasis on career opportunities. Includes an overview of: tourism, lodging, restaurants, managed services, gaming, recreation, event management, leadership, and marketing.

■ **HRM 52 — Food Safety and Sanitation** **1.5 Units**
Degree Applicable, CSU

27 hours lecture

Prerequisite: Eligibility for ENGL 68

Principles of food safety and sanitation in the food service industry. Emphasis on the role of management in creating and implementing a culture of applied food safety practices within the work place. Students must pass the ServSafe Food Protection Manager Certification exam to get credit for this course.

■ **HRM 53 — Dining Room Service Management** **3 Units**
Degree Applicable, CSU

54 hours lecture

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 tools are covered. Safety of both customer and staff are discussed. Field trip required.

■ **HRM 54 — Basic Cooking Techniques** **3 Units**
Degree Applicable, CSU

36 hours lecture

54 hours lab

Prerequisite: HRM 52

Professional cooking, tasting, and evaluating techniques for commercial operations. Emphasis on identification and use of proper equipment and ingredients in the production of: stocks, sauces, soups, salads, dressing, meats, poultry, fish, vegetables, starch, and dessert. Uniform and student knife set required. Students must be ServSafe Manager Certified.

■ **HRM 56 — Hospitality Supervision** **3 Units**
Degree Applicable, CSU

54 hours lecture

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.

Course Descriptions

■ HRM 57 — Hospitality Cost Control 3 Units
Degree Applicable, CSU

54 hours lecture
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 61 — Menu Planning 3 Units
Degree Applicable, CSU

54 hours lecture
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

54 hours lecture
Event planning and catering with an emphasis on organizing and catering both on-site and off-site events. Includes: event types, revenue-cost analysis, menu pricing, staff coordination, organizing logistical components, client negotiation and contracts, contracting vendors, conflict resolutions, and marketing.

■ HRM 64 — Hospitality Financial Accounting 3 Units
Degree Applicable, CSU

54 hours lecture
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

54 hours lecture
Advisory: HRM 51
Business law topics as they relate to the hospitality industry. Principles of negligence, civil rights, contracts, liability, rights of guests and innkeepers, and labor law are covered. Field trip required.

■ HRM 70 — Introduction to Lodging 3 Units
Degree Applicable, CSU

54 hours lecture
Operations in the lodging industry including: hotel organization, front office operations, reservations, registration, guest services, security, front office accounting, housekeeping, night audit, sale and marketing, planning and evaluating, revenue management, and human resources. Independent field trips required for this course.

■ HRM 81 — Garde Manger 3 Units
Degree Applicable

36 hours lecture
54 hours lab
Preparation and presentation of cold kitchen foods including: sauces, soups, salads, sandwiches, appetizers, hors d'oeuvres, and buffets.

■ HRM 82 — Baking and Pastry 3 Units
Degree Applicable

36 hours lecture
54 hours lab
Preparation of baked goods and pastries including: breads, cakes, icing, laminated pastries, cookies, pies, tarts, and plated desserts.

■ HRM 83 — International Cuisines 3 Units
Degree Applicable

36 hours lecture
54 hours lab
Preparation of international cuisines from Asia, Europe, the Mediterranean, and Latin America. Emphasis will be placed on regional dishes from: China, Japan, India, Thailand, Spain, Italy, France, Greece, Lebanon, and Mexico.

■ HRM 91 — Hospitality Work Experience 1 to 4 Units
Degree Applicable, CSU

(May be taken for Pass/No Pass only)
75 to 300 hours lab
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 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 1 — The Humanities 3 Units
Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: Eligibility for ENGL 68
Interdisciplinary study of the artistic, musical, literary and philosophical accomplishments and achievements of women and men in western society from the ancient Middle East to the present. Emphasizes creating an awareness of human expression as it occurs in a historical and philosophical context. Off-campus assignments may be required.

INDUSTRIAL DESIGN ENGINEERING

■ IDE 110 — Design Foundation-Visual Literacy 3 Units
Degree Applicable, CSU

36 hours lecture
54 hours lab
Corequisite: IDE 120 and IDE 130
Develops visual literacy to communicate industrial design concepts, analyze visual structures of images and objects, and decipher manufacturing techniques used for existing products. A portfolio-based course that explores sketching techniques for industrial design based on formal design concepts and principles and promote an understanding of design used for functional and aesthetic problem solving used in industrial design.

■ IDE 120 — Introduction to CAD 3 Units
Degree Applicable, CSU

36 hours lecture
54 hours lab
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 — Shop Processes 3 Units
Degree Applicable, CSU

36 hours lecture
54 hours lab
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 Foundations 3 Units
Degree Applicable, CSU

36 hours lecture
54 hours lab
Prerequisite: IDE 110 and IDE 120 and IDE 130
Corequisite: IDE 160 and IDE 170
Digital graphic media for industrial design used to convey complex design and manufacturing criteria. Focuses on design solutions for conceptual and structural problems with an emphasis on drawing techniques, rapid visualization, color theory, and Computer Assisted Design (CAD) techniques required for effective visual communication.

■ **IDE 160 — Intermediate CAD** **3 Units**
Degree Applicable, CSU

36 hours lecture
54 hours lab

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

36 hours lecture
54 hours lab

Prerequisite: IDE 110 and IDE 120 and IDE 130

Corequisite: IDE 150 and IDE 160

Processes and materials typically employed when creating breadboards, proof of concept models, form studies and production-intent prototypes. Provides hands-on experience with fabrication techniques including 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

36 hours lecture
54 hours lab

Prerequisite: IDE 150 and IDE 160 and IDE 170

Corequisite: IDE 220 and IDE 230

Digital media used for designing, redesigning, and inventing industrial products. Develops illustration and conceptualization skills using media and technology such as digital project photography, 2D scanners, sketch tablets, and presentation and illustration software. Emphasis is placed on refining and completing a comprehensive portfolio.

■ **IDE 220 — Advanced CAD** **3 Units**
Degree Applicable, CSU

36 hours lecture
54 hours lab

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

36 hours lecture
54 hours lab

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

54 hours lecture
162 hours lab

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

9 hours lecture
135 hours lab

Prerequisite: IDE 210 and IDE 220 and IDE 230

Corequisite: IDE 250

Relationships between common manufacturing processes and associated materials including advantages, limitations, and their impact on the design process. Reverse engineering and computer aided design (CAD) model construction assists with understanding common design approaches and real-world manufacturing problems and solutions.

INSPECTION AND ESTIMATING, BUILDING

■ **INSP 17 — Legal Aspects of Construction** **3 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Advisory: INSP 70 taken prior or concurrently

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.

■ **INSP 67 — Reading Construction Drawings** **3 Units**
Degree Applicable, CSU

54 hours lecture

Reading construction drawings as they apply to architecture, construction, interior design, and related fields. Off-campus assignments required.

■ **INSP 70 — Elements of Construction** **3 Units**
Degree Applicable, CSU

54 hours lecture

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).

■ **INSP 71 — Construction Estimating** **3 Units**
Degree Applicable, CSU

54 hours lecture

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.

■ **INSP 87 — Fundamentals of Construction Inspection** **3 Units**
Degree Applicable, CSU

54 hours lecture

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.

INTERIOR DESIGN

■ **ID 10 — Introduction to Interior Design** **2 Units**
Degree Applicable, CSU

36 hours lecture

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

54 hours lab

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.

Course Descriptions

ID 12 — Materials and Products for Interior Design 3 Units
Degree Applicable, CSU

36 hours lecture
54 hours lab

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

54 hours lecture

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, economic 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

36 hours lecture
54 hours lab

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

36 hours lecture
54 hours lab

Advisory: ID 20

Systematic process of designing three-dimensional 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

36 hours lecture
54 hours lab

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, and the basics of compiling construction documentation sets. Field trips may be required.

ID 23 — Computer Aided Drawing for Interior Design I 3 Units
Degree Applicable, CSU

36 hours lecture
54 hours lab

Advisory: ID 22 or ARCH 141

Computer Aided Drawing (CAD) as a communication element required to convey interior design ideas to building trades. Includes graphic and drawing techniques, interior design graphics, building construction fundamentals, methods of drawings, 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

36 hours lecture
54 hours lab

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

36 hours lecture
54 hours lab

Prerequisite: ID 22 or ID 23 or ARCH 141

Advisory: ID 25

Space planning with an emphasis on programming, behavioral aspects of space, 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

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture
54 hours lab

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

36 hours lecture
54 hours lab

Prerequisite: ID 26

Advisory: ID 12, ID 21, 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

36 hours lecture
54 hours lab

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

36 hours lecture
54 hours lab

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

36 hours lecture
54 hours lab

Advisory: ID 22 or ARCH 11

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

36 hours lecture
54 hours lab

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

54 hours lecture
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 38 — Internship in Interior Design 1 to 3 Units
Degree Applicable

(May be taken for Pass/No Pass only)
75 to 225 hours lab
Prerequisite: Compliance with Work Experience/Internship regulations as designated in the College Catalog

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 semester is required.

■ ID 39 — Interior Design Studio II 3 Units
Degree Applicable, CSU

36 hours lecture
54 hours lab
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

36 hours lecture
54 hours lab
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, CSU

36 hours lecture
54 hours lab
Prerequisite: ID 40
Advisory: ID32

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 to 3 Units
Degree Applicable, CSU

(May be taken for Pass/No Pass only)
75 to 225 hours lab
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 Studio 3 Units
Degree Applicable

36 hours lecture
54 hours lab
Prerequisite: ID 26

Exploratory design experience to enhance interior design curriculum. The content of each course and the methods of study vary each semester and depends on the particular project under consideration Students will explore advanced interior design concepts and presentation techniques. Portfolio pieces will be produced. Field trips may be required.

■ ID 52 — Independent Studies in Interior Design 1 to 3 Units
Degree Applicable

54 to 162 hours lab
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.

ITALIAN

■ ITAL 1 — Elementary Italian 4 Units
Degree Applicable, CSU, UC

72 hours lecture
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

72 hours lecture
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)
72 hours lecture
Prerequisite: ITAL 2

Development of intermediate Italian language skills and their use as tools in exploring Italian civilization. Further study and review of grammar, exercises in word building, derivation and the extension of the active and recognition vocabularies. Extensive exposure to Italian culture, such as film, music, and history.

■ ITAL 4 — Continuing Intermediate Italian 4 Units
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
72 hours lecture
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 52 — Conversational Italian 3 Units
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
54 hours lecture
Prerequisite: ITAL 1
Development of elementary Italian conversational skills. Emphasis on collaborative activities and practical use of the language. Extensive exposure to Italian culture. Grammar is presented in context.

Course Descriptions

■ **ITAL 53 — Continuing Conversational Italian** **3 Units**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
54 hours lecture
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)
54 hours lecture
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)
54 hours lecture
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.

JAPANESE

■ **JAPN 1 — Elementary Japanese** **4 Units**
Degree Applicable, CSU, UC
72 hours lecture
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
72 hours lecture
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
72 hours lecture
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
72 hours lecture
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
72 hours lecture
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.

JOURNALISM

■ **JOUR 100 — Introduction to Mass Media** **3 Units**
(C-ID JOUR 100) Degree Applicable, CSU, UC
54 hours lecture
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 Newswriting** **3 Units**
(C-ID JOUR 110) Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
54 hours lecture
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 Newswriting** **3 Units**
(C-ID JOUR 210) Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
54 hours lecture
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 Lab** **3 Units**
Degree Applicable
(May be taken for option of letter grade or Pass/No Pass)
162 hours activity
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)
108 hours activity
Practical lab experience in the creation, preparation, and publishing of photos for the student newspaper, magazine, and online 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)
54 hours lab
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)
108 hours activity
Practical experience in a newsroom lab setting in a variety of online publishing activities to produce and enhance the on-line 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, Sex, and Mass Media Images** **3 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: Eligibility for ENGL 1A

Role of mass media and advertising in the integration of minorities, cultures, women, and lesbians, gays-bisexuals, and trans-genders (LGBT) into American society. Examines how the mass media impacts public attitudes.

■ **JOUR 108 — Introduction to Public Relations** **3 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: JOUR 101

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** **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

225 hours lab

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. Students who repeat this course will improve skills through further instruction and practice.

■ **JOUR 110 — Magazine Writing and Production** **3 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

54 hours lab

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, 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)

54 hours lecture

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 to 4 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)

225 to 300 hours lab

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog. JOUR 101 or JOUR 1A and ENGL 1A

This course is designed to provide majors with actual on-the-job experience in an approved work station 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.

■ **JOUR 114 — Student News Media Staff** **3 Units**
(C-ID JOUR 130) Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

108 hours lab

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**
(C-ID JOUR 131) Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

108 hours lab

Prerequisite: JOUR 114

Management and leadership involvement in writing and producing the college student print 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**
(C-ID JOUR 120) Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)

36 hours lecture

54 hours lab

Prerequisite: Eligibility for ENGL 1A

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 2 — Physical Fitness for the Physically Limited** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours activity

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 14 — Activity Programs for the Physically Limited** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours activity

Designed for students with a disability or limitation who require special assistance or equipment to participate in leisure activities. Course content will vary each semester in order to meet current students' needs.

■ **KINL 18 — Weight Training for the Physically Limited** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours activity

Designed to assist students with a disability or limitation develop strength, endurance, flexibility, and physical fitness through weight training.

KINESIOLOGY: AQUATICS

■ **KINA 8A — Swimming - Beginning** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours activity

Designed to teach basic swimming strokes and aquatic skills to individuals with little or no swimming ability.

Course Descriptions

■ **KINA 8B — Swimming - Intermediate** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours activity

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** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours activity

Prerequisite: Demonstrate proficiency equivalent to Red Cross Level IV Swimming Test.

Designed to offer aquatic techniques of an advanced level and to refine the skill of the competent swimmer.

■ **KINA 14 — Water Polo** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours activity

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** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours activity

Student must be able to perform front crawl 50 yards. Designed to improve and maintain aquatic fitness. Emphasis on building strength, endurance and cardiovascular fitness. Students who repeat this course will improve skills through further instruction and practice.

KINESIOLOGY: ATHLETICS

■ **KINX 6 — Baseball - Men** **.5 to 3.5 Units**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 180 hours activity

Intended for Men's Intercollegiate Baseball Team candidates to provide instruction 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** **.5 to 3.5 Units**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 180 hours activity

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.

■ **KINX 9 — Conditioning for Sports** **.5 to 1 Unit**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 54 hours activity

Conditioning course for athletes to develop muscular strength and endurance, flexibility, core training skills, and cardiorespiratory fitness.

■ **KINX 10 — Basketball - Women** **.5 to 3.5 Units**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 180 hours activity

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.

■ **KINX 11 — Cross Country - Men** **.5 to 3.5 Units**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 180 hours activity

Intended for Men'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.

■ **KINX 12 — Cross Country - Women** **.5 to 3.5 Units**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 180 hours activity

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.

■ **KINX 16 — Football - Men** **.5 to 3.5 Units**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 180 hours activity

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.

■ **KINX 18 — Golf - Men** **.5 to 3.5 Units**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 180 hours activity

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 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.

■ **KINX 19 — Golf - Women** **.5 to 3.5 Units**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 180 hours activity

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 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.

■ **KINX 24 — Soccer - Men** **.5 to 3.5 Units**
Degree Applicable, CSU, UC

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

36 to 180 hours activity

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** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
Intended for Women’s Intercollegiate Soccer Team candidates to provides 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 26 — Softball - Women** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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.

■ **KINX 28 — Swimming - Men** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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.

■ **KINX 30 — Swimming - Women** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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.

■ **KINX 34 — Tennis - Women** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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.

■ **KINX 38 — Track and Field - Men** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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.

■ **KINX 42 — Track and Field - Women** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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.

■ **KINX 46 — Volleyball - Women** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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.

■ **KINX 48 — Water Polo - Men** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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.

■ **KINX 49 — Water Polo - Women** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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 70 — Pep Squad** .5 to 3.5 Units
Degree Applicable

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
Provides training and experience for members of pep squads or rally units who are directly supportive of Mt. SAC activities. Students who repeat this course will improve skills through further instruction and practice.

■ **KINX 88 — Pre-Season Athletics** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours lab
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.

■ **KINX 99 — Off-Season Athletics** .5 to 3.5 Units
Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 to 180 hours activity
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.

Course Descriptions

KINESIOLOGY: FITNESS
■ KINF 4 — Cardiovascular Conditioning .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours activity

Designed to improve fitness levels through cardiovascular activities.

■ KINF 6A — Physical Fitness - Beginning .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours activity

Presents beginning components of physical fitness. Students identify individual fitness level, participate in activities designed to improve overall fitness and use cardiovascular equipment to achieve fitness goals.

■ KINF 6B — Physical Fitness - Intermediate .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 36 hours activity

Develops intermediate levels of physical fitness. Students analyze individual fitness level and participate in activities designed to improve overall fitness.

■ KINF 6C — Physical Fitness - Advanced .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours activity

Advanced components of physical fitness. Students integrate fitness components into a personal fitness program and participate in activities designed to improve overall fitness.

■ KINF 9 — Conditioning for Sports .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours activity

A conditioning course for students and athletes to develop muscular strength and endurance, flexibility, core training skills, and cardiorespiratory fitness. Students who repeat this course will improve skills through further instruction and practice.

■ KINF 10 — Weight Training .5 to 1 Unit
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 54 hours activity

Muscular conditioning program using machines and free weights.

■ KINF 10A — Weight Training - Beginning .5 to 2 Units
 Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours activity

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 .5 to 2 Units
 Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours activity

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 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 108 hours activity

Designed for students concentrating on strength development through various types of exercise.

■ KINF 25 — Core Performance and Foundation Movement 1 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 54 to 108 hours activity

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 34 — Cardiorespiratory Training .5 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours activity

Individualized exercise programs designed to improve cardiorespiratory performance.

■ KINF 34A — Cardiorespiratory Training Beginning .5 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours activity

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 .5 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours activity

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 36 — Circuit Training .5 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours activity

Muscular strength and endurance exercise on circuit training equipment.

■ KINF 36A — Circuit Training Beginning .5 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours lab

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 .5 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours lab

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 38 — Aerobics .5 to 2 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
 36 to 108 hours activity

Group aerobic exercise to improve cardiorespiratory efficiency. Students who repeat this course will improve skills through further instruction and practice.

■ **KINF 38A — Aerobics-Beginning** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours lab

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** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours lab

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 51 — Agility Testing Preparation for Administration of Justice and Fire Technology** 1 Unit
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
71 hours activity

A training program directed toward physical agility testing approximating the testing process required by various law enforcement and fire agencies.

■ **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)
71 hours lab

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)
71 hours lecture

Advisories: 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 52 — Fitness and Conditioning for Administration of Justice, Fire Technology, and Forestry** 1 Unit
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
71 hours activity

A conditioning program to maintain strength, agility, cardiovascular fitness and flexibility necessary to perform the tasks required of personnel in fields of law enforcement, fire science and forestry.

■ **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)
71 hours lab

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)
71 hours activity

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)
133 hours activity

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 4A — Badminton - Beginning** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity

Beginning badminton fundamentals and techniques, including singles and doubles play.

■ **KINI 4B — Badminton - Intermediate** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity

Intermediate badminton techniques, including singles and doubles play.

■ **KINI 4C — Badminton - Advanced** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity

Advanced badminton techniques, including singles and doubles tournament play.

■ **KINI 18A — Golf - Beginning** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity

Golf fundamentals with an emphasis on technique, strategy, and rules.

■ **KINI 18B — Golf - Intermediate** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity

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** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity

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** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity

The sport of mixed martial arts. An integration of striking and close-combat martial arts.

■ **KINI 27A — Jeet Kune Do - Beginning** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity

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** .5 to 1 Unit
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity

Intermediate principles of Bruce Lee's martial art. Intermediate level footwork, distance, and technique (punching, kicking, and grappling) for combat efficiency.

Course Descriptions

- **KINI 29 — Self Defense/Martial Arts** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Basic concepts of self-defense and martial arts. Covers technique in three ranges of combat: grappling, kick/punch, and weapons range.
- **KINI 30A — Filipino Martial Arts - Beginning** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
The Filipino martial arts of Esgrima and Arnis. Basic weapons training for defense in armed and unarmed scenarios.
- **KINI 30B — Filipino Martial Arts - Intermediate** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
The Filipino martial arts of Esgrima and Arnis. Intermediate weapons training for defense in armed and unarmed scenarios.
- **KINI 31A — JiuJitsu - Beginning** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Fundamentals of Brazilian JiuJitsu. Basic positions, breakfalls, training techniques, strategy, finishing holds, competition, history, and philosophy. Students are required to provide their own Judo/JiuJitsu gi uniform.
- **KINI 31B — JiuJitsu - Intermediate** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Intermediate Brazilian JiuJitsu. Transitioning from positions, countering submissions and finishing holds, application of strategy, competition, and philosophy. Students are required to provide their own Judo/JiuJitsu gi uniform.
- **KINI 33 — Kickboxing** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Presents the martial sport of kickboxing. Includes techniques for offense and defense, cardiovascular endurance, strategy and training modes.
- **KINI 34 — Women's Self Defense** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Techniques for personal protection and safety with emphasis on defensive tactics for women.

- **KINI 37A — Tai Chi Chuan - Beginning** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
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** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Intermediate tai chi chuan fundamentals and principles including instruction in a traditional long form.
- **KINI 37C — Tai Chi Chuan - Advanced** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Instruction and practice for the experienced Tai Chi Chuan practitioner. Emphasis will be on the sword form.
- **KINI 40A — Tennis - Beginning** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Beginning tennis fundamentals and techniques.
- **KINI 40B — Tennis - Intermediate** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Intermediate tennis techniques and strategies for the individual who has previous experience and instruction in tennis.
- **KINI 40C — Tennis - Advanced** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Advanced tennis techniques and strategies for the experienced player.
- **KINI 48 — Wrestling** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Wrestling skills, fundamentals and match competition.
- **KINI 50A — Yoga** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Yoga instruction with emphasis on yoga postures, breathing techniques, relaxation strategies and philosophy.

- **KINI 51 — Iyengar Yoga** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Fundamentals of Iyengar yoga. Basic postures, alignments, strategy, history and philosophy.

KINESIOLOGY: TEAM SPORT

- **KINS 2 — Basketball** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Basic skills, fundamentals, rules and strategies for team play in basketball.
- **KINS 2A — Basketball Beginning** .5 to 1 Unit
Degree Applicable, CSU
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Designed to teach skills, fundamentals, rules and strategies for team play in basketball for those with little or no experience.
- **KINS 2B — Basketball Intermediate** .5 to 1 Unit
Degree Applicable, CSU
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Designed to teach enhancement skills, fundamentals, rules and strategies for team play in basketball for students with previous experience.
- **KINS 10 — Soccer** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Soccer skills including dribbling, passing, collecting, shooting, goalkeeping, and game play.
- **KINS 10A — Beginning Soccer** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Fundamental technical skills and tactics to students with little or no soccer ability.
- **KINS 10B — Soccer Intermediate** .5 to 1 Unit
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
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 16 — Softball** **.5 to 1 Unit**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Basic skills, rules and strategies for team play in the sport of slow-pitch softball.

■ **KINS 24A — Volleyball - Beginning** **.5 to 1 Unit**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Techniques and strategies of volleyball including passing, setting, hitting, and serving.

■ **KINS 24B — Volleyball - Intermediate** **.5 to 1 Unit**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Designed for individuals with previous experience in techniques and strategies of volleyball.

■ **KINS 24C — Volleyball - Advanced** **.5 to 1 Unit**
Degree Applicable, CSU, UC
(May be taken for option of letter grade or Pass/No Pass)
36 to 54 hours activity
Designed for individuals with previous experience in advanced techniques and strategies of volleyball.

KINESIOLOGY: THEORY

■ **KIN 3 — First Aid and CPR** **3 Units**
(C-ID KIN 101) Degree Applicable, CSU, UC
54 hours lecture
Advisory: Eligibility for ENGL 68
Training in caring for victims of injuries, sudden illness and other medical emergencies; includes Community CPR. Students who successfully pass all requirements, will earn the appropriate American Red Cross First Aid Certificate and/or CPR Certificate.

■ **KIN 5 — Advanced First Aid/CPR/Emergency Response** **3 Units**
Degree Applicable, CSU
54 hours lecture
Advisory: Eligibility for ENGL 68
First responder training, training and certifications, including laboratory experience for developing the First Aid (FA) and 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 and/or CPR for the Professional Rescuer.

■ **KIN 13 — Sports Officiating** **3 Units**
Degree Applicable, CSU, UC
54 hours lecture
Rules, regulations and career opportunities of various team and individual sports.

■ **KIN 15 — Administration of Fitness Programs** **2 Units**
Degree Applicable, CSU
(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
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
(May be taken for option of letter grade or Pass/No Pass)
54 hours lecture
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
54 hours lecture
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)
36 hours lecture
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
54 hours lecture
Survey and analysis of the components of fitness and wellness. Effects of fitness on optimal health, well-being, concepts of human movement, fitness program design, stress management, nutrition and weight maintenance.

■ **KIN 38 — Physiology of Exercise for Fitness** **3 Units**
Degree Applicable
(May be taken for option of letter grade or Pass/No Pass)
54 hours lecture
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
(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
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)
54 hours lecture
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.

■ **KIN 41 — Techniques of Teaching Weight Training** **2 Units**
Degree Applicable, CSU
(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
Part of the Fitness Specialist Certificate covering the principles and techniques of teaching weight training. Includes muscle structure and function, training sequences, free weight and machine equipment, safety factors, including contraindications for exercise.

■ **KIN 44 — Theory of Coaching** **3 Units**
Degree Applicable, CSU, UC
54 hours lecture
Coaching issues and problems facing the coach today and includes the philosophy, theory, and principles of developing and maintaining an athletic program. Designed for coaches at varying levels from youth league to high school varsity

■ **KIN 50 — Mt. Sac Fire Academy Physical Ability Entrance Exam** **1 Unit**
Degree Applicable
(May be taken for Pass/No Pass only)
9 hours lecture
9 hours activity
Physical ability test for admission into the Mt. SAC Fire Academy. Candidates must be approved by Fire Technology Office.

Course Descriptions

■ **KIN 81 — Work Experience for Coaching** **2 Units**
Degree Applicable

(May be taken for Pass/No Pass only)
150 hours lab
Prerequisite: Compliance with Work Experience regulations as designated in College Catalog
Provides coaching and physical education 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 Internship** **1 Unit**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
75 hours lab
Provides fitness specialist students with actual on-the-job skill development in fitness testing, analysis and prescription. 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 Fitness Certificate faculty advisor.

■ **KIN 92 — Work Experience - Athletic Training** **2 to 3 Units**
Degree Applicable

(May be taken for Pass/No Pass only)
120 to 239 hours lab
Prerequisite: KIN 19 and compliance with Work Experience regulations as designated in the College Catalog
Provides Athletic Trainer Aides and Kinesiology 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. Instructor approval required.

LATIN

■ **LATN 1 — Elementary Latin** **4 Units**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
72 hours lecture
Advisory: Eligibility for READ 90 or eligibility for AMLA 33R
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 2 — Continuing Elementary Latin** **4 Units**
Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)
72 hours lecture
Prerequisite: LATN 1
Advisory: Eligibility for READ 90 or eligibility for AMLA 33R
Second semester of coursework for students with prior coursework in Latin. Development of vocabulary, grammar, and reading. Explores Roman history and culture.

LEADERSHIP

■ **LEAD 55 — Exploring Leadership** **3 Units**
Degree Applicable, CSU

54 hours lecture
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 48 — Basic Math Skills Review** **3 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)
54 hours lecture
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)
54 hours lecture
Prerequisite: LERN 48 or passing score on current placement test
Improves knowledge of basic math. Includes operations and applied problems in whole numbers, fractions, decimals, proportions, percentages, and integers. Covers math study strategies such as learning styles and self-assessment.

■ **LERN 61 — Skills Development Laboratory** **1 Unit**
Not Degree Applicable

(May be taken for Pass/No Pass only)
54 hours lab
Individualized instruction in the following subjects: reading comprehension and vocabulary, writing, elementary math, algebra review, study techniques (note-taking, goal-setting, test-taking, etc.).

■ **LERN 62 — Skills Development Laboratory** **2 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)
108 hours lab
Offers individualized material in the following subjects: reading comprehension, reading acceleration, vocabulary, spelling, elementary math, algebra review, English grammar, study techniques (note-taking, test-preparation, test-taking).

■ **LERN 81 — Improving Writing** **3 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)
54 hours lecture
Assist students who wish to improve prewriting, writing, editing, and revising skills. Provide instruction in content and structure of sentences, paragraphs, and essays; emphasize development in writing through the integration of grammar and critical thinking.

LEARNING COMMUNITIES

■ **LCOM 80 — Learning Communities: Individual Connections** **1 Unit**
Not Degree Applicable

18 hours lecture
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

18 hours lecture
Analyzes connections between the individual and the campus. Focuses on the benefits of campus involvement in order to create student identity. Identifies connections between themes and topics of courses within a learning community. Explores problem based learning. Concurrent enrollment in a learning community is required. Field trips may be required.

■ **LCOM 100 — Learning Communities: Interdisciplinary Connection** **1 Unit**
Degree Applicable

18 hours lecture
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 may be required.

LIBRARY AND INSTRUCTIONAL MEDIA

■ **LIBR 1 — Information Resources and Research Methods** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Advisory: Eligibility for ENGL 68

Research methods for academic research and critical thinking that support information competency. Includes finding, evaluating, and documenting information using traditional and electronic resources.

■ **LIBR 1A — Introduction to Library Research** **1 Unit**
Degree Applicable, CSU, UC

18 hours lecture

Advisory: Eligibility for ENGL 68

Research strategies for academic research and critical thinking. Topics include search strategies, citation of sources, and use and evaluation of library resources.

MANUFACTURING TECHNOLOGY

■ **MFG 10 — Mathematics and Blueprint Reading for Manufacturing** **3 Units**
Degree Applicable

54 hours lecture

Applications of mathematical principles, including fractions, decimals, ratio/proportion, geometry and trigonometry to manufacturing problems and their solutions. Reading and interpreting part drawings, assembly drawings and sketches used in the manufacturing industry.

■ **MFG 11 — Manufacturing Processes I** **2 Units**
Degree Applicable, CSU

18 hours lecture

54 hours lab

Manual and computerized manufacturing, tool nomenclature, and lathe and mills operations, computer numerical control (CNC) machinery, applications, and tooling.

■ **MFG 12 — Manufacturing Processes II** **2 Units**
Degree Applicable, CSU

18 hours lecture

54 hours lab

Advisory: MFG 11

Machine tool manufacturing process theory and practice in milling operations, tooling set up, indexing, metallurgy, heat treatment, precision grinding, and basic tool design with study and application of manufacturing process to computerized equipment.

■ **MFG 38 — MasterCAM I** **2 Units**
Degree Applicable, CSU

18 hours lecture

54 hours lab

Use MasterCAM software to create wire-frame part geometry, add tool paths and create CNC code for CNC mills and CNC lathes.

■ **MFG 38B — MasterCAM II** **2 Units**
Degree Applicable, CSU

18 hours lecture

54 hours lab

Advisory: MFG 38

Use MasterCAM software to create three-dimensional wire-frame and solid part geometry.

■ **MFG 85 — Manual Computerized Numerical Control (CNC) Programming** **2 Units**
Degree Applicable, CSU

18 hours lecture

54 hours lab

Theory and practice in manually developing CNC programs. Methods of transmitting data to CNC machines and physical set-up and operation of CNC equipment.

MATHEMATICS

■ **MATH 50 — Pre-Algebra** **3 Units**
Not Degree Applicable

54 hours lecture

Prerequisite: LERN 49 or qualifying score on current department placement test

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 and mastery.

■ **MATH 51 — Elementary Algebra** **4 Units**
Not Degree Applicable

72 hours lecture

Prerequisite: MATH 50 or qualifying score on current department placement test

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/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

54 hours lecture

Prerequisite: MATH 50 or qualifying score on current department placement test

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; applications.

■ **MATH 51B — Elementary Algebra - Second Half** **3 Units**
Not Degree Applicable

54 hours lecture

Prerequisite: MATH 51A

Contains the second half of Elementary Algebra. Includes: Cartesian Coordinate System, slope/graphing/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 55 — Statway I** **5 Units**
Not Degree Applicable

90 hours lecture

Prerequisite: MATH 50 or qualifying score on current department placement test.

The Statway path is a two-semester sequence recommended for majors that require no mathematics beyond freshman-level statistics. Math 55 is the first semester of two in the Statway sequence. Math 55 includes topics from descriptive statistics (experimental design and descriptive statistics), and beginning algebra (linear and quadratic algebraic phenomena), and is a prerequisite for Math 115, the second course in the Statway sequence. Both courses in the sequence, Math 55 and 115, must be taken to receive credit for college level statistics.

■ **MATH 61 — Plane Geometry** **3 Units**
Degree Applicable

54 hours lecture

Prerequisite: MATH 51 or MATH 51B or qualifying score on current department placement test

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.

Course Descriptions

■ **MATH 70S — Integrated Intermediate Algebra** **5 Units**
Degree Applicable

90 hours lecture
Prerequisite: MATH 50 or qualifying score on current department placement test.
 Math 70S and 110S form a two-semester sequence that leads students through college level statistics. Simplification, solving of equations, graphing, and applications are covered. Each is applied to the following mathematical functions: polynomial, rational, radical, exponential and logarithmic. Rates and proportions, linear systems of equations, inequalities, sequence, series, design of experiments, one- and two-variable descriptive statistics are also covered.

■ **MATH 71 — Intermediate Algebra** **5 Units**
Degree Applicable

90 hours lecture
Prerequisite: MATH 51 or MATH 51B or qualifying score on current department placement test
 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

54 hours lecture
Prerequisite: MATH 51 or MATH 51B or qualifying score on current department placement test
 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

54 hours lecture
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

90 hours lecture
Prerequisite: MATH 51 or MATH 51B or MATH 55 or qualifying score on current department placement test.
 Intermediate Algebra for the non-calculus path. Recommended for Humanities, Social Sciences, and Applied Sciences. Recommended prerequisite for Math 100, Math 110, and Math 120. 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)
 18 hours lecture
 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

36 hours lecture
 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

54 hours lecture
Prerequisite: MATH 71 or MATH 71X or MATH 71B or qualifying score on current department placement test
 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

54 hours lecture
Prerequisite: MATH 71 or MATH 71X or MATH 71B or qualifying score on current department placement test
 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

54 hours lecture
Prerequisite: (MATH 71 or MATH 71X or MATH 71B or qualifying passing score on current department placement test) 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 110S — Integrated Statistics** **5 Units**
Degree Applicable, CSU, UC

90 hours lecture
Prerequisite: MATH 70S
 MATH 110S is an elementary course in descriptive and inferential statistics. Observational and experimental studies, design of experiments, descriptive statistics, probability, discrete and continuous probability distributions, estimates, and hypothesis tests. For categorical data, inferences include one or two sample proportions, one- and two-way tables (chi-square goodness of fit). For quantitative data, inferences for one or two sample means, one-way ANOVA. Inferences in linear correlation and regression are included.

■ **MATH 115 — Statway II** **5 Units**
Degree Applicable, CSU

90 hours lecture
Prerequisite: MATH 55
 The Statway path is a two-semester sequence recommended for majors that require no mathematics beyond freshman-level statistics. MATH 115 is the second semester of the Statway sequence. MATH 115 includes topics from intermediate algebra (radical, exponential, and logarithmic algebraic phenomena) and inferential statistics.

■ **MATH 120 — Finite Mathematics** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: MATH 71 or MATH 71X or MATH 71B or qualifying score on current department placement test
 Mathematics for business, social science, and biological science majors. Topics include linear programming, matrix theory, probability, statistics, stochastic processes, Markov chains, and math of finance.

■ MATH 130 — College Algebra **4 Units**

Degree Applicable, CSU, UC

72 hours lecture

Prerequisite: MATH 71 or MATH 71B or qualifying score on current department placement test

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

72 hours lecture

Prerequisite: MATH 130 or MATH 160 or qualifying score on current department placement test

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; multi variable calculus.

■ MATH 150 — Trigonometry **3 Units**

Degree Applicable, CSU

54 hours lecture

Prerequisite: MATH 71 or MATH 71B or qualifying score on current department placement test AND MATH 61 or passing score on current geometry competency test.

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

72 hours lecture

Prerequisite: MATH 150 or qualifying score on current department placement test

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

72 hours lecture

Prerequisite: MATH 160 or qualifying score on current department placement test

Differential and integral calculus with applications. Functions, limits, the derivative, curve sketching, optimization, 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 **5 Units**

Degree Applicable, CSU, UC

90 hours lecture

Prerequisite: MATH 180

Differential integral calculus with infinite series and applications. Includes applications of integration, techniques of integration, numerical integration, indeterminate forms and improper integrals, differential equations, conic sections, and polar coordinates.

■ MATH 245 — A Transition to Advanced Mathematics **3 Units**

Degree Applicable, CSU, UC

54 hours lecture

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 280 — Calculus and Analytic Geometry **5 Units**

Degree Applicable, CSU, UC

90 hours lecture

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, 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

90 hours lecture

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.

MEDICAL TERMINOLOGY
■ MEDI 90 — Medical Terminology **3 Units**

Degree Applicable, CSU

54 hours lecture

Medical terminology used in various allied health fields.

MENTAL HEALTH/PSYCHIATRIC TECHNICIAN
■ MENT 40 — Introduction to Interviewing and Counseling **3 Units**

Not Degree Applicable

54 hours lecture

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

162 hours lecture

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, 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)

216 hours lab

Corequisite: MENT 56

Development of medical-surgical nursing skills. Application and assessment, intervention, 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. 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.

Course Descriptions

■ MENT 58D — Advanced Medical-Surgical Nursing and Pharmacology for PT **4 Units**
Degree Applicable

72 hours lecture

*Prerequisite: MENT 56, MENT 56L**Corequisite: MENT 58L*

Disease processes affecting body systems; etiology; required nursing care; study of drugs: standards, administration, dose calculations.

■ MENT 58L — Advanced Medical-Surgical Nursing for Psychiatric Technicians Clinical **1.5 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

90 hours lab

*Prerequisite: MENT 56 and MENT 56L**Corequisite: MENT 58D*

Application of nursing skills to patients with medical and surgical disorders. Administration of medications.

■ MENT 70 — Introduction to Psychiatric Technology **1.5 Units**
Degree Applicable

27 hours lecture

*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 behavior modification techniques.

■ MENT 70L — Introduction to Psychiatric Technology Clinical Technicians **2 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

108 hours lab

Corequisite: MENT 70

Clinical experience at mental health facilities within the community which serve people with mental health and intellectual, physical and other developmental disabilities.

■ MENT 72 — Nursing Care of the Developmentally Disabled Person **7 Units**
Degree Applicable

126 hours lecture

*Prerequisite: MENT 56, MENT 56L, MENT 70, MENT 70L**Corequisite: MENT 72L*

Etiology of developmental disabilities; develops the knowledge, skills, and attitudes necessary to safely teach individuals diagnosed with intellectual and developmental disabilities. Techniques of behavior modification, positive behavior support and sensorimotor training are used, as well as the teaching of self-help skills. Examines normal development from infancy to the aged.

■ MENT 72L — Nursing Care of the Developmentally Disabled Person - Clinical **5.5 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

287 hours lab

Corequisite: MENT 72

Application of skills needed to teach, train, and provide care for the individuals with intellectual/physical and other developmental disabilities.

■ MENT 73L — Psychiatric Nursing for Psychiatric Technicians Clinical **5.5 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

287 hours lab

*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

108 hours lecture

*Prerequisite: MENT 56 MENT 56L**Corequisite: MENT 73L PSYC 1A**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)

150 hours lab

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog, MENT 72, and MENT 73T

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 3 — Weather and the Atmospheric Environment **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

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

54 hours lab

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 1 — Principles of Microbiology **5 Units**
Degree Applicable, CSU, UC

54 hours lecture

108 hours lab

Prerequisite: CHEM 10 or CHEM 40. One year of college chemistry is recommended for all transfer majors. CHEM 50/51 sequence is preferred for biology and most pre-health professional majors

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

54 hours lecture

54 hours lab

*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

54 hours lecture
Prerequisite: MICR0 1 or MICR0 22
Advisory: BIOL 1, 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 2 — Music Theory** **3 Units**
(C-ID MUS 120) Degree Applicable, CSU, UC

54 hours lecture
Corequisite: MUS 5A
Preparation for the study of harmony and form as it is practiced in Western tonal music. Topics include scales, intervals, chords, cadences, counterpoint and Roman numeral analysis. Ability to read music notation is advised. Required for music majors.

■ **MUS 3A — Harmony - Diatonic** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: MUS 2
Corequisite: MUS 5B
An examination of harmony and form as it is practiced in Western tonal music. This course covers diatonic harmony, from its syntax to its contrapuntal conventions, with musical examples drawn primarily from Renaissance ground basses, American folksong and the chorales of Bach.

■ **MUS 3B — Harmony - Chromatic I** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: MUS 3A
Corequisite: MUS 6A
Harmony and form as it is practiced in Western tonal music. This course focuses on secondary chromaticism and modulation.

■ **MUS 3C — Harmony - Chromatic II** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: MUS 3B
Corequisite: MUS 6B
Examination of harmony and form as it is practiced in Western tonal music with a focus on advanced chromatic harmony. The course concludes with a study of sonata form as practiced by Haydn, Mozart and Beethoven.

■ **MUS 5A — Musicianship - Ear Training and Sight Singing** **1 Unit**
Degree Applicable, CSU, UC

(C-ID MUS 125) 54 hours lab
Corequisite: MUS 2
Training in diatonic sight singing, rhythm reading, aural recognition and the dictation of rhythm and diatonic melody. Ability to read music and match pitch is advised. Required for music majors.

■ **MUS 5B — Musicianship - Diatonic** **1 Unit**
(C-ID MUS 135) Degree Applicable, CSU, UC

54 hours lab
Prerequisite: MUS 5A
Corequisite: MUS 3A
Training in sight singing, rhythm reading, aural recognition and the dictation of rhythm, melody and harmony. This course covers diatonic music.

■ **MUS 6A — Musicianship - Chromatic I** **1 Unit**
(C-ID MUS 145) Degree Applicable, CSU, UC

54 hours lab
Prerequisite: MUS 5B
Corequisite: MUS 3B
Sight singing and dictation of music with chromatic embellishments, secondary functions and modulations to closely-related keys.

■ **MUS 6B — Musicianship - Chromatic II** **1 Unit**
(C-ID MUS 155) Degree Applicable, CSU, UC

54 hours lab
Prerequisite: MUS 6A
Corequisite: MUS 3C
Sight singing and dictation of music with borrowed chords, linear chromaticism and modulation to foreign keys.

■ **MUS 7 — Fundamentals of Music** **3 Units**
(C-ID MUS 110) Degree Applicable, CSU, UC

54 hours lecture
Music notation and the elements of music for non-music majors. Topics include pitch, rhythm, key, intervals and chords.

■ **MUS 9 — Introduction to Music Technology** **3 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
36 hours lecture
54 hours lab
Advisory: Eligibility for ENGL 68
Uses of computers and electronic devices to capture, create, modify and disseminate music. Provides an introduction to the principles of musical acoustics, sound recording, and digital audio. Computer software for MIDI sequencing, sound synthesis, digital sampling, editing, music notation and composition will be demonstrated and practiced in class. Assignments will include the creation of original music.

■ **MUS 10A — Keyboard Skills** **1 Unit**
Degree Applicable, CSU, UC

54 hours lab
Advisory: Ability to read music notation
Keyboard (piano) skills required for music majors emphasizing practical skills applicable to professional positions in music education. Exercises include harmonization of melodies, transposition, sight-reading, improvisation, and theory as applied to the keyboard. Emphasizes proficiency with scales, broken triads and seventh chords of major and minor keys, using hands separately and together, up to two octaves.

■ **MUS 10B — Keyboard Skills** **1 Unit**
Degree Applicable, CSU, UC

54 hours lab
Prerequisite: MUS 10A or admission by audition
Keyboard (piano) skills, required for music majors, including harmonization of melodies, transposition, sight-reading, improvisation, and theory. Emphasizes proficiency with scales as well as arpeggios of triads and seventh chord of both major and minor keys up to two octaves; harmonization of melodies with tonic, subdominant, and dominant triads and seventh chords; transposition of simple melodies by a minor and major second, higher and lower; improvisation on given progression; and realization of diatonic figured bass with first and second inversions.

■ **MUS 11A — Music Literature Survey** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
Western music from the 15th through the 18th century, including examples of non-western cultures, for music majors. Lectures are augmented by sound recordings. Attending a live concert may be required.

Course Descriptions

■ MUS 11B — Music Literature Survey 3 Units
 Degree Applicable, CSU, UC

54 hours lecture
 Western music from the 18th to the early 21st century including examples from several non-western cultures that have influenced music of those style periods. Lectures are augmented by recordings and other support media pertinent to the cultures and periods being studied. Attending at least one live concert is required.

■ MUS 12 — History of Jazz 3 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture
Advisory: Eligibility for ENGL 68.

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 13 — Introduction to Music Appreciation 3 Units
 (C-ID MUS 100) Degree Applicable, CSU, UC

54 hours lecture
 Western music from the Medieval period through the 21st century, including music from a variety of cultures. Lectures are augmented by recordings and other support media pertinent to the culture and period being studied. Attending at least one live concert is required.

■ MUS 13H — Introduction to Music Appreciation - Honors 3 Units
 (C-ID MUS 100) Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: Acceptance into the Honors Program

Western music from the Medieval period through the 21st century, including music from a variety of cultures. Lectures are augmented by recordings and other support media pertinent to the culture and period being studied. Attending at least one live concert is required.

■ MUS 14A — World Music 3 Units
 Degree Applicable, CSU, UC

54 hours lecture
Advisory: Eligibility for ENGL 68
 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

54 hours lecture
 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 15 — Rock Music History and Appreciation 3 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture
 Historical survey of rock music from its beginnings in the early 50's to the present. Rhythm and 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 — History and Appreciation of Rock and Popular Music - Honors 3 Units
 Degree Applicable, CSU

54 hours lecture
Prerequisite: Acceptance into the Honors Program
 Historical survey of rock music from its beginnings in the early 50s to the present. Rhythm and 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 MUS15H

■ MUS 16 — Individual Instruction .5 Unit
 Degree Applicable, CSU, UC

(May be taken four times for credit)
 32 hours lab
Prerequisite: Admission by audition

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 17A — Elementary Piano 1 Unit
 Degree Applicable, CSU, UC

54 hours lab
 Reading and performance of piano literature with emphasis on scales, chord progressions, and sight reading. No prior musical experience is required.

■ MUS 17B — Intermediate Piano 1 Unit
 Degree Applicable, CSU, UC

54 hours lab
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

54 hours lab
Advisory: MUS 17B
 Style, technique and interpretation of piano music from the 17th century to the present is 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

54 hours lab
 Group singing instruction with an emphasis on breathing and posture and their importance in the singing of the musical line, performance techniques, and vocal quality. English and American songs are studied and performed. Open to non-music majors and recommended for all music majors.

■ MUS 20B — Intermediate Voice 1 Unit
 Degree Applicable, CSU, UC

54 hours lab
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

54 hours lab
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 Italian, German, and French.

■ MUS 22 — Conducting 1.5 Units
 Degree Applicable, CSU

18 hours lecture
 18 hours lab
 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
54 hours lab
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
54 hours lab
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
48 hours lab
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)
48 hours lab
Styles and techniques of jazz improvisation. Students must furnish their own musical instruments to play for and with the class.

■ **MUS 25B — Jazz Improvisation** **1 Unit**
Degree Applicable, CSU, UC
(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
54 hours lab
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**
(C-ID MUS 180) Degree Applicable, CSU, UC
(May be taken four times for credit)
72 hours lab
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)
54 hours lab
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)
54 hours lab
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
(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
72 hours lab
Prerequisite: Admission by audition
A large mixed choral ensemble in which students perform a variety of major choral works. Classical songs are rehearsed in class and performed for a public audience. 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 34 — Women’s Vocal Ensemble** **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)
108 hours lab
Prerequisite: Admission by audition during the first week of class
Women’s vocal ensemble that studies and performs selected classical works, folk songs, spirituals, and popular compositions. Attendance is required at all public performances including off-campus locations. Students who repeat this course will improve skills through further instruction and practice. Auditions held the first week.

■ **MUS 36 — Wind Symphony** **1 Unit**
Degree Applicable, CSU, UC
(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
54 hours lab
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** **.5 Unit**
Degree Applicable, CSU, UC
(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
36 hours lab
Prerequisite: Ability to read music or admission by audition
The study and performance of music written for small ensembles. On campus performances may be required.

■ **MUS 39 — Laboratory Band** **2 Units**
Degree Applicable, CSU
(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
108 hours lab
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)
(May be taken for option of letter grade or Pass/No Pass)
108 hours lab
Prerequisite: Admission by audition
A vocal ensemble appropriate for beginning and intermediate jazz singers. This group will perform vocal jazz charts accompanied by a rhythm section, as well as a cappella. Basics of singing jazz, vocal improvisation, group singing techniques, and microphone techniques. Ensemble will perform locally and/or at vocal jazz festivals. Attendance at performances and competitions is required. Students who repeat this course will improve skills through further instruction and practice.

Course Descriptions

■ **MUS 45 — Chamber Singers** **2 Units**
(C-ID MUS 180) Degree Applicable, CSU, UC
(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
108 hours lab

Prerequisite: Admission by audition

Premier mixed choral group, specializing in smaller ensemble repertoire. 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. Students who repeat this course will improve skills through further instruction and practice. Off-campus performances are required.

■ **MUS 47 — Jazz Ensemble** **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)

108 hours lab

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.

■ **MUS 48 — Men's Vocal Ensemble** **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)

108 hours lab

Prerequisite: Admission by audition the first week of class

Men's vocal ensemble that studies and performs selected classical works, folk songs, spirituals, and popular compositions. Attendance is required at all public performances including off-campus locations. Students who repeat this course will improve skills through further instruction and practice.

■ **MUS 49 — Wind Ensemble** **2 Units**
(C-ID MUS 180) Degree Applicable, CSU, UC

(May be taken four times for credit)

108 hours lab

Prerequisite: Admission by audition

The premier 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**
(C-ID MUS 180) Degree Applicable, CSU

(May be taken four times for credit)

(May be taken for option of letter grade or Pass/No Pass)

108 hours lab

Prerequisite: Admission by audition

A premier vocal jazz choir. 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. Students who repeat this course will improve skills through further instruction and practice. Admission by audition. Off-campus performances are required.

■ **MUS 99 — Special Projects in Music** **1 to 2 Units**
Degree Applicable, CSU

54 to 108 hours lab

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.

NURSING

■ **NURS 1A — The Nursing Process I** **5 Units**
Degree Applicable, CSU

45 hours lecture

135 hours lab

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, communication. The Betty Neuman Model serves as the conceptual framework.

■ **NURS 1B — The Nursing Process II** **5 Units**
Degree Applicable, CSU

45 hours lecture

135 hours lab

Prerequisite: NURS 1A

Corequisite: NURS 2

Principles of nursing as related to 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. The Betty Neuman Model serves as the conceptual framework.

■ **NURS 2 — Pharmacology** **2 Units**
Degree Applicable, CSU

36 hours lecture

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/Integ/Oncology** **3.5 Units**
Degree Applicable, CSU

30 hours lecture

108 hours lab

Prerequisite: NURS 1B and NURS 2 or Advanced Placement

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

27 hours lecture

81 hours lab

Prerequisite: NURS 3 or Advanced Placement

Concepts of nursing assessment and intervention with application to maternity and newborn clients. The Betty Neuman Model serves as the conceptual framework.

■ **NURS 5 — Psychiatric Nursing** **3 Units**
Degree Applicable, CSU

27 hours lecture

81 hours lab

Prerequisite: NURS 7 or NURS 70 (Advanced Placement) 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

27 hours lecture
81 hours lab
Prerequisite: NURS 4 or NURS 70 (Advanced Placement) and CHLD 10 or CHLD 10H or PSYC 14
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

63 hours lecture
189 hours lab
Prerequisite: NURS 6 or Advanced Placement
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

45 hours lecture
135 hours lab
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

18 hours lecture
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 10 — Medical-Surgical Nursing: Integration/Regulation** **4 Units**
Degree Applicable, CSU

45 hours lecture
81 hours lab
Prerequisite: NURS 8 and NURS 9, or Advanced Placement (NURS 70)
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)
108 hours lab
Prerequisite: NURS 10 or Advanced Placement
Students participate as a pre-licensed Registered Nurse immediately prior to graduation. Students assume responsibility for a group of clients under direct supervision of a qualified registered nurse.

■ **NURS 20 — Nursing Work Experience Program** **1 to 4 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)
75 to 300 hours lab
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)
36 hours lecture
54 hours lab
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 CHLD10H or PSYC 14.
For the LVN (Licensed Vocational Nurse), PT (Psychiatric Technician) or advanced placement student transitioning into the role of the RN (Registered Nurse). 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 AND FOOD

■ **NF 1 — Introduction to Nutrition as a Career** **1.5 Units**
Degree Applicable, CSU

27 hours lecture
Prerequisite: NF 10, or NF 25, or NF 25H
Careers in dietetics, food science, 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 Personal Health and Wellness** **3 Units**
Degree Applicable, CSU

54 hours lecture
Prerequisite: Eligibility for ENGL 68
Principles of nutrition and its relationship to optimum health. Emphasizes nutrient needs, food selection and weight control during the various life stages from prenatal to adult. Student food intake is evaluated in 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

54 hours lecture
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 Lab** **3 Units**
Degree Applicable, CSU

36 hours lecture
54 hours lab
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 and of food.

■ **NF 25 — Essentials of Nutrition** **3 Units**
(C-ID NUTR 110) Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: Eligibility for ENGL 68
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. Course is appropriate for health science majors.

Course Descriptions

■ **NF 25H — Essentials of Nutrition - Honors** **3 Units**
(C-ID NUTR 110) Degree Applicable, CSU, UC

54 hours lecture

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. Course is appropriate for health science majors. 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

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Regional, ethnic, cultural, religious, historical and social influences on food patterns and cuisines. Core components: specialized equipment and utensils related to cultures, traditional foods of selected cultures, geographic factors in food availability, global food issues, and sanitation and safety practices.

■ **NF 30 — Food Science Technologies** **3 Units**
Degree Applicable, CSU

54 hours lecture

Prerequisite: Eligibility for ENGL 68 Eligibility for MATH 50

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, packaging; dispersion systems, enzyme reactions, food additives, composition and properties of food.

■ **NF 81 — Cooking for Your Heart and Health** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

12 hours lecture

20 hours lab

Prerequisite: HRM 52 or NF 20 or NF 10 or NF 25

Advisory: Basic food preparation knowledge, skills, and experience

Principles and techniques of healthful food preparation and investigation of chronic disease prevention through dietary means. Includes laboratory experience in preparation of healthful foods and meals. Basic food preparation knowledge, skills, and experience is advised. Off-campus meetings may be required.

■ **NF 82 — Vegetarian Cuisine** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

12 hours lecture

20 hours lab

Prerequisite: HRM 52 or NF 10 or NF 20 or NF 25

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. Basic food preparation knowledge, skills, and experience advised. Off-campus meetings may be required.

■ **NF 91 — Work Experience in Nutrition and Dietetics** **1 to 3 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)

60 to 225 hours lab

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 10 — Introduction to Oceanography** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

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/university. Field trips are required.

■ **OCEA 10H — Introduction to Oceanography - Honors** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Acceptance into the Honors Program

An honors course designed to provide an enriched experience. Introduces the geological, chemical, physical, and biological aspects of the Earth's ocean. Topics include 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/university. Field trips are 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

54 hours lab

Corequisite: OCEA 10 or OCEA 10H (May have been taken previously)

Laboratory applications and problem-solving in oceanography, including related aspects of geology, meteorology, 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/university.

PHILOSOPHY

■ **PHIL 3 — Introduction to Logic** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Analysis of language as an instrument of sound thinking in morals, politics and everyday life. Assists students to analyze an argument, avoid faulty conclusions in reasoning, understand levels of meaning and kinds of arguments, avoid verbal pitfalls, understand the steps of scientific methods and identify value assumptions.

■ **PHIL 3H — Introduction to Logic - Honors** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Acceptance into the Honors Program

Analysis of language as an instrument of sound thinking in morals, politics and everyday life. Assists students to analyze an argument, avoid faulty conclusions in reasoning, understand levels of meaning and kinds of arguments, avoid verbal pitfalls, understand the steps of scientific methods and identify value assumptions. 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**
(C-ID PHIL 100) Degree Applicable, CSU, UC

54 hours lecture

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**
 (C-ID PHIL 100) Degree Applicable, CSU, UC
 54 hours lecture
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
 54 hours lecture
 Effective use of critical thinking in contemporary living, including recognizing faulty arguments, the usefulness of validity and truth, identifying and avoiding common fallacies in thinking.

■ **PHIL 9 — Critical Analysis and Writing** **3 Units**
 Degree Applicable, CSU, UC
 54 hours lecture
Prerequisite: ENGL 1A or ENGL 1AH
 Function and use of formal and informal logic, argument, critical evaluation, and language in written composition.

■ **PHIL 9H — Critical Analysis and Writing - Honors** **3 Units**
 Degree Applicable, CSU, UC
 54 hours lecture
Prerequisite: 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**
 (C-ID PHIL 120) Degree Applicable, CSU, UC
 54 hours lecture
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**
 (C-ID PHIL 120) Degree Applicable, CSU, UC
 54 hours lecture
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
 54 hours lecture
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, Taoism, Confucianism, Judaism, Christianity, and Islam including those of East Asia, India, and the Middle East. Off-campus assignments are required.

■ **PHIL 15H — Major World Religions - Honors** **3 Units**
 Degree Applicable, CSU, UC
 54 hours lecture
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, Taoism, Confucianism, Judaism, Christianity, Islam including those of East Asia, India, and the Middle East. 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 — History of Ancient Philosophy** **3 Units**
 Degree Applicable, CSU, UC
 54 hours lecture
Prerequisite: Eligibility for ENGL 1A
 Major philosophers and philosophical ideas from pre-Socratic to medieval times. Emphasis on the development of Greek philosophy from the pre-Socratics through Aristotle including Hellenistic, Roman, Medieval, and non-Western thinkers.

■ **PHIL 20AH — History of Ancient Philosophy - Honors** **3 Units**
 Degree Applicable, CSU, UC
 54 hours lecture
Prerequisite: Acceptance into the Honors Program
 Major philosophers and philosophical ideas from pre-Socratic to medieval times. Emphasis on the development of Greek philosophy from the pre-Socratics through Aristotle including 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 — History of Modern Philosophy** **3 Units**
 (C-ID PHIL 140) Degree Applicable, CSU, UC
 54 hours lecture
Prerequisite: Eligibility for ENGL 1A
 Major philosophers and philosophical ideas from the Renaissance to the present, with an emphasis on Western philosophy.

■ **PHIL 20BH — History of Modern Philosophy - Honors** **3 Units**
 (C-ID PHIL 140) Degree Applicable, CSU, UC
 54 hours lecture
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
 36 hours lecture
 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 1 — Laboratory Studies: Black and White Photography** **1 Unit**
 Degree Applicable
 (May be taken for Pass/No Pass only)
 54 hours lab
Corequisite: PHOT 10 (may have been taken previously)
 Extended black and white laboratory experiences to supplement those available in the regular program. Provides students the opportunity to pursue more advanced projects and experiments.

■ **PHOT 1A — Laboratory Studies: Beginning Black and White Photography** **1 Unit**
 Degree Applicable
 (May be taken for Pass/No Pass only)
 54 hours lab
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.

Course Descriptions

■ PHOT 1B — Laboratory Studies: Advanced Black and White Photography 1 Unit

Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lab

Corequisite: PHOT 11 or PHOT 12 or PHOT 17

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.

■ PHOT 1C — Laboratory Studies: Studio Photography 1 Unit

Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lab

Corequisite: PHOT 11 or PHOT 14 or PHOT 16 or PHOT 17 or PHOT 18 or PHOT 20 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)

54 hours lab

Corequisite: PHOT 9 or PHOT 19 or PHOT 24

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

18 hours lecture

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

36 hours lecture

54 hours lab

Corequisite: PHOT 10 (may have been taken previously)

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

36 hours lecture

54 hours lab

The basic mechanical, optical, and chemical principles of photography, including digital image systems. Laboratory experience involves problems related to camera and image output techniques.

■ PHOT 11 — Intermediate Photography 4 Units

Degree Applicable

36 hours lecture

108 hours lab

Prerequisite: PHOT 10

Current professional 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 and digital cameras, computer basics for professional photographers and studio lighting. Students must furnish a digital single lens reflex (DSLR) camera. Field trips may be required.

■ PHOT 12 — Photographic Alternatives 3 Units

Degree Applicable, CSU, UC

36 hours lecture

54 hours lab

Prerequisite: PHOT 10

Alternative photographic processes. Instant films: Lifts and transfers, specialized lighting, stain toning, emulsion coating, scanography and hand-made camera construction will be applied to produce images not considered common to making photographic prints.

■ PHOT 14 — Commercial Lighting 3 Units

Degree Applicable, CSU

36 hours lecture

54 hours lab

*Prerequisite: PHOT 10**Advisory: PHOT 11*

Use of studio equipment, and studio and location lighting techniques used in all aspects of commercial photographic applications. Field trips may be required.

■ PHOT 15 — History of Photography 3 Units

Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Survey of the history of photography from circa 1839 to the present. An introduction to concepts of photographic representation and their impact on society.

■ PHOT 16 — Fashion Photography 3 Units

Degree Applicable

36 hours lecture

54 hours lab

Prerequisite: PHOT 11

Professional illustrative, editorial and advertising fashion photography. Studio and location production in digital capture. Business aspects of operation and working with clients are presented. Off-campus assignments may be required.

■ PHOT 17 — Photocommunication 3 Units

Degree Applicable

36 hours lecture

54 hours lab

Prerequisite: PHOT 10

Affects that camera controls have on visual communication with photographs. Includes message enhancement using optical and digital controls, depth of field, lenses, lighting, composition, books, black and white vs. color images, and documentary and journalistic styles.

■ PHOT 18 — Portraiture and Wedding Photography 3 Units

Degree Applicable

36 hours lecture

54 hours lab

*Prerequisite: PHOT 10**Advisory: PHOT 11*

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

36 hours lecture

54 hours lab

Prerequisite: PHOT 10 AND (PHOT 9 OR ARTC100)

Digital color management software and hardware skills, techniques and digital workflow practices commonly used in photography.

■ PHOT 20 — Color Photography 3 Units

Degree Applicable

36 hours lecture

54 hours lab

Prerequisite: PHOT 10

Fundamentals of photographic color theory, editing, schemes and presentation of color photographs. Applying color psychology principles and HDR to enhance image messages.

■ PHOT 21 — Exploring Color Photography **3 Units**
Degree Applicable

36 hours lecture
54 hours lab

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 effects, and oversize output.

■ PHOT 24 — Advanced Digital Image Editing for Photographers **3 Units**
Degree Applicable

36 hours lecture
54 hours lab

Prerequisite: PHOT 10 AND (PHOT 9 OR GRAP 10 OR ARTC 100)

Advanced software and techniques for digital image editing, archiving, and retouching used in commercial photography.

■ PHOT 25 — Digital Capture Workflow **3 Units**
Degree Applicable

36 hours lecture
54 hours lab

Prerequisite: PHOT 11

Advanced application of digital capture and workflow using DSLR medium and large format digital camera systems and software to produce high-quality digital files as a photographer or as a digital photographic technician. Field trips may be required.

■ PHOT 26 — Video for Photographers **3 Units**
Degree Applicable

36 hours lecture
54 hours lab

Prerequisite: PHOT 11 and PHOT 9

Corequisite: PHOT 14 (may have been taken previously)

Teaches advanced photography students how to create moving images for commercial applications using 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

36 hours lecture
54 hours lab

Prerequisite: PHOT 10 and PHOT 11 and PHOT 20 and (PHOT 16 or PHOT 18)

Development of a photography portfolio and marketing materials 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

54 hours lecture

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

36 hours lecture
54 hours lab

Prerequisite: PHOT 11 and PHOT 20

Advisory: PHOT 14

Overview of the commercial photographic industry including specialties and styles. Field trips may be required.

■ PHOT 98 — Work Experience in Photography **1 to 3 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

75 to 225 hours lab

Prerequisite: Compliance with Work Experience regulations as designated in the College Catalog

Provides students with on-the-job experience in professional photography and related areas in an approved worksite to strengthen and broaden skills in the workplace. A minimum of 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. Students who repeat this course will improve skills through further instruction and practice.

■ PHOT 99 — Special Projects in Photography **2 Units**
Degree Applicable

36 hours lecture

Prerequisite: PHOT 10 and approval by instructor

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. Students must have an instructor's authorization before enrolling in this course. 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 3 — Energy Science **4 Units**
Degree Applicable, CSU, UC

54 hours lecture
54 hours lab

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

54 hours lecture
54 hours lab

Prerequisite: Eligibility for MATH 71 and Eligibility for ENGL 68

Formerly PHSC 7 and PHSC 7L *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 1 — Physics **4 Units**
Degree Applicable, CSU, UC

54 hours lecture
54 hours lab

Prerequisite: Eligibility for MATH 100

Discovery of concepts of physics by working 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 and waves.

■ PHYS 2AG — General Physics **4 Units**
(C-ID PHYS 105) Degree Applicable, CSU, UC

54 hours lecture
54 hours lab

Prerequisite: MATH 150

The basic principles of physics. Includes theory, applications, laboratory, and problem solving in mechanics, heat, fluids, and wave motion.

Course Descriptions

■ **PHYS 2BG — General Physics** **4 Units**
(C-ID PHYS 110) Degree Applicable, CSU, UC

54 hours lecture
54 hours lab

Prerequisite: PHYS 2AG or equivalent

Continuation of Physics 2AG. Includes electricity and magnetism (including DC and 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**
(C-ID PHYS 205) Degree Applicable, CSU, UC

72 hours lecture
54 hours lab

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

72 hours lecture
54 hours lab

Prerequisite: PHYS 4A

Corequisite: MATH 280 (May have been taken previously)

Calculus-based course covering heat, kinetic theory of gases, thermodynamics, electromagnetism (including DC and 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**
(C-ID PHYS 215) Degree Applicable, CSU, UC

72 hours lecture
54 hours lab

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

72 hours lecture
54 hours lab

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

71 hours lecture
48 hours lab

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

36 hours lecture

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 1 — Political Science** **3 Units**
(C-ID POLS 110) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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 — Political Science - Honors** **3 Units**
(C-ID POLS 110) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Acceptance into the Honors Program

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**
(C-ID POLS 130) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: POLI 1 or POLI 1H

Advisory: 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

54 hours lecture

Prerequisite: Eligibility for ENGL 1A

Ancient to contemporary theories of political institutions, social change, and social dynamics..

■ **POLI 7 — Political Theory II - Early Modern to Contemporary** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: POLI 1

Advisory: Eligibility for ENGL 1A

Major political philosophers and theories from the late nineteenth century to the present. Intended to prepare students majoring in political science for further study in the discipline by providing adequate background preparation in political philosophy.

■ **POLI 9 — Introduction to International Relations** **3 Units**
(C-ID POLS 140) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 68

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

54 hours lecture

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

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Latino political thought and action and how it is influenced and shaped by American institutions at the state, local and national levels.

■ **POLI 30 — California State and Local Government** **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: Eligibility for ENGL 68

Surveys the forces shaping California government and analyzes the operation of governmental institutions within California and the political and fiscal challenges facing California.

■ **POLI 35 — African American Politics** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 1A

Methods and strategies employed by African Americans in their quest to gain equal access and participation in American institutions.

PSYCHOLOGY

■ **PSYC 1A — Introduction to Psychology** **3 Units**
(C-ID PSY 110) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Eligibility for ENGL 1A

Advisory: Eligibility for READ 100 or completion of AMLA 33R

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, and 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**
(C-ID PSY 110) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: Acceptance into the Honors Program

Advisory: Eligibility for READ 100 or completion of AMLA 33R

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, and 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**
(C-ID PSY 150) Degree Applicable, CSU, UC

54 hours lecture

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**
(C-ID PSY 205B) Degree Applicable, CSU, UC

54 hours lecture
54 hours lab

Prerequisite: PSYC 1A or PSYC 1AH and PSYC 10 or MATH 110 or MATH 110H

Advisory: ENGL 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 5 — Psychology of Reasoning and Problem Solving** **3 Units**
Degree Applicable, CSU

54 hours lecture

Prerequisite: Eligibility for ENGL 68

The components involved in problem solving and reasoning from a psychological perspective. These components assess many facets of the critical thinking process, including perception, learning (classical and operant conditioning, behavior modification, observation, cognitive models), memory, logical fallacies, heuristics, cognitive distortions, decision-making processes, argument, and judgment. 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

54 hours lecture

54 hours lab

Prerequisite: PSYC 1A or SOC 1 and eligibility for MATH 110

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**
(C-ID PSY 180) Degree Applicable, CSU, UC

54 hours lecture

Advisory: Eligibility for ENGL 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 15 — Introduction to Child Psychology** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

Advisory: Eligibility for ENGL 68

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

54 hours lecture

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**
(C-ID PSY 120) Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: PSYC 1A or PSYC 1AH

Application of principles of general psychology to the field of psychopathology. Major classifications of psychiatric disorders, their causes and treatment modalities. Includes theoretical perspectives used in abnormal psychology.

■ **PSYC 25 — The Psychology of Women** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture

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.

Course Descriptions

■ **PSYC 26 — Psychology of Sexuality** **3 Units**
(C-ID PSY 130) Degree Applicable, CSU, UC
54 hours lecture
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**
(C-ID PSY 115) Degree Applicable, CSU
54 hours lecture
Emphasis on comprehension and application of psychological principles to interpersonal relationships, personal growth, sexuality, vocation, marriage, parenting, aging, and other circumstances encountered in the life cycle. Considers personality development and psychological disorders as well as therapeutic approaches.

■ **PSYC 99 — Special Projects in Psychology** **1 to 3 Units**
Degree Applicable, CSU
18 to 54 hours lecture
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.

RADIO TELEVISION

■ **R-TV 01 — Introduction to Electronic Media** **3 Units**
Degree Applicable, CSU
54 hours lecture
Prerequisite: Eligibility for ENGL 68
History, structure, function, economics, content and evolution of radio, television, film, and the internet, including traditional and mature formats as well as emerging electronic media delivery systems. The social, political, regulatory, ethical and occupational impact of the electronic media will also be studied.

■ **R-TV 02 — On-Air Personality Development** **3 Units**
Degree Applicable, CSU
54 hours lecture
Corequisite: R-TV 01 and R-TV 11A (May have been taken previously)
Developing a broadcast voice, style and understanding of the business for all areas of the industry, including disc jockey, newscaster and voice over artist. 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
27 hours lecture
Corequisite: R-TV 01 and R-TV 11A (May have been taken previously)
Sportscasting, interviewing, field reporting and play-by-play for radio and television. Legalities and ethics of covering sports, and how to work 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
54 hours lecture
Corequisite: R-TV 01, 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
54 hours lecture
Corequisite: R-TV 01 (May have been taken previously)
Writing, editing and reporting radio and TV news, utilizing the Associated Press Wire Service. Rewriting news wire copy as well as create stories from interviews and from covering news events, including the incorporation and selection of sound bites from actualities. Emphasis on factual and concise content and the ability to work under deadline.

■ **R-TV 06 — Broadcast Traffic Reporting** **1.5 Units**
Degree Applicable
27 hours lecture
Corequisite: R-TV 01 (May have been taken previously)
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 07A — Beginning Commercial Voice-Overs** **3 Units**
Degree Applicable
54 hours lecture
Advisory: R-TV 01
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 09 — Broadcast Sales and Promotion** **3 Units**
Degree Applicable
54 hours lecture
Corequisite: R-TV 01 (May have been taken previously)
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
54 hours lecture
Corequisite: R-TV 01 (May have been taken previously)
Programming, management and producing techniques for various radio stations formats such as music, news, talk, and sports.

■ **R-TV 11A — Beginning Radio Production** **3 Units**
Degree Applicable, CSU
54 hours lecture
Corequisite: R-TV 01 (May have been taken previously)
Operation of standard radio production equipment for both tape-based and digital production utilizing ProTools technology. 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
54 hours lecture
Prerequisite: R-TV 11A
Techniques in non-linear recording, editing and mixing using Pro Tools technology 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 14 — Media Aesthetics** **3 Units**
Degree Applicable, CSU
54 hours lecture
Prerequisite: Eligibility for ENGL 68
Media aesthetics for television and film presentation. Stresses critical, theoretical and practical analysis. Material is presented from a producer/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
54 hours lecture
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 and developing media, as well as unions, contracts, negotiations, residuals, and mergers.

■ **R-TV 17 — Internet Radio and Podcasting** **3 Units**
Degree Applicable

54 hours lecture

Corequisite: R-TV 01 and R-TV 11A (May have been taken previously)

Internet broadcasting and podcasting including programming, announcing, promotions, and legal and copyright issues through the use of an actual Internet radio station.

■ **R-TV 18 — Introduction to Screenwriting** **3 Units**
Degree Applicable, CSU

54 hours lecture

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)

36 hours lecture

54 hours lab

Advisory: R-TV 14

Video production using studio, remote multicamera, and film-style techniques. Introduction to theory and practice in lighting, audio recording for video, basic directing and producing, editing software, and production of a short narrative-form video.

■ **R-TV 19B — Advanced Video Production** **3 Units**
Degree Applicable, CSU

36 hours lecture

54 hours lab

Prerequisite: R-TV 19A

Video production techniques emphasizing narrative storytelling, film-style aesthetics and production.

■ **R-TV 20 — Television News Production** **3 Units**
Degree Applicable

36 hours lecture

54 hours lab

Prerequisite: R-TV 05 or R-TV 19A

TV newscast production using writing, announcing, production, equipment, direction, graphics, and editing skills both in and out of the studio.

■ **R-TV 21 — Remote Multicamera Production** **3 Units**
Degree Applicable

36 hours lecture

54 hours lab

Prerequisite: R-TV 19A

Remote video production using both multi-camera and single camera techniques. Topics include video engineering, directing, and remote production truck setup.

■ **R-TV 22 — Editing for Film and Television** **3 Units**
Degree Applicable, CSU

54 hours lecture

Aesthetics and use of editing software for film and television. Previous production experience recommended.

■ **R-TV 23 — Reality Show Production** **3 Units**
Degree Applicable

36 hours lecture

54 hours lab

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, wireless multicamera shooting, editing and related skills. Includes production of a reality show.

■ **R-TV 24 — American Film History** **3 Units**
Degree Applicable, CSU

54 hours lecture

Prerequisite: Eligibility for ENG 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

54 hours lecture

Prerequisite: Eligibility for ENG 1A

Cinema history using a global perspective, following the growth of cinema in key countries from their beginnings until 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

54 hours lecture

Prerequisite: Eligibility for ENGL 68

Conceptualize, structure and write dramatic and non-dramatic scripts for cinema, television and new media.

■ **R-TV 31 — History of Radio DJs** **3 Units**
Degree Applicable

54 hours lecture

Traces the history of music radio through study of the most influential disc jockeys in broadcasting history.

■ **R-TV 32 — Radio - TV Internet Applications** **3 Units**
Degree Applicable

54 hours lecture

Creating and managing material on radio, TV and movie websites such as cross-promoting on-air content and converting audio and video.

■ **R-TV 35 — Pop Culture in the Media** **3 Units**
Degree Applicable

54 hours lecture

Examines American Pop Culture and its various forms as it applies to the 1920s through the 1990s through the major fads and follies of those decades as reflected in and influenced by radio, TV, film.

■ **R-TV 96A — Campus Radio Station Lab: Studio Procedures and Equipment Operations** **1 to 2 Units**
Degree Applicable

54 to 108 hours lab

Prerequisite: RTV 01 and RTV 02 and RTV 11A

Experience in the operation of the college radio stations. Activities focus on studio equipment operation, station procedures and on-air techniques.

■ **R-TV 96B — Campus Radio Station Lab: Disc Jockey and News Anchor/Reporter Skills** **1 to 2 Units**
Degree Applicable

54 to 108 hours lab

Prerequisite: R-TV 96A

Participation in the college radio stations. Activities focus on developing Disc Jockey, News Anchor, and News Reporter skills.

■ **R-TV 96C — Campus Radio Station Lab: Hosting and Management Skills** **1 to 2 Units**
Degree Applicable

54 to 108 hours lab

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/Entertainment Industry Seminar** **1 Unit**
Degree Applicable

18 hours lecture

Prerequisite: Approval by Instructor

Corequisite: R-TV 97B

Evaluating professionalism and problem-solving techniques related to their internship experiences.

■ **R-TV 97B — Radio/Entertainment Industry Internship** **1 Unit**
Degree Applicable

75 hours lab

Prerequisite: Approval by Instructor

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.

Course Descriptions

■ R-TV 99 — Radio/TV Special Projects **2 Units**
Degree Applicable

36 hours lecture

Prerequisite: Completion of six R-TV course units

Students earn credit via a broadcasting or film course of study customized for the student. Instructor authorization is needed prior to enrollment.

■ R-TV 100 — Work Experience in Film and Television 1 to 3 Units
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

75 to 225 hours lab

Prerequisite: Completion of 12 units of R-TV courses from among the following: R-TV 1, 14, 18, 19A, 19B, 20, 21, 22, 23, taken at Mt. San Antonio College. Compliance with work experience regulations as designated in the college catalog.

Provides students with on-the-job experience in the film or TV industry, related to classroom instruction, at an approved work site. A minimum of 60 unpaid or 75 paid hours of supervised work is required for each unit of credit.

■ R-TV 101 — Work Experience in Broadcast Entertainment **1 to 2 Units**
Degree Applicable

(May be taken for Pass/No Pass only)

75 to 150 hours lab

Prerequisite: Completion of RTV 01, RTV 97A, RTV 97B and any three other RTV units, taken at Mt. San Antonio College. 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 1A — Clinical Experience 1A **5 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)

256 hours lab

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 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 **3 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)

150 hours lab

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 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 **5 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)

256 hours lab

Prerequisite: RAD 1B

Corequisite: RAD 62A, RAD 62B, and RAD 62C

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on cervical spine, cross-table trauma cervical spine, thoracic spine, lumbar spine, ribs, paranasal sinuses, esophagus, upper gastrointestinal, small bowel and barium enema. Health physical, background check, drug test, and 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 **3 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)

144 hours lab

Prerequisite: RAD 2A

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on cervical spine, cross-table trauma cervical spine, thoracic spine, lumbar spine, ribs, paranasal sinuses, esophagus, upper gastrointestinal, small bowel and barium enema. Health physical, background check, drug test, and 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 **7.5 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)

384 hours lab

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 special and elective procedures. Health physical, background check, drug test, and 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 **3 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)

150 hours lab

Prerequisite: RAD 3A

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on special and elective procedures. Health physical, background check, drug test, and 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 **7.5 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)

384 hours lab

Prerequisite: RAD 3B

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on special and elective procedures. Health physical, background check, drug test, and 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 **4.5 Units**
Degree Applicable, CSU

(May be taken for Pass/No Pass only)

239 hours lab

Prerequisite: RAD 3C

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on developing imaging and/or therapeutic technologies. Health physical, background check, drug test, and CPR certification is required. Intended for students enrolled in Radiologic Technology Program.

■ **RAD 30 — Radiographic Pathology** **1.5 Units**
Degree Applicable

24 hours lecture

Corequisite: RAD 3A

Concepts related to disease and etiological considerations. Emphasis on radiographic appearance of disease and impact on exposure factor selection.

■ **RAD 31 — Fluoroscopy and Radiobiology** **5 Units**
Degree Applicable

90 hours lecture

Prerequisite: RAD 62A

Corequisite: RAD 3C

Areas of 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

36 hours lecture

Prerequisite: RAD 61A

Radiographic digital imaging system components, principles, operation, quality assurance, and maintenance. Factors impacting image acquisition, display, archiving and retrieval are discussed. Guidelines for selecting exposure factors and evaluating images within a digital system assist students to bridge between film-based and digital imaging systems. Intended for students enrolled in Radiologic Technology program.

■ **RAD 50 — Introduction to Radiologic Science and Health Care** **3 Units**
Degree Applicable, CSU

54 hours lecture

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

72 hours lecture

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

54 hours lecture

Prerequisite: RAD 50, RAD 91, ANAT 10A, ANAT 10B and MEDI 90

Corequisite: RAD 61A, RAD 61C, and RAD 1A

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

18 hours lecture

18 hours lab

Prerequisite: RAD50, RAD 91, ANAT 10A, ANAT 10B, and MEDI 90

Corequisite: RAD 61A, RAD 61B and RAD 1A

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

72 hours lecture

Prerequisite: RAD 61A and RAD 1B

Corequisite: RAD 2A, RAD 62B, and RAD 62C

Areas of X-ray production and interaction with matter, principles of imaging, film screen processing, imaging equipment, and radiation protection. Intended for students enrolled in Radiologic Technology Program.

■ **RAD 62B — Radiographic Procedures II** **3 Units**
Degree Applicable, CSU

54 hours lecture

Prerequisite: RAD 61A, RAD 61B, RAD 61C

Corequisite: RAD 62A, RAD 62C and RAD 2A

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, gastrointestinal (GI) system and genitourinary (GU) system. Intended for students enrolled in Radiologic Technology Program.

■ **RAD 62C — Radiographic Procedures II Laboratory** **1.5 Units**
Degree Applicable, CSU

18 hours lecture

18 hours lab

Prerequisite: RAD 61A, RAD 61B and RAD 61C

Corequisite: RAD 62A, RAD 62B, RAD 2A

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** **4 Units**
Degree Applicable, CSU

72 hours lecture

Corequisite: RAD 3A

Special radiographic studies, advanced modalities, radiation protection, contrast media use and quality assurance processes relative to film-based radiology. Intended for students enrolled in Radiologic Technology Program.

■ **RAD 64 — Theory of Radiologic Technology** **4 Units**
Degree Applicable, CSU

72 hours lecture

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 91 — Patient Care in Radiologic Sciences** **3 Units**
Degree Applicable, CSU

45 hours lecture

15 hours lab

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, 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 70 — Approaches to Reading** **3 Units**
Not Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lecture

Introduction to comprehension and vocabulary strategies, and self-reflection on reading.

Course Descriptions

■ READ 80 — Exploring Reading Strategies 3 Units
 Not Degree Applicable

(May be taken for Pass/No Pass only)

54 hours lecture

Prerequisite: READ 70 or satisfactory score on reading placement test

Reading comprehension, vocabulary strategies, and self-awareness of reading capabilities using narrative and expository text.

■ READ 90 — Reading College Texts 3 Units
 Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: READ 80 or satisfactory score on reading placement test

Effective college textbook reading with an emphasis on vocabulary and cross disciplinary textbook analysis and comprehension.

■ READ 100 — Analysis and Critical Reading 3 Units
 Degree Applicable, CSU

54 hours lecture

Prerequisite: READ 90 or satisfactory score on reading placement test

Effective use of critical reading in a cross-disciplinary framework. Emphasis on the development of critical reading skills of interpretation, analysis and evaluation of texts to include: academic, business, and technology readings.

RESPIRATORY THERAPY
■ RESD 50 — Theory and Principles of Respiratory Therapy 2 Units
 Degree Applicable, CSU

36 hours lecture

*Prerequisite: ANAT 10A, ANAT 10B, CHEM 10, MATH 51, MEDI 90**Corequisite: RESD 51A, RESD 52*

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 51A — Respiratory Therapy Science 4 Units
 Degree Applicable, CSU

54 hours lecture

54 hours lab

Corequisite: RESD 50 and RESD 52

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 51B — Respiratory Therapy Science 4 Units
 Degree Applicable, CSU

54 hours lecture

54 hours lab

*Prerequisite: RESD 50 and RESD 51A**Corequisite: RESD 53 and RESD 60*

Respiratory therapy equipment will be presented. 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 52 — Pulmonary Anatomy and Physiology 3 Units
 Degree Applicable, CSU

54 hours lecture

*Prerequisite: MEDI 90, CHEM 10, ANAT 10A and 10B, MATH 51**Corequisite: RESD 51A, RESD 50*

Anatomy and physiology of the cardiopulmonary, neurological, and renal systems emphasizing clinical application of physiological concepts.

■ RESD 53 — Cardiopulmonary Pathophysiology 3 Units
 Degree Applicable, CSU

54 hours lecture

Corequisite: RESD 51B

Anatomic alterations of the lungs, etiology, overview of the cardiopulmonary clinical manifestations, and general management of commonly encountered cardiopulmonary diseases.

■ RESD 55 — Adult Respiratory Intensive Care 3 Units
 Degree Applicable, CSU

54 hours lecture

Corequisite: RESD 56B

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 primary and/or secondary cardiopulmonary failure.

■ RESD 56A — Techniques of Respiratory Therapy 2.5 Units
 Degree Applicable, CSU

(May be taken for Pass/No Pass only)

143 hours lab

*Prerequisite: RESD 51B**Corequisite: RESD 57B*

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 and RESD 51B 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 56B — Techniques of Respiratory Therapy 6 Units
 Degree Applicable, CSU

(May be taken for Pass/No Pass only)

324 hours lab

*Prerequisite: RESD 56A**Corequisite: RESD 55, RESD 58*

Clinical practice in the hospital setting. The student is expected to perform basic therapeutic modalities mastered in 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 are done. Emphasis of intensive care and mechanical ventilator procedures are introduced.

■ RESD 56C — Techniques of Respiratory Therapy 2.5 Units
 Degree Applicable, CSU

(May be taken for Pass/No Pass only)

143 hours lab

Prerequisite: RESD 55

Clinical practice in the hospital setting. Continued practice of intensive care and mechanical ventilator procedures in the treatment of adult and pediatric patients.

■ RESD 56D — Techniques of Respiratory Therapy 6 Units
 Degree Applicable, CSU

(May be taken for Pass/No Pass only)

324 hours lab

*Prerequisite: RESD 56C**Corequisite: RESD 59 and RESD 61*

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 51A and RESD 51B and apply concepts learned in the first four semesters of the Respiratory Therapy Program.

■ RESD 57A — Special Procedures for Respiratory Care 1.5 Units
 Degree Applicable, CSU

27 hours lecture

Prerequisite: RESD 50

Application and skills development in chest tubes and drainage systems, aerosol pharmacology for respiratory care and arterial blood gas analysis.

■ **RESD 57B — Special Procedures for Respiratory Care** 1.5 Units
Degree Applicable, CSU

27 hours lecture
Prerequisite: RESD 51B
Corequisite: RESD 56A

Application and skills development in pharmacology, bronchoscopy, mechanical ventilation, and arterial blood gas puncture.

■ **RESD 58 — Neonatal Intensive Care** 3 Units
Degree Applicable, CSU

54 hours lecture
Corequisite: RESD 56B and RESD 55

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 59 — Respiratory Therapeutic Modalities** 3 Units
Degree Applicable, CSU

54 hours lecture
Prerequisite: RESD 55
Corequisite: RESD 56D and RESD 61

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 60 — Comprehensive Pulmonary Assessment** 2 Units
Degree Applicable, CSU

36 hours lecture
Corequisite: RESD 51B and RESD 53

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; extensive practice in interpreting this data.

■ **RESD 61 — Current Issues in Respiratory Care** 3 Units
Degree Applicable, CSU

54 hours lecture
Prerequisite: RESD 56C
Corequisite: RESD 56D and RESD 59

Explores recently developed health care techniques and strategies for diagnostics, assessment, and therapeutics and their impact on respiratory therapists.

■ **RESD 62 — Pharmacology for Respiratory Care** 1.5 Units
Degree Applicable, CSU

27 hours lecture
Prerequisite: RESD 50 and RESD 51A and RESD 52

Commonly used respiratory care drugs with emphasis on dosage, indications, contraindications, adverse reactions, and expected outcomes.

SERVICE LEARNING

■ **SL 2 — Linked Service Learning** 1 Unit
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
54 hours lab
Links service learning with content-specific courses across the college curriculum. Allows students to explore interests or career objectives through community involvement and service. Requires arranged hours of community-based activity. Must be enrolled concurrently in a course with a service learning link.

SIGN LANGUAGE, INTERPRETING

■ **SIGN 101 — American Sign Language 1** 4 Units
Degree Applicable, CSU, UC

72 hours lecture
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

72 hours lecture
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

72 hours lecture
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

72 hours lecture
Prerequisite: SIGN 102
American Sign Language 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

72 hours lecture
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

72 hours lecture
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 decisions. Further exposure to Deaf cultural components.

■ **SIGN 108 — Fingerspelling** 2 Units
Degree Applicable

(May be taken for Pass/No Pass only)
36 hours lecture
Prerequisite: SIGN 102
Receptive and expressive fingerspelling.

■ **SIGN 201 — Introduction to Deaf Studies** 3 Units
Degree Applicable, CSU

54 hours lecture
Topics central to the Deaf community including Deaf education, Deaf/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

54 hours lecture
American Deaf cultural norms, values, mores and institutions.

Course Descriptions

■ SIGN 210 — American Sign Language Structure 3 Units
 Degree Applicable, CSU, UC

54 hours lecture

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/English 3 Units
 Degree Applicable, CSU

54 hours lecture

*Prerequisite: SIGN 104**Corequisite: SIGN 210 (May have been taken previously.)*

American Sign Language and English translation by comparing texts in both languages.

■ SIGN 223 — Principles of Interpreting 3 Units
 Degree Applicable, CSU

54 hours lecture

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

36 hours lecture

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)

54 hours lecture

54 hours lab

*Prerequisite: SIGN 104 and ENGL 1A**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)

54 hours lecture

54 hours lab

Prerequisite: SPCH 1A and SIGN 227

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)

54 hours lecture

54 hours lab

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)

36 hours lecture

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)

36 hours lecture

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)

18 hours lecture

27 hours lab

Prerequisites: 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)

18 hours lecture

27 hours lab

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)

36 hours lecture

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 1 — Sociology 3 Units
 (C-ID SOCI 110) Degree Applicable, CSU, UC

54 hours lecture

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 — Sociology - Honors 3 Units
 (C-ID SOCI 110) Degree Applicable, CSU, UC

54 hours lecture

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**
(C-ID SOCI 115) Degree Applicable, CSU, UC
54 hours lecture
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.

■ **SOC 2H — Contemporary Social Problems - Honors** **3 Units**
(C-ID SOCI 115) Degree Applicable, CSU, UC
54 hours lecture
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. An honors course designed to provide an enriched experience. Students may not receive credit for both SOC 2 and SOC 2H.

■ **SOC 4 — Introduction to Gerontology** **3 Units**
Degree Applicable, CSU, UC
54 hours lecture
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**
(C-ID SOC 160) Degree Applicable, CSU, UC
54 hours lecture
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**
(C-ID SOC 160) Degree Applicable, CSU, UC
54 hours lecture
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
54 hours lecture
An analysis of religion as a social institution. Attention will focus on the influence that religion has on American society, religious movements, norms, symbols and the social manifestations of religious observable facts.

■ **SOC 14 — Marriage and the Family** **3 Units**
(C-ID SOCI 130) Degree Applicable, CSU, UC
54 hours lecture
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**
(C-ID SOCI 130) Degree Applicable, CSU, UC
54 hours lecture
Prerequisite: Acceptance into 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
54 hours lecture
Prerequisite: Eligibility for ENGL 68
Theoretical aspects of physical, social, emotional and cognitive development from conception through adolescence. Requires observation of children.

■ **SOC 20 — Sociology of Ethnic Relations** **3 Units**
(C-ID SOCI 150) Degree Applicable, CSU, UC
54 hours lecture
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.

■ **SOC 20H — Sociology of Ethnic Relations - Honors** **3 Units**
(C-ID SOCI 150) Degree Applicable, CSU, UC
54 hours lecture
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. An honors course designed to provide an enriched experience. Students may not receive credit for both SOC 20 and SOC 20H.

■ **SOC 36 — Asian American Communities** **3 Units**
Degree Applicable, CSU, UC
54 hours lecture
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 91 — Service Learning for Sociology** **1 Unit**
Degree Applicable, CSU
(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture
Prerequisite: Eligibility for ENGL 68
Increases awareness and appreciation for civic responsibility through service learning. Students will examine the sociological dynamics of community service and assess specific needs for community service and fundraising. Field trips required.

■ **SOC 91L — Service Learning for Sociology Lab** **.5 to 2 Units**
Degree Applicable, CSU
(May be taken for option of letter grade or Pass/No Pass)
27 to 108 hours lab
Corequisite: SOC 91 (May have been taken previously.)
Examines and addresses community needs through service learning. Students will organize fundraising and other community events. Field trips required.

Course Descriptions

■ SOC 99 — Special Projects in Sociology 2 Units
 Degree Applicable, CSU

36 hours lecture

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.

SPANISH
■ SPAN 1 — Elementary Spanish 4 Units
 Degree Applicable, CSU, UC

72 hours lecture

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 2 — Continuing Elementary Spanish 4 Units
 Degree Applicable, CSU, UC

72 hours lecture

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 3 — Intermediate Spanish 4 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

72 hours lecture

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

(May be taken for option of letter grade or Pass/No Pass)

72 hours lecture

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 11 — Spanish for the Spanish Speaking 4 Units
 Degree Applicable, CSU, UC

72 hours lecture

Prerequisite: SPAN 2 or equivalent

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 12 — Continuing Spanish for the Spanish Speaking 4 Units
 Degree Applicable, CSU, UC

72 hours lecture

Prerequisite: SPAN 11 or equivalent

Provides 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 53 — Conversational Spanish 3 Units
 Degree Applicable, CSU, UC

(May be taken for option of letter grade or Pass/No Pass)

54 hours lecture

Prerequisite: SPAN 2

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)

54 hours lecture

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.

SPEECH
■ SPCH 1A — Public Speaking 4 Units
 Degree Applicable, CSU, UC

72 hours lecture

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/analytical techniques. Students may not receive credit for both SPCH 1A and SPCH 1AH.

■ SPCH 1AH — Public Speaking - Honors 4 Units
 Degree Applicable, CSU, UC

72 hours lecture

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/analytical techniques. Students may not receive credit for both SPCH 1A and SPCH 1AH. An honors course designed to provide an enriched experience. Students may not receive credit for both SPCH 1A and SPCH 1AH.

■ SPCH 1B — Intermediate Public Speaking 3 Units
 Degree Applicable, CSU, UC

54 hours lecture

Prerequisite: SPCH 1A or SPCH 1AH

Extemporaneous, impromptu, manuscript and memorized speaking focusing on organization, research and delivery skills. Includes skills to analyze, synthesize, criticize, and advocate ideas using inductive and deductive reasoning, distinguishing fact from opinion and avoiding argumentative fallacies.

■ SPCH 2 — Fundamentals of Communication 4 Units
 Degree Applicable, CSU, UC

72 hours lecture

Corequisite: ENGL 1A or ENGL 1AH (May have been taken previously)

Fundamental theories and competencies in interpersonal, small group, public, and intercultural communication. 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)

54 hours lecture

Improvement of the speaking voice and oral communication style, including proper use for 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

54 hours lecture

Theory, principles, and techniques of the performance of literature in solo and duo formats. Texts will include prose, poetry, drama, nonfiction and other forms. Appreciation of various genres of literature through textual analysis, oral reading, and evaluation. Practical training is given 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.

■ **SPCH 6 — Group Communication** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
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

54 hours lecture
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

54 hours lecture
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. An honors course designed to provide an enriched experience. Students may not receive credit for both SPCH 7 and SPCH 7H.

■ **SPCH 8 — Professional and Organizational Speaking** **4 Units**
Degree Applicable, CSU

72 hours lecture
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.

■ **SPCH 8H — Professional and Organizational Speaking - Honors** **4 Units**
Degree Applicable, CSU

72 hours lecture
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 15 — Forensics: Fundamentals of Contest Speech and Debate** **2 Units**
Degree Applicable, CSU

(May be taken four times for credit)
18 hours lecture
54 hours lab
Advisory: SPCH 1A or SPCH 1AH

Participation in one or more intercollegiate competitions as part of the Mt. SAC Forensics Team. Instructions in preparatory procedures for these tournaments, including techniques in persuasive oratory, interpretation, expository, impromptu, speech analysis, and debate. Student has option to choose area of interest and also an opportunity to participate in public community programs. Tournament 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)
167 hours activity
Prerequisite: Admission by audition
Speech performance skills and participation in multiple intercollegiate speaking competitions 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 attendance 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)
167 hours activity
Prerequisite: SPCH 15 or SPCH 20
Speaking and argumentation skills and participation in multiple intercollegiate speaking competitions as members of the Mt. SAC Forensics Team. Emphasis is on parliamentary debate and limited preparation speaking. Tournament 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)
167 hours activity
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

54 hours lecture
Prerequisite: SPCH 1A or SPCH 1AH
Rhetorical principles of argumentation in both theory and practice. Emphasis is given to rational discussion and reasoned advocacy.

■ **SPCH 20H — Argumentation and Debate - Honors** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: SPCH 1A or SPCH 1AH and acceptance into the Honors Program
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

54 hours lecture
Prerequisite: Eligibility for ENGL 68
Dynamics of everyday one-to-one communication focusing on the role behavior, psychology, and environment play in friendship, family, intimate, and workplace relationships. Factors that influence communication such as non-verbal 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

54 hours lecture
Prerequisite: Acceptance into the Honors Program
Dynamics of everyday one-to-one communication focusing on the role behavior, psychology, and environment play in friendship, family, intimate, and workplace relationships. Factors that influence communication such as non-verbal 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.

Course Descriptions

■ **SPCH 30 — Gateway to Communication Studies** **3 Units**
Degree Applicable, CSU, UC

54 hours lecture
Corequisite: ENGL 1A or ENGL 1AH (may be taken previously)
Advisory: READ 100

Prominent issues in communication theory, introduction to the professional field of communication, and practice of multiple research methods. Particularly useful for students preparing for upper division study in communication or related disciplines.

■ **SPCH 99 — Special Projects in Speech** **2 Units**
Degree Applicable, CSU

36 hours lecture
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.

STUDY TECHNIQUES

■ **STDY 80 — Foundations for Academic Success** **3 Units**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
54 hours lecture
Advisory: Eligibility for ENGL 67 and READ 80
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

18 hours lecture
Advisory: Eligibility for ENG 67 and Eligibility for READ 80
Brain-based perspective emphasizing study techniques that include self-awareness, self-motivation, note-taking, test-taking, studying and learning strategies and learning preferences.

■ **STDY 85C — Online Learning Success Skills** **1 Unit**
Not Degree Applicable

18 hours lecture
Advisory: Eligibility for ENG 67 and Eligibility for READ 90
Introductory college success course overview for online learning using a brain-based perspective emphasizing success strategies designed to prepare students to take online classes and to introduce students to strategies for online learning.

■ **STDY 100 — University-level Academic Success Strategies** **3 Units**
Degree Applicable, CSU

54 hours lecture
Advisory: Eligibility for ENGL 68 and eligibility for READ 100
Advanced transfer-level college success course emphasizing study strategies that include Triune Brain Theory, Emotional Intelligence, learning theories, preparation for transfer, self-management, and critical thinking using a brain-based perspective.

SURVEYING

■ **SURV 1A — Surveying** **3 Units**
Degree Applicable, CSU, UC

36 hours lecture
54 hours lab
Prerequisite: MATH 150
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

36 hours lecture
54 hours lab
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.

TECHNOLOGY RELATED COURSES

■ **TECH 60 — Customer Relations for the Technician** **2 Units**
Degree Applicable

36 hours lecture
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

18 hours lecture
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 9 — Introduction to Theater Arts** **3 Units**
(C-ID THTR 111) Degree Applicable, CSU, UC

54 hours lecture
Aesthetic, artistic, technical, and business aspects of theater.

■ **THTR 10 — History of Theater Arts** **3 Units**
(C-ID THTR 113) Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: Eligibility for ENGL 1A
Dramatic literature and the development of dramatic art. Representative plays and the history and development of the living stage will be stressed.

■ **THTR 11 — Principles of Acting I** **3 Units**
(C-ID THTR 151) Degree Applicable, CSU, UC

54 hours lecture
Introduction to the basic principles and techniques of acting as an artistic discipline. Analysis of the plot, characterization and language of the drama. Performances of laboratory scenes, readings and exercises.

■ **THTR 12 — Principles of Acting II** **3 Units**
(C-ID THTR 152) Degree Applicable, CSU, UC

54 hours lecture
Prerequisite: THTR 11
Investigation of acting techniques through the study and presentation of varied dramatic scenes.

■ **THTR 14 — Stagecraft** **3 Units**
(C-ID THTR 171) Degree Applicable, CSU, UC

36 hours lecture
54 hours lab
Theory and practice of scenery construction and stage lighting. Practical work in scene design and construction and lighting layouts, with the opportunity to perform these tasks in actual theatre situations. By virtue of the wide range of productions staged by the department, students who repeat this course will increase their skills and proficiency.

■ **THTR 15 — Play Rehearsal and Performance** **1 to 3 Units**
(C-ID THTR 191) Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)
54 to 162 hours lab

Prerequisite: Admission by audition

Planning, preparation, and presentation of college-sponsored dramatic presentations. Emphasis on acting with some technical theater assignments. Attendance at performances is required.

■ **THTR 16 — Theatrical Make-Up** **3 Units**
(C-ID THTR 175) Degree Applicable, CSU, UC

45 hours lecture
36 hours lab

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

54 hours lecture

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, commercials. Assists students to prepare for an occupation in the performing areas of television and film.

■ **THTR 18 — Technical Theater Practicum** **1 Unit**
(C-ID THTR 192) Degree Applicable, CSU, UC

(May be taken four times for credit)
(May be taken for option of letter grade or Pass/No Pass)

54 hours lab

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**
(C-ID THTR 174) Degree Applicable, CSU, UC

36 hours lecture
54 hours lab

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 25 — Theatrical Playwriting** **3 Units**
Degree Applicable, CSU

54 hours lecture

Advisory: Eligibility for ENGL 1A

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 60 — Children's Theater** **2 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
108 hours lab

Practice of children's theater through the creation and performance of new work for young audiences. Includes experience in story development, design, directing and performance culminating in the practical application of a series of public presentations.

■ **THTR 99 — Special Projects in Theater** **1 to 2 Units**
Degree Applicable, CSU

54 to 108 hours lab

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.

TUTOR TRAINING

■ **TUTR 10A — Introduction to Tutoring** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

Introduction to tutoring, with an emphasis on tutoring strategies, problem solving, and working with a diverse student population.

■ **TUTR 10B — Tutoring in the English Language** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

Prerequisite: Eligibility for ENGL 1A

Tutoring in the English language with an emphasis on approaches to working with students on written drafts and addressing the needs of non-native speakers.

■ **TUTR 10C — Tutoring as a Supplemental Instructor** **1 Unit**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

Tutoring as a Supplemental Instructor with an emphasis on tutoring in the classroom and in small groups under the supervision of a designated instructor.

■ **TUTR 10D — Tutoring in Mathematics** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

Prerequisite: MATH 71

Tutoring in mathematics with an emphasis on strategies to promote active learning.

■ **TUTR 10R — Tutoring in Reading** **1 Unit**
Not Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

Advisory: Eligibility for READ 100

Application of strategic reading processes and approaches to reading tutoring. Prepares students to become tutors for reading.

VETERINARY TECHNOLOGY

See Agriculture: Animal Health Technology

WELDING

■ **WELD 30 — Metal Sculpture** **2 Units**
Degree Applicable, CSU

(May be taken for option of letter grade or Pass/No Pass)
18 hours lecture

54 hours lab

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

18 hours lecture
54 hours lab

Fundamentals of welding processes related to the areas of fabrication, construction, machine tool, aerospace and the transportation industries.

Course Descriptions

WELD 50 — Oxyacetylene Welding **2 Units**
Degree Applicable

18 hours lecture
54 hours lab

Oxyacetylene fusion welding, non-fusion welding and cutting. Develops understanding of and fundamental skills in modern welding practices.

WELD 51 — Basic Electric Arc Welding **2 Units**
Degree Applicable

18 hours lecture
54 hours lab

Advisory: WELD 50

Electric arc welding, weld symbols, standard electrode and alloy electrode selection, American Welding Society (AWS) procedure for certification.

WELD 53A — Welding Metallurgy **3 Units**
Degree Applicable, CSU

54 hours lecture

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

54 hours lecture

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

18 hours lecture
108 hours lab

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

18 hours lecture
108 hours lab

Advisory: WELD 70A taken prior

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

18 hours lecture
108 hours lab

Advisory: WELD 70A taken prior

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

18 hours lecture
108 hours lab

Advisory: WELD 40, WELD 51, WELD 70A

Theory and practical applications of welding used in industry and construction. Designed to adapt and upgrade skills to industry standards. Includes project models such as ornamental iron gates and fences and material storage components.

WELD 81 — Pipe and Tube Welding **3 Units**
Degree Applicable

18 hours lecture
108 hours lab

Advisory: WELD 70B, 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)

18 hours lecture
108 hours lab

Advisory: WELD 70B taken prior

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)

18 hours lecture
108 hours lab

Advisory: WELD 70B taken prior

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.

WELD 91 — Automotive Welding, Cutting and Modification **1 Unit**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

18 hours lecture

Corequisite: WELD 91L

Advisory: WELD 70B taken prior

Welding and cutting metals used in the automotive industry. Gas Metal Arc (GMAW/MIG), Gas Tungsten Arc (GTAW/TIG), Plasma Arc Cutting (PAC), and Oxy-fuel Cutting (OFC) welding will be covered.

WELD 91L — Automotive Welding, Cutting and Modification Lab **2 Units**
Degree Applicable

(May be taken for option of letter grade or Pass/No Pass)

108 hours lab

Corequisite: WELD 91 (may have been taken previously)

Advisory: WELD 70B

Practical lab applications for sheet metal forming, metal inert gas (MIG), tungsten inert gas (TIG), resistance spot (RSW), and Oxy-fuel welding, plasma arc cutting (PAC) and Oxy-fuel cutting. Includes design, fabrication and assembly of automotive suspension and chassis components.

WELD 96 — Work Experience in Welding **1 to 4 Units**
Degree Applicable

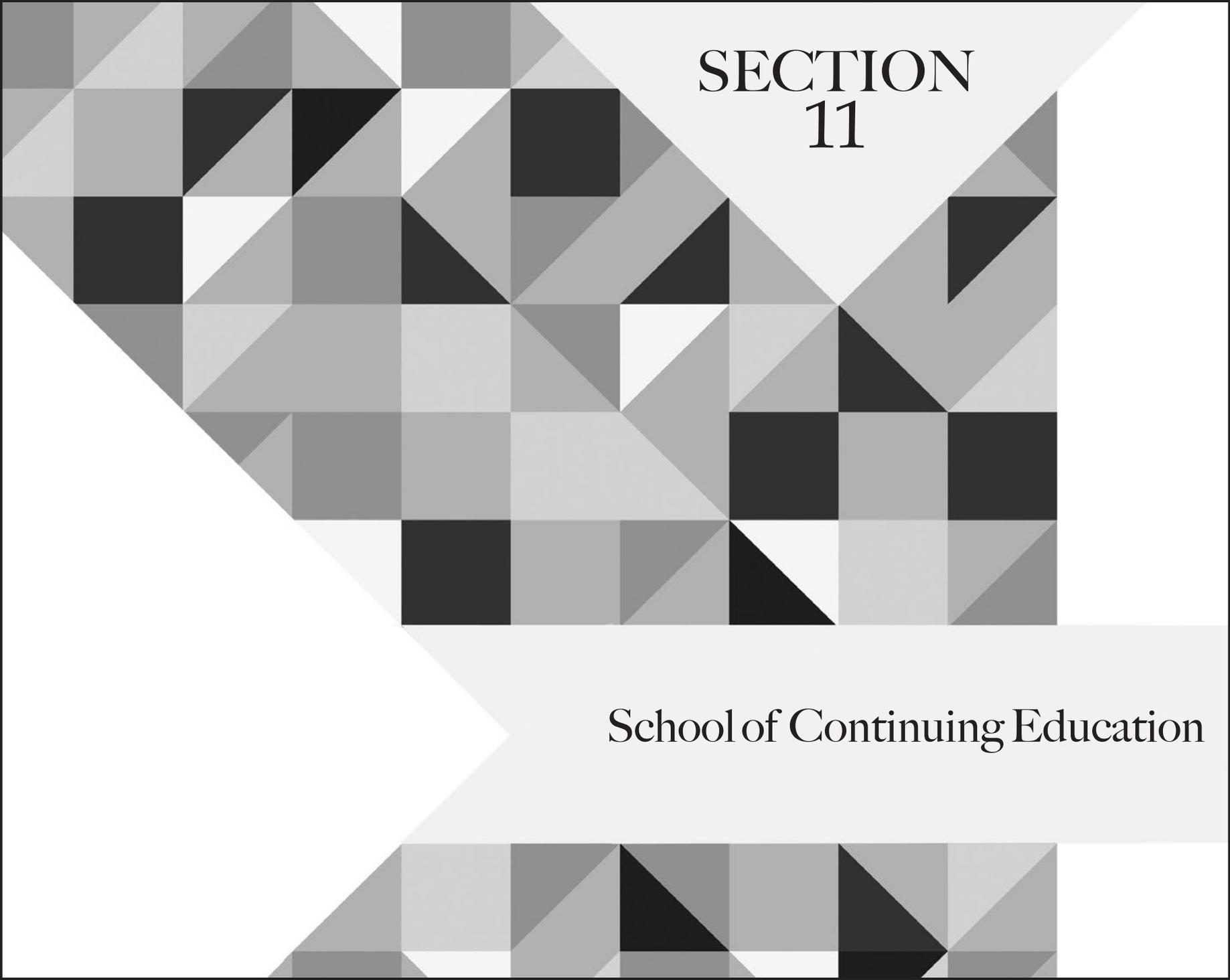
(May be taken for Pass/No Pass only)

75 to 300 hours lab

Prerequisite: Compliance with work experience regulations as designated in the college catalog

Advisory: WELD 70B

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.



SECTION
11

School of Continuing Education

**SCHOOL OF CONTINUING EDUCATION
(ADULT EDUCATION) COURSES**

Noncredit courses are designed to meet the needs and capabilities of those students who do not desire or need to obtain college unit credit or who need further preparation for credit-level work. These courses provide developmental, occupational and other general education 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, Citizenship, Programs for the Adults with Disabilities, Vocational Courses, Education for Older Adults, and additional courses qualified for adult education curricula.

Student Services

Admissions and Registration

For School of Continuing Education (noncredit) and Community Services (fee-based) offerings, admission and registration are completed using a registration card. However, enrollment in ESL and/or Adult Basic Education and Health Career courses REQUIRES assessment and orientation prior to registration (see explanations, following). Students may register for most courses at any time during the semester, on a space available basis.

Assessment

Adult Basic Education students are assessed prior to enrolling in courses. Additional assessments are available for specific needs. Career assessment identifies career interest and goals. For more information, contact (909) 274-4845.

ESL students must be assessed prior to enrollment. Placement testing is offered every Thursday, year-round. Multilingual assistance is available. For more information, contact (909) 274-5235.

Health careers students enrolling in nursing assistant, home support, or phlebotomy programs must meet specific state requirements related to security and physical health. This information on requirements is provided at mandatory orientation meetings. For more information, please call (909) 274-4788.

Orientation

Adult Basic Education and ESL students must attend an orientation session prior to registration. Orientation sessions are generally offered immediately after assessment. Health career orientations are scheduled prior to the start of each cohort.

Counseling and Advisement

Educational advisement services are available throughout the semester through the Adult Basic Education Department. To schedule an individual appointment, please call the Adult Basic Education Department, (909) 274-4845.

The Adult Basic Education and ESL departments provide counselors to serve their students. Assistance to all noncredit students includes development of educational and career plans, identification of personal, academic and career goals, career development, transitioning to credit programs and work, and assessment of special needs.

Fees and Expenses

There is no tuition for noncredit courses. However, some courses include a fee for materials provided to students. Prices for fee-based community courses vary. In addition, all students who park on the Mt. San Antonio College campus must have a valid, current parking permit. Student parking permits may be purchased at the Bursar's Office. One-day parking permits may be purchased at various parking lots on campus. See campus map for details. Books and supplies needed for a class are the responsibility of the student unless specifically noted as provided by a material fee.

Vocational Programs

The Division offers courses and certificates in vocational and health career areas. Additionally, many credit vocational classes offer a minimum number of seats available to School of 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. However, students enrolled in these classes who wish to receive a certificate of completion are expected to complete all assignments including tests, quizzes, projects and examinations. (A list of Noncredit Certificate Programs is provided beginning on page 221 of this catalog.)

Students wishing to complete a noncredit certificate program in one of the vocational areas of study must apply to the School of Continuing Education Division office, building 40, room 104. For further information, please call (909) 274-4220.

Adult Basic Education

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)
- High School Equivalency Preparation (GED, HiSet)
- Adult High School Diploma Program
- High School Credit Recovery
- Summer High School Program
- Student Athlete Tutoring (WIN Program)
- 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
 - In-Home Support Services Training
- For more information on Adult Basic Education programs, contact (909) 274-4845.

English as a Second Language

Classes and programs are available for English language learners at all levels of proficiency, from low literacy to advanced, ready to transition into credit or career pathways. Classes and services include:

- Orientation and assessment for level placement (Pre-Level 1 – Level 6)
- Core level classes focusing on integrated skills (grammar, listening, speaking, reading and writing)
- Skill-focused classes (Speaking Pre, A, B, and C; Writing Pre, A, B, and C)
- Specialized courses (TOEFL preparation, Citizenship preparation)
- Transition to credit and/or career training program (VESL Career Paths)
- Supplemental workshops, tutoring, and conversation groups
- Academic and career counseling, educational planning, and annual career conference
- Workshops and classroom presentations on college and career options

For more information on ESL programs located in the Language Center, Building 66, contact (909) 274-5235.

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 6, room 264, 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
- Computer Aided Testing (CATS) for the FFA and other licensing boards

For more information on the LLC, contact (909) 274-4580.

Health Careers Resource Center (HCRC)

The Center provides the resources to increase student knowledge base, to learn new skills and to reinforce previously learned skills. Resources are provided to Mt. SAC credit and noncredit health career students.

The HCRC provides a state-of-the-art learning lab environment to:

- develop new health related skills/knowledge
- update prior or current knowledge
- participate in simulated clinical activities which will promote success in the health care industry.

The Center is open to current Mt. SAC credit and noncredit health career students only.

Some of the campus programs/departments actively utilizing the center include:

Technology and Health Division

- Medical Services – EMT, Paramedic
- Mental Health Technology
- Associate Degree Nursing
- Radiologic Technology
- Respiratory Therapy

School of Continuing Education Division

- Long-Term Certified Nursing Assistant (C.N. A.)
- IV Therapy
- Home Health Aide
- In-Home Support Services
- Phlebotomy Technician

Education for Older Adults

Courses designed for older adults (age 55+ years*) provide the full continuum of education from vocational classes to the pursuit of long-standing educational goals. Classes are offered in the health, and vocational areas, and are conducted at various senior and community centers and residential facilities throughout the Mt. San Antonio College District.

Mountie Volunteer Program (MVP)

Partnering with the Retired Senior Volunteer Program (RSVP), the MVP Program coordinates and provides volunteer opportunities for participants, and provides for the recruiting and screening of potential volunteers.

Generations Program

The Generations Program provides educational activities which foster intergenerational relationships that link 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.

Other Community Education Services and Programs

- Fee-based programs related to career development and personal enrichment for community members
- College 4 Kids and Youth Programs
- CPR and First Aid
- Vehicle Safety Programs (Motorcycle Safety and Traffic School)
- Farm Tours
- Wildlife Sanctuary Tours
- Study Skills Laboratory for Disabled Students Programs and Services

For more information regarding School of Continuing Education Services and Programs, contact (909) 274-4220.

**Note: Although courses are designed for the older adult, anyone 18 years of age and older may enroll.*

NONCREDIT LIST OF CERTIFICATES

NONCREDIT LIST OF CERTIFICATES		
Certificates of Competency		
Adult High School Diploma	222	
Basic Career Readiness	222	
Basic Skills.....	222	
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English as a Second Language.....	222	
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Certified Nursing and Acute Care Nursing Assistant.....	229	
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Interior Design – Level 1	229	
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Welding: Gas Tungsten Arc Welding	230	
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NONCREDIT 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 four specific Certificates of Competency that follow.

CERTIFICATES OF COMPETENCY

- Adult High School Diploma
- Basic Career Readiness
- Basic Skills
- Career Development
- English as a Second Language
- ESL – Beginning Level
- ESL – Intermediate Level
- ESL – Advanced Level
- GED Preparation
- VESL Career Paths

Adult High School Diploma #31598

The High School Program 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.

Certificate Requirements:

Students will complete a total of 160 high school credits in the following disciplines: natural sciences, social and behavioral sciences, humanities, English, mathematics, health, vocational education along with competencies in writing, math and reading.

A minimum of 20 residency credits must be completed at Mt. San Antonio College.

For detailed information regarding course and graduation requirements, please call 909-274-4937.

Course ID	Course Title
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 School Civics/American Government
BSHS CPTC	High School Computer Technology
BSHS DIPR	High School Diploma and Referral
BSHS EASC	High School Earth Science
BSHS ECON	High School Economics
BSHS EELA	High School CAHSEE Prep – English Language Arts
BSHS EEMA	High School CAHSEE Prep – Mathematics
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	High School Integrated Math
BSHS KEY	High School Typing/Keyboarding
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 SSK	High School Study Skills
BSHS SOC	High School Sociology
BSHS SPN1	High School Spanish 1
BSHS SPN2	High School Spanish 2
BSHS USHS	High School United States History
BSHS WHS	High School World History
BSHS WREX	High School Expository Writing
BSHS WRIT1	High School Literature and Writing Fundamentals 1
BSHS WRIT2	High School Literature and Writing Fundamentals 2

Basic Career Readiness #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.

Certificate Requirements:

Required Courses:

Course ID	Course Title
BS ABE02	Adult Basic Education
BS ABE05	Career Development
BS LRN06	Personal Computer Applications

Basic Skills #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 in their careers, or preparing for future advanced academic studies. Students will progress through different levels within this sequence based on individual need. Some students who improve skill levels in reading and mathematics and wish to take the military entrance exam (ASVAB) can take the ASVAB Prep course as an elective. Other elective courses provide students with the necessary admissions, assessment, educational planning, and enrollment into credit courses. For more information, please call (909) 274-4845.

Certificate Requirements:

Course ID	Course Title
BS ABE02	Adult Basic Education
BS LRN01	Short-Term Review
BS ABE01	Career Information and Guidance
BS ABE04	Guidance and Orientation to Special Programs

Elective:

- BS ASVAB ASVAB Preparation (Armed Services Vocational Aptitude Battery)

Career Development #24060

Career development provides students with information and guidance on college opportunities, careers and life planning. Students can apply skills gained to their current employment and personal lives and will improve their opportunities to advance in their careers or transition into a new career. This sequence of courses is offered days and evenings to accommodate adults with alternating schedules. For more information, please call (909) 274-4845.

Certificate Requirements:

Course ID	Course Title
BS ABE01	Career Information and Guidance
BS ABE02	Adult Basic Education
BS ABE03	Adult Basic Education – Leadership Development
BS ABE04	Guidance and Orientation to Special Programs
BS ABE05	Career Development
BS ABE06	Basic Skills Foundation
BS ABE07	Re-Entry Work Skills Needed for Today's Workforce
BS CNSL5	Career/Life Planning

English as a Second Language #24054

ESL students are placed within the following sequence of courses according to their English abilities. Students progress through this sequence based on individual need before transferring into credit courses or employment. Supplemental courses in speaking, writing and vocational language will assist their progress through the sequence and may be taken along with level classes as needed.

Courses are offered all year long, including winter and summer intersessions. Classes are offered days, evenings and weekends. For more information, please call (909) 274-5235.

Certificate Requirements:

Course ID Course Title

ESL PLVL1	ESL – Pre-Level 1
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

Certificate Electives:

ESL SPKA	ESL – Speaking A
ESL SPKB	ESL – Speaking B
ESL SPKC	ESL – Speaking C
ESL TOEFL	TOEFL Preparation
ESL WRTA	ESL Writing A
ESL WRTB	ESL Writing B
ESL WRTC	ESL Writing C
ESL LANG3	English for Special Uses
BS LANG1	Language Skills Laboratory
ESL VHLTH	English as a Second Language for Health Professionals

ESL – Beginning Level

#30375

ESL students are placed within the following sequence of beginning courses according to their English abilities. Students progress through this sequence based on individual need transitioning into intermediate courses or employment. Supplemental courses in speaking, writing and vocational language will assist their progress through the sequence and may be taken along with level classes as needed. Courses are offered all year long, including winter and summer intersessions. Classes are offered days, evenings and weekends. For more information, please call (909) 275-5235.

Certificate Requirements:

Required Courses:

Course ID Course Title

ESL PLVL1	ESL – Pre-Level 1
ESL LVL1	ESL – Level 1
ESL LVL2	ESL – Level 2

Elective Courses:

ESL SPKA	ESL – Speaking A
ESL WRTA	ESL Writing A

ESL LANG2	English for Special Uses
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ESL – Intermediate Level

#30374

ESL students are placed within the following sequence of intermediate courses according to their English abilities. Students progress through this sequence based on individual need transitioning into advanced courses or employment. Supplemental courses in speaking, writing and vocational language will assist their progress through the sequence and may be taken along with level classes as needed.

Courses are offered all year long, including winter and summer intersessions. Classes are offered days, evenings and weekends. For more information, please call (909) 275-5235.

Certificate Requirements:

Required Courses:

Course ID Course Title

ESL LVL3	ESL – Level 3
ESL LVL4	ESL – Level 4

Elective Courses:

ESL SPKB	ESL – Speaking B
ESL WRTB	ESL Writing B
ESL LANG2	ESL Computer and Language Skills Lab

ESL – Advanced Level

#30376

ESL students are placed within the following sequence of advanced courses according to their English abilities. Students progress through this sequence based on individual need transitioning into credit courses or employment. Supplemental courses in speaking, writing and vocational language will assist their progress through the sequence and may be taken along with level classes as needed.

Courses are offered all year long, including winter and summer intersessions. Classes are offered days, evenings and weekends. For more information, please call (909) 275-5235.

Certificate Requirements:

Required Courses:

Course ID Course Title

ESL LVL5	ESL – Level 6
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ESL LVL6	ESL – Level 6
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Elective Courses:

ESL SPKC	ESL – Speaking C
ESL WRTC	ESL Writing C
ESL LANG2	Computer and Language Skills Lab
ESL LANG3	English for Special Uses
ESL TOEFL	TOEFL Preparation
ESL VHLTH	ESL for Health Professionals

GED Preparation

#30778

Improve the academic skills needed for passing the General Education Development (GED) exam. Math, reading, writing, science and social studies. Progress in a sequence based on individual need.

Certificate Requirements:

Course ID Course Title

BS GEDMA	GED Preparation: Mathematics
BS GEDRD	GED Preparation: Language Arts, Reading
BS GEDSC	GED Preparation: Science
BS GEDSS	GED Preparation: Social Studies
BS GEDWR	GED Preparation: Science

NONCREDIT VOCATIONAL TRAINING CERTIFICATES OF COMPLETION

California Community College Adult Education Programs are authorized to offer short-term vocational programs with high employment potential. The demonstration of need to offer these programs within the College service area is determined by manpower needs projections from the California Occupational Information System (COTS), or surveys of employer needs in the Continuing, or state licensing mandates and/or certification. However, if a course needed for certificate completion is not offered in a timely manner, the course may be taken for credit and applied to the noncredit certificate.

What Are Vocational Training Certificates?

Certificates in a variety of vocational programs are available through the Continuing Education Division. Many of these certificate programs mirror those offered through the credit programs of the College, are favorably recognized by business and industry, and

are frequently used as a requirement for professional advancement. Classes taken are noncredit, and do not generate college units toward a degree.

The Continuing Education Division also offers fee-based Certificate Programs. These include:

- Bookkeeping Preparation
- CPR and First Aid
- Makeup Artistry
- Medical Insurance Billing Specialist
- Phlebotomy Technician
- RN Re-Entry into Practice

Specific certificate content and more information can be found in the Continuing Education Schedule of Classes each semester or contact (909) 274-4220.

How to Finish an Occupational Certificate

In order for students to receive a Certificate of Completion, the student must do the following:

- Register and pay material fees, if required, for desired classes
- Satisfactorily complete coursework, papers and projects, take and pass mid-terms and final with the equivalent of a “C” grade as outlined by each individual course syllabus
- When all courses are completed, submit a request to the Continuing Education Division Office, building 40.

If any courses for a noncredit certificate program have been taken for college credit, students must contact the Continuing Education Division office, (909) 274-4220, for instructions.

Certificate criteria will be verified by Continuing Education Division staff. If all requirements are met, a Certificate of Completion will be prepared and delivered to the student.

Getting Help

For more information regarding occupational training certificates, please call the Division office at (909) 274-4220.

Educational Advisers are available to assist students with Career and Education Planning. Advisers are also available by appointment during the semester. Please call (909) 274-4845 to schedule an appointment.

Noncredit Vocational Training Certificates of Completion are available in the following programs:

Accounting:

Bookkeeping
Computerized
Payroll

Agricultural Sciences:

Floral Design
Horse Ranch Management
Interior Landscaping
Landscape and Park Maintenance
Landscape Equipment Technology
Landscape Irrigation
Livestock Management
Nursery Management
Park Management
Pet Science
Sports Turf Management
Tree Care and Maintenance

Business Management:

Business Management – Level 1
Business Management – Level 2
Business Management – Level 3
Human Resource Management
International Business – Level 1
International Business – Level 2
Retail Management – Level 1
Retail Management – Level 2
Retail Management – Level 3
Small Business Management – Level 1
Small Business Management – Level 2
Small Business Management – Level 3

Electronics:

Computer and Networking Technology – Level 1
Computer Systems Technology
Electronic Assembly and Fabrication
Electronic Systems Technology – Level 1
Electronic Systems Technology – Level 2
Electronic Technology
Electronics and Computer-Engineering Technology
Electronics Communications
Electronics: Industrial Systems

Health Careers:

Certified Nursing Assistant Preparation

Interior Design:

Interior Design – Level 1

Manufacturing Technology:

MasterCAM

Office Technology:

Administrative Assistant – Level 1
Administrative Assistant – Level 2
Office Computer Applications

Photographics:

Photography - Level I

Welding Technology:

Welding
Licensed Welder
Welding: Automotive Welding, Cutting
and Modification
Welding: Gas Tungsten Arc Welding
Welding: Semiautomatic Arc Welding

ACCOUNTING

Accounting – Bookkeeping

#24089

The Bookkeeping Certificate provides the student with the basic skills and knowledge for entry-level positions within the clerical/accounting field. Common duties performed in this field are posting transactions to journals/ledgers, accounts receivable, accounts payable, inventory tracking/reporting, bank reconciliation, expense reporting and account analysis. The sequence can be completed in one year, and courses are offered Fall and Spring semesters.

Certificate Requirements:

Course ID	Course Title
VOC BA07	Principles of Accounting – Financial <i>or</i>
VOC BA72	Bookkeeping – Accounting
VOC BA75	Using Microcomputers in Financial Accounting
VOC BA76	Using Microcomputers in Managerial Accounting
	<i>or</i>
VOC BA68	Business Mathematics

Accounting – Computerized

#24246

The Computerized Accounting Certificate provides the student with basic accounting skills and knowledge together with additional training in computer applications common to the accounting industry. This certificate program prepares the student for an entry-level position as a computerized accounting clerk. Common duties performed in this field are utilization of accounting software programs for posting transactions to journals/ledgers, accounts receivable, accounts payable, inventory tracking/reporting, bank reconciliation, expense reporting and account analysis.

Certificate Requirements:

Completion of Accounting – Bookkeeping Certificate

PLUS the following courses:

Course ID	Course Title
VOC BA07	Principles of Accounting – Financial <i>or</i>
VOC BA72	Bookkeeping – Accounting
VOC BA75	Using Microcomputers in Financial Accounting
VOC BA76	Using Microcomputers in Managerial Accounting
	<i>or</i>
VOC BA68	Business Mathematics
VOC CSB15	Microcomputer Applications
VOC CSB16	Macintosh Applications
VOC CSB31	Microsoft Word
VOC CSB51	Microsoft PowerPoint

Accounting – Payroll

#24074

The Payroll Certificate combines accounting skills with specialized training in payroll preparing the student for entry-level positions within the payroll segment of accounting. Common duties performed include payroll tax reporting, maintenance of payroll

accounting systems and posting payroll transactions to journals/ledgers.

Certificate Requirements:

Completion of Accounting – Bookkeeping Certificate

PLUS the following courses:

Course ID	Course Title
VOC BA70	Payroll and Tax Accounting
VOC BS75	Using Microcomputers in Financial Accounting
	<i>or</i>
VOC BA76	Using Microcomputers in Managerial Accounting

AGRICULTURAL SCIENCE

Floral Design

#24242

This sequence is offered in the evening only on campus and at off-campus locations 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.

Certificate Requirements:

Course ID	Course Title
VOC AGR25	Floral Design – 1
VOC AGR26	Floral Design – 2
VOC AGR27	Floral Design – 3

Horse Ranch Management

#24340

This certificate program is designed to give students basic skills on horse ranches and agriculture sales and services.

Certificate Requirements:

Course ID	Course Title
VOC AGN02	Animal Nutrition
VOC AGN94	Animal Breeding
VOC AGL16	Horse Production or
VOC AGL18	Horse Ranch Management
VOC AGL19	Horse Hoof Care
VOC AGL96	Animal Sanitation and Disease Control
VOC AGL97	Artificial Insemination of Livestock

Interior Landscaping

#24342

This certificate 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.

Certificate Requirements:

Course ID	Course Title
VOC AGR01	Horticultural Science
VOC AGR15	Interior Landscaping
VOC AGR24	Integrated Pest Management
VOC AGR29	Ornamental Plants – Herbaceous
VOC AGR32	Landscaping and Nursery Management
VOC AGR64	Landscape Irrigation – Drip and Low Volume

Landscape and Park Maintenance

#24113

This certificate is designed to give students basic skills in park landscape maintenance. Courses offered prepare students with skills that are appropriate for the maintenance of grounds, property or parks.

Certificate Requirements:

Course ID	Course Title
VOC AGR01	Horticultural Science
VOC AGR24	Integrated Pest Management
VOC AGR30	Ornamental Plants – Trees and Woody Shrubs
VOC AGR51	Tractor and Landscape Equipment Operations
VOC AGR63	Landscape Irrigation System Management
VOC AGR75	Urban Arboriculture

Landscape Equipment Technology

#24111

This certificate is designed to give students basic skills to seek employment in equipment repair, at golf courses, rental yards and small equipment repair shops.

Certificate Requirements:

Course ID	Course Title
VOC AGR52	Hydraulics
VOC AGR53	Small Engine Repair I
VOC AGR55	Diesel Engine Repair
VOC AGR56	Engine Diagnostics
VOC AGR57	Power Train Repair

Landscape Irrigation

#24088

This certificate is designed to give students basic skills in irrigation design, repair installation, water management and troubleshooting.

Certificate Requirements:

Course ID	Course Title
VOC AGR01	Horticultural Science
VOC AGR13	Landscape Design
VOC AGR51	Tractor and Landscape Equipment Operations
VOC AGR62	Landscape Irrigation – Design and Installation
VOC AGR63	Landscape Irrigation System Management
VOC AGR64	Landscape Irrigation – Drip and Low Volume
VOC AGR71	Landscape Construction Fundamentals

Livestock Production Management

#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.

Certificate Requirements:

Course ID	Course Title
VOC AGL14	Swine Production
VOC AGL17	Sheep Production
VOC AGL30	Beef Production
VOC AGL34	Livestock Judging and Selection
VOC AGL97	Artificial Insemination of Livestock

Nursery Production Management

#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.

Certificate Requirements:

Course ID	Course Title
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	Landscape Irrigation – Drip and Low Volume

Park Management

#24374

This certificate program is designed to give students skills required for entry level positions in park management.

Certificate Requirements:

Course ID	Course Title
VOC AGR04	Park Management
VOC AGR05	Park Facilities
VOC AGR51	Tractor and Landscape Equipment Operations
VOC AGR62	Landscape Irrigation – Design and Installation
VOC AGR63	Landscape Irrigation System Management
VOC AGR75	Urban Arboriculture

Pet Science

#24172

This certificate program is designed to give students basic skills in production and marketing of pets at the wholesale and retail level.

Certificate Requirements:

Course ID	Course Title
VOC AGN01	Animal Science
VOC AGN02	Animal Nutrition
VOC AGN51	Animal Handling and Restraint
VOC AGN94	Animal Breeding
VOC AGL96	Animal Sanitation and Disease Control
VOC AGP70	Pet Shop Management
VOC AGP71	Canine Management
VOC AGP72	Feline Management
VOC AGP73	Tropical and Coldwater Fish Management
VOC AGP74	Reptile Management
VOC AGP76	Aviculture – Cage and Aviary Birds
VOC BM66	Small Business Management

Sports Turf Management

#24075

This certificate 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.

Certificate Requirements:

Course ID Course Title

VOC AGR24	Integrated Pest Management
VOC AGR39	Turf Grass Production and Management
VOC AGR40	Sports Turf Management
VOC AGR50	Soil Science and Management
VOC AGR62	Landscape Irrigation – Design and Installation
VOC AGR63	Landscape Irrigation Systems Management

Tree Care and Maintenance

#24215

This certificate is designed to give students basic skills in the repair and maintenance of trees.

Certificate Requirements:

Course ID Course Title

VOC AGR01	Horticultural Science
VOC AGR24	Integrated Pest Management
VOC AGR30	Ornamental Plants – Trees and Woody Shrubs
VOC AGR50	Soil Science and Management
VOC AGR51	Tractor and Landscape Equipment Operations
VOC AGR75	Urban Arboriculture

BUSINESS MANAGEMENT

Business Management – Level 1

#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.

Certificate Requirements:

Course ID Course Title

VOC BM20	Principles of Business
VOC BM61	Business Organization and Management
VOC BS36	Principles of Marketing

Business Management – Level 2

#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.

Certificate Requirements:

Course ID Course Title

VOC BM20	Principles of Business
VOC BM61	Business Organization and Management
VOC BS36	Principles of Marketing
VOC BM60	Human Relations in Business
VOC BM62	Human Resource Management
VOC CSB15	Microcomputer Applications

Business Management – Level 3

#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.

Certificate Requirements:

Course ID Course Title

VOC BM20	Principles of Business
VOC BM61	Business Organization and Management
VOC BS36	Principles of Marketing
VOC BM60	Human Relations in Business
VOC BM62	Human Resource Management
VOC CSB15	Microcomputer Applications
VOC BA07	Principles of Accounting – Financial
VOC BM10	Principles of Continuous Quality Improvement
VOC BM51	Principles of International Business

Human Resource Management

#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.

Certificate Requirements:

Course ID Course Title

VOC BM20	Principles of Business
VOC BM61	Business Organization and Management
VOC BM62	Human Resource Management

International Business – Level 1

#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.

Certificate Requirements:

Course ID Course Title

VOC BM20	Principles of Business
VOC BM51	Principles of International Business
VOC BS36	Principles of Marketing

International Business – Level 2

#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.

Certificate Requirements:

Course ID Course Title

VOC BM20	Principles of Business
VOC BM51	Principles of International Business
VOC BS36	Principles of Marketing
VOC BM61	Business Organization and Management
VOC BM66	Small Business Management

**Retail Management – Level 1
#24418**

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.

Certificate Requirements:

Course ID	Course Title
VOC B025	Business Communications
VOC CSB15	Microcomputer Applications
VOC FSH62	Retail Store Management and Merchandising
<i>or</i>	
VOC BS50	Retail Store Management and Merchandising

**Retail Management – Level 2
#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 provides the student a solid foundation from which to build a career in retail management.

Certificate Requirements:

Course ID	Course Title
VOC B025	Business Communications
VOC CSB15	Microcomputer Applications
VOC FSH62	Retail Store Management and Merchandising
<i>or</i>	
VOC BS50	Retail Store Management and Merchandising
VOC BA11	Fundamentals of Accounting
VOC BM61	Business Organization and Management
VOC BM62	Human Resource Management
VOC BS36	Principles of Marketing

**Retail Management – Level 3
#24383**

Students completing the advanced Level 3 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.

Certificate Requirements:

Course ID	Course Title
VOC B025	Business Communications
VOC CSB15	Microcomputer Applications
VOC FSH62	Retail Store Management and Merchandising
<i>or</i>	
VOC BS50	Retail Store Management and Merchandising
VOC BA11	Fundamentals of Accounting
VOC BM61	Business Organization and Management
VOC BM62	Human Resource Management
VOC BS36	Principles of Marketing
VOC BA07	Principles of Accounting – Financial
VOC BM60	Human Relations in Business
VOC B026	Oral Communications for Business

**Small Business Management – Level 1
#24035**

Small business has been described as the engine of change within the economy. The Business: 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.

Certificate Requirements:

Course ID	Course Title
VOC BM20	Principles of Business
VOC BM66	Small Business Management
VOC BS36	Principles of Marketing

**Small Business Management – Level 2
#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.

Certificate Requirements:

Course ID	Course Title
VOC BM20	Principles of Business
VOC BM66	Small Business Management
VOC BS36	Principles of Marketing
VOC BM60	Human Relations in Business
VOC BM61	Business Organization and Management
VOC BM62	Human Resource Management

**Small Business Management – Level 3
#24034**

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.

Certificate Requirements:

Course ID	Course Title
VOC BM20	Principles of Business
VOC BM66	Small Business Management
VOC BS36	Principles of Marketing
VOC BM60	Human Relations in Business
VOC BM61	Business Organization and Management
VOC BM62	Human Resource Management
VOC BA07	Principles of Accounting – Financial
VOC BM10	Principles of Continuous Quality Improvement (CQI)
VOC CSB15	Microcomputer Applications

ELECTRONICS

**Computer and Networking Technology – Level I
#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.

Certificate Requirements:

Course ID	Course Title
VOC CNT50	PC Servicing
VOC CNT52	PC Operating Systems
VOC CNT54	PC Troubleshooting
VOC CNT60	A+ Certification Preparation
VOC EL11	Technical Applications in Microcomputers
<i>or</i>	
VOC CSB15	Microcomputer Applications
VOC EL50A	Electronic Circuits - Direct Current (DC)
VOC EL50B	Electronic Circuits (AC)
VOC EL56	Digital Electronics

**Computer Systems Technology
#24284**

The Computer Systems Technology curriculum encompasses advanced coursework in computer systems circuitry, including microcontrollers and microprocessors.

Certificate Requirements:

Course ID	Course Title
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	Electronics Assembly and Fabrication
VOC EL74	Microcontroller Systems
VOC TCH60	Customer Relations for the Technician

Electronic Assembly and Fabrication

#24162

This certificate prepares 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), including skills for various types of cabling and connections.

Certificate Requirements:

Course ID	Course Title
VOC EL50A	Electronic Circuits - Direct Current (DC)
VOC EL50B	Electronic Circuits (AC)
<i>or</i>	
VOC EST50	Electrical Fundamentals for Cable Installations
VOC EL61	Electronic Assembly and Fabrication
VOC EL62	Advanced Surface Mount Assembly and Rework

Electronic Systems Technology – Level 1

#24363

This certificate program provides job skills in the areas of low voltage cable and wire installations used in the telephone industry, computer networks (business and home), home theatre, home automation, and home security systems (integrated home systems). Typical job titles in these areas are data or cable technician, low-voltage wiring technician, home theatre installer, consumer electronics service technician and security system installer. Level 1 certification develops skills in electrical fundamentals, fabrication techniques, cabling and wiring standards for voice, video and data, and basic computer skills in word processing, spreadsheets, database and the Internet.

Certificate Requirements:

Course ID	Course Title
VOC EST50	Electrical Fundamentals for Cable Installations
VOC EST52	Fabrication Techniques for Cable Installations

VOC EST54	Cabling and Wiring Standards
VOC EL11	Technical Applications in Microcomputers
<i>or</i>	
VOC CSB15	Microcomputer Applications

Electronic Systems Technology – Level 2

#24416

This Level 2 certificate builds on the skills and concepts learned in level 1 and adds customer relations (soft skills) and the installation, calibration, setup, maintenance and troubleshooting of home theater systems, home automation and home security systems.

Certificate Requirements:

Completion of Electronic Systems Technology Level 1 Certificate

PLUS the following courses:

Course ID	Course Title
VOC EST50	Electrical Fundamentals for Cable Installations
VOC EST52	Fabrication Techniques for Cable Installations
VOC EST54	Cabling and Wiring Standards
VOC EL11	Technical Applications in Microcomputers
<i>or</i>	
VOC CSB15	Microcomputer Applications
VOC EST56	Home Theater and Home Automation Systems
VOC EST62	Electronic Troubleshooting – 1
VOC TCH60	Customer Relations for the Technician
VOC EST64	Electronic Troubleshooting – 2
Recommended Electives:	
VOC EST70	C-7 Low Voltage Systems License Preparation
VOC EL61	Electronic Assembly and Fabrication
VOC EL62	Advanced Surface Mount Assembly and Rework

Electronics Technology

#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.

Certificate Requirements:

Course ID	Course Title
VOC EL11	Technical Applications in Microcomputers
VOC EL12	Computer Simulation/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	Electronics Assembly and Fabrication
VOC TCH60	Customer Relations for the Technician

Electronics and Computer - Engineering Technology

#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.

Certificate Requirements:

Course ID	Course Title
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 Circuits
VOC EL54A	Industrial Electronics
VOC EL54B	Industrial Electronic Systems

VOC EL55	Microwave Communications
VOC EL56	Digital Electronics
VOC EL61	Electronics Assembly and Fabrication
VOC EL74	Microcontroller Systems
VOC TCH60	Customer Relations for the Technician
Recommended Electives:	
VOC EL62	Advanced Surface mount Assembly and Rework
VOC EL76	FCC General Radiotelephone Operator License Preparation

Electronics Communications

#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.

Certificate Requirements:

Course ID	Course Title
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 Circuits
VOC EL55	Microwave Communications
VOC EL56	Digital Electronics
VOC EL61	Electronics Assembly and Fabrication
VOC TCH60	Customer Relations for the Technician

Electronics: Industrial Systems

#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.

Certificate Requirements:

Course ID	Course Title
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	Electronics Assembly and Fabrication
VOC TCH60	Customer Relations for the Technician

HEALTH CAREERS

Certified Nursing and Acute Care Nursing Assistant

#24400

This certificate program will prepare participants to work in both long-term and acute care facilities thus providing entry level, diverse, work opportunities in the ever growing health care field. For those planning on entering LVN or RN programs, course content may increase chances for successful admission and completion of nursing program curriculum.

These courses meet the requirements for California state certification as a CNA. The program incorporates processing of the state application and administration of the NATAP test with same day official test results for the written and manual skills examination. Verification of successful passing of the NATAP test permits immediate eligibility for employment.

All coursework can be completed within 11 weeks. Offered in Fall or Spring semesters

Participants must

- provide their own transportation and be at least 16 years of age or have a work permit
- be able to meet expenses and responsibilities incurred as part of this program.
- demonstrate proficient English/ESL verbal and written communication skills to take written exams, communicate with clients and maintain a safe clinical environment

Certificate Requirements:

Course ID	Course Title
VOC HTH01	Certified Nursing Assistant
VOC HTH04	Acute Care Nursing Assistant
VOC HTH05	Health Careers Resource Center Certified Nurse Assistant (CNA) Course Completion Only VOC HTH 01

VOC HTH 01 is offered for "course completion only" during the Winter and Summer Intersessions. This course provides for employment in long term care only.

For further information, please contact the Health Careers Resource Center, (909) 274-4788.

INTERIOR DESIGN

Interior Design – Level 1

#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.

Certificate Requirements:

Course ID	Course Title
VOC ID10	Introduction to Interior Design
VOC ID12	Materials and Products for Interior Design
VOC ID14	History of Furniture and Decorative Arts

MANUFACTURING TECHNOLOGY

MasterCAM

#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.

Certificate Requirements:

Course ID	Course Title
VOC MF11	Manufacturing Processes I
VOC MF38	MasterCAM I
VOC MF38B	Advanced MasterCAM
VOC MF85	Manual CNC Operations

OFFICE TECHNOLOGY

Administrative Assistant – Level I

#24061

Prepares students for entry-level clerical positions where keyboarding is the primary function.

Certificate Requirements:

Course ID	Course Title
VOC B005	Business English
VOC CS11	Computer Keyboarding
VOC CSB15	Microcomputer Applications
VOC CS41	Office Management Skills

Administrative Assistant – Level 2

#24066

This Level 2 certificate prepares students for clerical positions where, in addition to general office skills, written communication and advanced word processing skills are needed.

Certificate Requirements:

Course ID	Course Title
VOC B005	Business English
VOC CS11	Computer Keyboarding
	<i>or</i>
VOC CSB15	Microcomputer Applications
VOC CS41	Office Management Skills
VOC B025	Business Communications
VOC CSB31	Microsoft Word

Office Computer Applications

#24410

This certificate in Office Computer Applications is customized to meet the needs of the entry-level adult student or professional, who is seeking to acquire an array of office computer skills required in a computerized office environment.

Certificate Requirements:

Course ID	Course Title
VOC CPBC1	Basic Computing – Level 1
VOC CPBC2	Basic Computing – Level 2
VOC CPBC3	Basic Computing – Level 3
VOC CPNET	Internet Research – An Introduction
VOC CPCC	Creative Computing

PHOTOGRAPHICS

Photography - Level I

#24245

This certificate program is designed to prepare students for employment in the field of photography and offers the core skills necessary as an entry-level Photography Assistant.

Certificate Requirements:

Course ID	Course Title
VOC GRP10	Photoshop Imagery
VOC PH010	Basic Digital and Film Photography
VOC PH011	Intermediate Photography
VOC PH016	Fashion Photography
	<i>or</i>
VOC PH018	Portraiture and Wedding Photography
VOC PH020	Color Photography

Recommended Electives: The Photographics faculty recommends that you complement your studies with selected elective courses listed below. You should meet with a professor of Computer Graphics Design/Photography to help you determine which electives would best suit your career plans.

VOC PH001	Laboratory Studies: Black and White Photography
VOC PH015	History of Photography

WELDING TECHNOLOGIES

Welding

#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.

Certificate Requirements:

Course ID Course Title

VOC WL40 Introduction to Welding

VOC WL70A Beginning ARC Welding

Note: Any higher level welding course may be substituted for VOC WL 70A.

VOC WL70B Intermediate ARC Welding

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.

VOC WL60 Print Reading and Computations for Welders

VOC WL70C Certification for Welders

Licensed Welder

#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.

Certificate Requirements:

Course ID Course Title

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 Welding

VOC WL80 Fabrication and Construction Welding

VOC WL81 Pipe and Tube Welding

Welding: Automotive Welding, Cutting & Modification

#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.

Certificate Requirements:

Course ID Course Title

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 Welding

VOC WL80 Fabrication and Construction Welding

VOC WL81 Pipe and Tube Welding

VOC WL91 Automotive Welding, Cutting and Modification

Welding: Gas Tungsten Arc, Welding

#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.

Certificate Requirements:

Course ID Course Title

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 Welding
VOC WL80 Fabrication and Construction Welding
VOC WL81 Pipe and Tube Welding
VOC WL90A Gas Tungsten ARC Welding

Welding: Semiautomatic Arc, Welding

#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.

Certificate Requirements:

Course ID Course Title

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 Welding

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VOC WL90B Semiautomatic ARC Welding Process

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BASIC SKILLS**BS ABE01 — Career Information and Guidance**

Orientation to the college including enrollment procedures, test score interpretation, course selection, and career information. Course includes academic placement tests and/or vocational assessments available.

BS ABE02 — Adult Basic Education

Improves basic skills of adult learners. Content includes reading comprehension, language, and mathematics. Prepares students for the General Education Development (GED) Exam and the Armed Services Vocational Aptitude Battery (ASVAB) exam.

BS ABE03 — Adult Basic Education--Leadership Development

Leadership styles and individual leadership skills including effective communication, facilitation, problem-solving, decision-making and conflict resolution. Introduction to organizational structures, governance, models and group process.

BS ABE04 — Guidance and Orientation to Special Programs

Provides an overview of special programs at Mt. San Antonio College. Information regarding the College's mission, program guidelines, regulations, and eligibility requirements are presented.

BS ABE05 — Career Development

Career assessment, research and preparation; investigates career fields to determine interest; provides information on required skills and areas for professional growth. Includes assigned time for field investigation, individual assessment and skill building.

BS ABE06 — Basic Skills Foundation

Preparation for college credit courses. Improves reading, mathematics, writing, and critical thinking by assessing current skills. Includes individual education plan to achieve career and educational goals.

BS ABE07 — Re-Entry Work Skills Needed for Today's Workforce

Development of skills necessary for employment. Topics include workplace ethics, job search techniques, resume writing and preparing for an interview.

BS ASVAB — ASVAB Preparation (Armed Services Vocational Aptitude Battery)

General knowledge in five of the ten areas of the Armed Services Vocational Aptitude Battery (ASVAB) exam; general science, word knowledge, paragraph comprehension, arithmetic reasoning, and math knowledge, test preparation skills.

BS CNSL5 — Career/Life Planning

A systematic approach to self-exploration and career/life planning which includes: identification of values, interests, skills, and self-management style. Development of decision-making and goal-setting skills and identification of barriers to success. Explores careers and job search techniques.

BS GEDMA — GED Preparation: Mathematics

Improve mathematical knowledge and skills in preparation for the Math section of the General Education Development (GED) exam. Test areas include number operations, geometry, statistics and algebra.

BS GEDRD — GED Preparation: Language Arts, Reading

Improve comprehension and reading knowledge and skills in preparation for the Language Arts: Reading section of the General Education Development (GED) exam. Poetry, fiction, nonfiction, drama, art reviews and workplace documents.

BS GEDSC — GED Preparation: Science

Improve scientific knowledge and skills in preparation for the Science section of the General Education Development (GED) exam. Test areas include physics, chemistry, life science, earth science and astronomy.

BS GEDSS — GED Preparation: Social Studies

Improve historical knowledge in preparation for the social studies section of the General Education Development (GED) exam. Test areas include United States history, world history, geography, government and economics.

BS GEDWR — GED Preparation: Language Arts, Writing

Improve organizational and grammatical knowledge and skills in preparation for the Language Arts: Writing section of the General Education Development (GED) exam. Test areas include paragraph organization, sentence structure, usage, grammar mechanics and essay development.

BSHS ALG1 — High School Algebra 1

Use of symbolic reasoning and calculations with symbols as applied to solving and 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

Key components of second year algebra. Expands on basic algebra and geometry concepts, including solutions of quadratic equation 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, and the complex number system. 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 & Creative Expression

Artistic perception, creative expression, and aesthetic value of art for high school students. Historical and cultural influences. Original productions through design and drawing 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 ART2 — High School - Art 2

Artistic perception, creative expression, and aesthetic valuing through experiences with art for high school students. Historical and cultural context of the visual arts. Original productions in design and drawing 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

Fundamental areas of life science for high school students. Characteristics of living things, simple organisms, plants, animals, human biology, cell biology, physiology, genetics, heredity, adaptation, evolution and ecology. 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

Chemistry for high school students. Includes atomic and molecular structure, chemical bonds, conservation of matter and stoichiometry, bases and their properties, acids and bases, solutions, chemical thermodynamics, reaction rates, chemical equilibrium, organic chemistry and biochemistry 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 School Civics/American Government

Civics and government for high school students. Includes the 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

Fundamental computer concepts, keyboarding skills, Internet applications, word processing, multi-media presentations, spreadsheets and electronic publishing. Application of technology in the educational and workplace settings. Includes file-management and appropriate technology use in a network environment as well as copyright law and safety. 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

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 ECON — High School - Economics

General economic practices including: scarcity and choice, opportunity, cost 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 EELA — CAHSEE Prep: English Language Arts

Examination preparation for the reading and writing portions of the California High School Exit Exam. Supports progress toward a high school diploma or equivalent.

BSHS EEMA — CAHSEE Math Prep

Preparation for the mathematics portion of the California High School Exit Exam. Supports progress toward a high school diploma or equivalent.

BSHS ENG1 — High School - English 1

Foundations of literature using a variety of genres and theme experiences; analysis of works based on themes. Writing, editing and critical thinking skills; vocabulary, concept development, grammar and writing mechanics. Supports progress towards 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

Expands on the foundations of literature from English 1 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

Foundations of literature through American literature using the 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

Foundations of literature through 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

Patterns and processes that have shaped human understanding, use and alteration of earth's surface; spatial concept 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

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 Education

Increases high school students' awareness of health issues, includes healthy behavior vs high-risk behavior; how health issues impact the community and environment. Uses skill-building approach that includes decision-making, role modeling, critical analysis, and goal-setting toward a healthy lifestyle. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS INMA1 — High School – Integrated Math 1

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 KEY — High School - Typing/Keyboarding

Develops the skill of keyboarding for high school students. Emphasis will be placed on learning alphabetic and numeric keys by touch using appropriate techniques. Students will build on basic skills to improve speed and accuracy in order to create, format and edit a variety of documents. 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

Historical, cultural and genre-based aesthetic valuing of music for high school students. Vocabulary, interaction of words and music, influence of religion, theater, government and culture on musical style. 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

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

Compliments existing school guidance and planning activities and motivates high school students to utilize those resources to their best advantage. Covers the challenges faced by students at the end of high school careers. 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

Preparatory course for first year algebra. Review of basic mathematic skills and the basic principles of algebra. Supports progress toward a high school diploma or equivalent. From 1-10 high school credits can be earned in 15-hour modules.

BSHS PSY — High School Psychology

Methods, facts and theories of the behavior and processes of human beings and animals. 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

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

Concepts and theories of social interaction. 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, Conversation and Writing

Fundamentals of Spanish language. Communication about self and immediate environment using simple sentences and phrases. 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

Intermediate Spanish. 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 SSK — High School - Study Skills

Effective work habits in preparation for the school or work environment. Basic approaches to organization skills, effective 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 United States History

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

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 WRIT1 — Literature and Writing Fundamentals 1

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

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.

BSHS WREX — High School Expository Writing

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.

BS LANG1 — Language Skills Laboratory

Designed for ESL students either enrolled in a ESL class or awaiting admission, to enhance pronunciation, listening, writing and comprehension skills. Also open to AMLA, Foreign Language, American Sign Language students to enhance skills in the primary target language.

BS LANG2 – ESL Computer/Language Skills Lab

Enhance student's communication skills by providing access to the internet, thereby completing assignments for courses offered throughout the college.

BS LRN01 — Short Term Review

Intensive review in the following subjects: reading, comprehension, vocabulary, grammar, basic math, pre-algebra, and algebra. Computer programs, instructional materials, and individual assistance are provided.

BS LRN03 — Math Skills Review

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

Increase typing and ten-key speed using computer software. Includes current word processing, spreadsheet, database software, keyboarding techniques, including correct posture; introduction to e-mail and the Internet; time management, decision-making, problem-solving and creative thinking.

BS LRN50 — Learning Support Laboratory

Learning and workplace skills are enhanced by computer use and instruction for students enrolled in or seeking enrollment in a college instructional program.

BS LRN72 — Reading Acceleration

Provides instruction and practice in techniques of reading acceleration and variable reading speeds. Students who repeat will improve reading speed and comprehension rates.

BS LRN76 — Improving Reading Comprehension

Prepares students for reading informational materials. Topics include spelling, reading comprehension, dictionary usage and how to read a textbook.

BS LRN81 — Improving Writing

Offers assistance to students who wish to improve prewriting, writing, editing and revising. Provides instruction in content and structure of sentences, paragraphs and essays; emphasizes development in writing through the integration of grammar and critical thinking.

BS MTH01 — Developmental Mathematics Concepts and Application

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 STD80 – Foundations for Academic Success

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 WRT2 — Basic Writing Skills Development - Basic Skills Development in Reading and Writing

Enhance basic skills in reading and writing, via the use of computer-assisted learning, e-mail and on-line tools.

BS TR01 — All Subject Tutoring

Assistance in basic English and mathematics skills through tutoring and computer-based learning. Tutorial assistance in other subject areas is also available.

BS TR02 — Tutoring Techniques

Explores learning theories and tutoring techniques for tutoring individuals and small groups. Emphasis is placed on encouraging independent learning.

CITIZENSHIP

CITZ NAT — Citizenship for Naturalization

Intermediate and advanced students prepare for the interview for United States citizenship.

DISABLED STUDENTS

DSPS ELL01 — Lifelong Learning for the Special Needs Population

Educational activities for special needs students emphasizing physical, cognitive, social and emotional skill development.

DSPS ESL25 — Language Development for Deaf Students in ASL and ESL

Language development for Deaf and hard-of-hearing students. Includes written English, ESL and ASL.

DSPS ESL26 — Language Enhancement for Deaf Students in ASL and ESL

Language enhancement for Deaf or hard-of-hearing students. Intermediate skills in written ASL and ESL.

DSPS LRND1 — Clinical Speech Instruction

Designed to accommodate individual and group instruction for adults with speech and/or learning problems. Includes individual evaluation and speech improvement plan. Disorders addressed include phonology, fluency, voice and resonance, hearing impairment, cerebral vascular accident and acquired brain injury. Instruction is not available for students with dialectal problems.

DSPS LRND2 — High Tech Center Tutorial/Assistance Class

Advisory Prerequisite: Students must be referred by a counselor in Disabled Student Programs and Services (DSP&S) in order to register for this class. This class is for students with identified disabilities to utilize adaptive hardware and software in the High Tech Center that will assist them in succeeding in other courses. Through technology provided by the HTC, student will be given support, additional resources, assistance and strategies to succeed in their other classes. This class is designed as a transition or resource class for students eligible or nearing eligibility to advancement into other Mt. SAC courses.

DSPS LRND3 — Adaptive Academic Preparation

Note: Students must see a Brain Injury Specialist in Disabled Student Programs and Services (DSP&S) and have acquired their injury after the age of 12 in order to be evaluated for the Brain Injury Program prior to registration for this class.

Designed for students who have been accepted into the Brain Injury Program at Mt. SAC. Includes specialized instruction and the use of computer software to improve cognitive skills (attention, memory, reasoning, etc.) needed for academic and/or vocational goals.

ENGLISH AS A SECOND LANGUAGE

ESL DEAF1 — ESL for the Deaf and Hard of Hearing – Level 1

Foundations of English as a Second Language (ESL) and American Sign Language (ASL) for communication with the Deaf or Hard of Hearing.

ESL DEAF2 — ESL for the Deaf and Hard of Hearing – Level 2

Developing English as a Second Language (ESL) and American Sign Language (ASL) for communication, promotion of study skills, and career advancement.

ESL LANG2 — ESL Computer and Language Skills Lab

English language through reading, writing, listening, pronunciation, grammar review and practice tests using various software programs

ESL LANG3 — English for Specific Uses (ESL)

Advanced ESL students improve speaking, writing, vocabulary and SCANS competencies related to vocations. Includes critical thinking, customer service, teamwork and autonomous learning strategies.

ESL LVL1 — ESL - Level 1

Beginning to low English students build vocabulary, grammar and communication skills.

ESL LVL2 — ESL - Level 2

High beginning English students build upon their base of vocabulary and improve grammar understanding through practice of listening, speaking, reading and writing skills. Students work independently and in groups to develop projects and make presentations that are meaningful to them.

ESL LVL3 — ESL - Level 3

Low intermediate level students improve English communication and grammar through practice of listening, speaking, reading and writing skills. Activities include team projects, presentations and exams in preparation for academic/vocational success and encourage civic participation.

ESL LVL4 — ESL - Level 4

High intermediate level students improve English communication and grammar through practice of listening, speaking, reading and writing skills. Activities include team projects, presentations and exams, in preparation for academic/vocational success and encourage civic participation.

ESL LVL5 — ESL - Level 5

Low advanced level students improve English communication and grammar understanding through practice of listening, speaking, reading and writing skills. Activities include team projects, presentations and exams in preparation for and academic/vocational success and encourage civic participation.

ESL LVL6 — ESL - Level 6

High advanced level students improve English communication skills and prepare to transition into academic, vocational programs, or general community classes. Activities include teamwork, projects, presentations and exams to ensure life-long learning, civic participation and overall success.

ESL PLVL1 — ESL - Pre-Level 1

Literacy-level English students build a base of vocabulary and grammar through practice of listening, speaking reading and writing skills.

ESL SPKA — ESL - Speaking A

Beginning level students develop English listening comprehension and speaking fluency. Activities include talking in small groups or with partners, listening and responding to simple conversations, short presentations and pronunciation practice.

ESL SPKB — ESL - Speaking B

Intermediate level students improve English oral proficiency in areas of pronunciation, listening comprehension and speaking skills. Through group discussions and short presentations, students practice speaking with clarity and fluency, present their ideas and opinions, and make cultural comparisons.

ESL SPKC — ESL - Speaking C

Advanced level students expand listening and speaking strategies to facilitate academic preparation, workplace advancement and civic participation. Focus is on fluency, grammatical accuracy and appropriate social register. Activities include use of authentic material in group tasks and class presentations.

ESL SPKP1 — ESL Speaking A for Beginners (Pre-1)

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

Advanced ESL students improve grammar, speaking and writing in preparation for standardization tests such as TOEFL.

ESL VHLTH — English As A Second Language for Health Professionals

Advanced ESL students improve medical vocabulary and English skills for healthcare situations.

ESL WRTA — ESL Writing - A

Beginning level students develop reading and writing skills that set the foundation for their English literacy. Material is based on familiar topics and American customs. Focus is on vocabulary expansion, introduction to reading passages, and accuracy in sentence-level writing.

ESL WRTB — ESL Writing – B

Intermediate level students improve English reading and writing proficiency through a variety of reading material and writing topics. Students gain fluency and confidence through abridged book reports, process writing and peer editing, primarily at the paragraph level.

ESL WRTC — ESL Writing - C

Advanced level students expand English reading and writing proficiency through a range of genres. American-style process writing is practiced in order to facilitate academic preparation and workplace advancement. Focus will be on interpretation of authentic material and development of editing strategies.

ESL WRTP1 — ESL Writing A for Beginners (Pre-1)

Reading and writing skills that set the 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.

OLDER ADULTS

OAD BHTH1 — Brain Health 1

Critical thinking and cognitive skills through understanding key structures and functions of the brain. Particular focus on auditory processing.

OAD BHTH2 — Brain Health 2

Age-related cognitive decline and preventative measures to strengthen and improve brain function. Particular focus on visual processing.

OAD ELLO4 — Lifelong Learning for Older Adults

Improve and/or maintain the mental fitness of the older adult through educational activities promoting critical thinking skills. Students will be presented with mental exercises and intellectual stimulation to enhance cognitive skills.

OAD ELLO5 — Lifelong Learning Through Current World Events

Presents current events in a variety of ways to provide education about local, national and world issues to promote mental fitness of the older adult.

OAD FNA03 — Oil Painting

Provides the fundamental principles of drawing, design, color and composition for oil painting. Emphasis will be on creative expression to develop primary skills and techniques for oil painting as they relate to composition and technique. Students will receive a supply list at the first class meeting.

OAD FNA04 — Watercolor Painting

The fundamental principles of watercolor painting. Emphasis will be on creative expression to develop primary skills for watercolor painting as they relate to composition and technique. Students will receive a supply list at the first class meeting.

OAD FNA32 — Drawing - Beginning Through Advanced

Drawing while emphasizing the development of perceptual and technical skills. Students will advance their abilities in dry and fluid media while expanding their use of the formal elements and principles. The development of works of art will utilize observation of single objects, still life, and landscape for representation and expression. Students will receive a supply list at the first class meeting.

OAD MOX01 — Health Aging

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

Healthy aging, including diet, nutrition, disease prevention, and application of Tai Chi principles to maintain health while aging.

OAD MOX04 — Healthy Aging – Principles of Posture and Flexibility

Healthy aging, including diet, nutrition, disease prevention, and application of Yoga principles to maintaining health while aging.

OAD MOX06 — Healthy Aging – Principles of Aquatic Resistance

Healthy aging, including diet, nutrition disease prevention, and application of aquatic resistance principles to maintain health while aging.

OAD MOX11 — Fall Prevention: Balance and Mobility

Addresses, particularly for older adults, the risks and fears associated with falling. Includes setting realistic goals, minimizing environmental risks and balance exercises.

VOC ESD02 — Production of Boutique Craft for Retail Sales

Prepares the student to create individual designs for mass production and/or one-of-a-kind crafts. Marketing, pricing, cost analysis and proper care of equipment included. Students will receive a supply list at the first class meeting.

VOC ESD03 — Lettering Styles and Advertising Calligraphy

Presents styles of calligraphy as they are used in the arts, media, and advertising fields. Includes proper placement and proper size of lettering styles and emerging technology.

VOC ESD05 — Intermediate Ceramic Productions

Includes the techniques used to create finished ceramic pieces; including the art of chalking on ceramics in the bisque form and wood surfaces by using oil based stains, metallic stains, colored creams, rubs and metallic and bronze finishes. Finalizing some pieces with electrical parts and mounting on wood bases will be considered. Discusses proper equipment usage and maintenance. Marketing and cost analysis will be covered. Students will receive a supply list at the first class meeting.

VOC ESD06 — Craft Painting for Business Opportunities

Paint on various surfaces including fabric, glass, wood, plaster and plastic. Includes product design, marketing and proper use of equipment and maintenance and emerging technology.

VOC ESD07 — Handcrafted Needlework for Retail Sales and Boutiques

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

Design and construct wire-worked jewelry using beads & stones with various methods of wire wrapping, coiling, hammering and emerging technology.

VOC ESD09 — Sewing and Design

Basic sewing techniques for the older adult population, including basic tailoring, pattern reading, cutting and style design to construct professional-looking garments.

VOC ESD10 — Beginning Decorative Art Production for Retail Sales

Introduction to decorative painting and associated mediums for the older adult population, including 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

Intermediate tole art brush strokes on a variety of surfaces using acrylic paints, associated mediums and emerging technology to create finished products for the older adult population.

VOC ESD15 — Jewelry/Lapidary Production Design

Jewelry making, stone cutting, polishing and lapidary work and emerging technology for the older adult population.

VOC HBBUS — Starting a Home-Based Business

Starting a home-based business to become self-employed. Includes basic marketing, finance and management skills.

OCCUPATIONAL ADMINISTRATIVE JUSTICE

VOC ADJ01 — The Administration of Justice System

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

Roles and responsibilities of each segment of the justice system; additional focus on relationships between system segments and sub-system procedures from initial incident to final disposition.

VOC ADJ03 — Concepts of Criminal Law

Provides an overview of California criminal law from the perspective of the law enforcement officer.

VOC ADJ04 — Legal Aspects of Evidence

Criminal evidence, including admissibility, witness competency, privileged communication, hearsay and collection and preservation of evidence.

VOC ADJ05 — Community Relations

A comprehensive exploration of community problems designed for individuals in public service with major emphasis on community-oriented policing. Reviews public service image, diversity issues, human relations and reactions, crisis areas and confrontations with the public.

VOC ADJ06 — Concepts of Enforcement Services

Responsibilities, techniques and methods of police patrol with emphasis on the basic knowledge required in handling common police occurrences.

VOC ADJ13 — Concepts of Traffic Services

Traffic management, collision reconstruction, collision factors including law violations and human factors, collision evidence, traffic enforcement techniques and specialization in traffic management. Emphasis is placed on service to the motoring public.

VOC ADJ20 — Principles of Investigation

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.

VOC ADJ38 — Narcotics Investigation

Investigation and arrest techniques for drug enforcement. Drug effects, use of informants, amendment issues and handling of evidence.

VOC ADJ59 — Gangs and Corrections

Exploration of contemporary street and prison gang issues, including historical and current perspectives, prison gang dynamics, identification of characteristics, cultural differences of gang philosophy. Includes law enforcement/corrections role in intervention/suppression.

VOC ADJ68 — Administration of Justice Report Writing

Techniques for proper documentation of crime reports and related law enforcement records. Use of simulations and role-playing.

VOC ADJ74 — Vice Control

Code and case law dealing with vice; detection and suppression; apprehension and prosecution of violators; special consideration of laws dealing with gambling, prostitution, and sex crimes.

OCCUPATIONAL AGRICULTURAL SCIENCE

VOC AGG01 — Food Production, Land Use and Politics - A Global Perspective

Surveys the world's food producing systems in terms of economic, political and cultural forces. Emphasizes ethical, sustainable food producing agriculture.

VOC AGN01 — Animal Science

Fundamental problems and essential concepts of animal production. Includes the study of the types of domestic animals and their utilization by humans.

VOC AGN02 — Animal Nutrition

Composition of feeds and their utilization by domestic animals, including digestive physiology, animal assessment, feed appraisal and compiling of rations.

VOC AGN51 — Animal Handling and Restraint

This course will cover the methods of properly handling large and small animals and will include chemical and physical techniques of restraint.

VOC AGN94 — Animal Breeding

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 AGL12 — Exotic Animal Management

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 AGL14 — Swine Production

Swine enterprises and the ways and means of entering them. Swine management, including handling, feeding, breeding, farrowing, butchering, and marketing. Practical skills are taught using the college farm.

VOC AGL16 — Horse Production

Selection, utilization, and management of the light horse emphasizing recreational aspects of the modern horse. Laboratory work includes actual experience in the care of horse and tack.

VOC AGL17 — Sheep Production

Various types of sheep enterprises and the ways and means of entering them. Includes class, laboratory and project work concerning all phases of sheep management, sheep handling, feeding, shearing, breeding, lambing and marketing. Practical skills taught on the school farm and sheep farms in the area.

VOC AGL18 — Horse Ranch Management

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 AGL19 — Horse Hoof Care

Emphasizes proper horse hoof care; shoeing, trimming and disease recognition and control.

VOC AGL20 — Horse Behavior and Training

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.

VOC AGL30 — Beef Production

Principles and practices in the selection and management of feeder, market and breeding beef cattle. Economics of production, utilization of farm-grown feeds, and feedlot operations will be stressed.

VOC AGL34 — Livestock Judging and Selection

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.

VOC AGL96 — Animal Sanitation and Disease Control

Prevention and control of infectious diseases affecting domestic animals, including basic disease concepts, transmissions of infectious diseases, principles of sanitation and fundamentals of immunology.

VOC AGL97 — Artificial Insemination of Livestock

Theory and application of artificial insemination of domestic animals, including semen evaluation and processing, heat synchronization and pregnancy diagnosis.

VOC AGR-G — Home Gardening

Includes lectures, demonstrations and hands-on experience in organic gardening, indoor plants, introduction to bonsai, fruit orchards, traditional gardening and information on pesticides. The study of design, propagation methods, pruning, fertilizing, and a general understanding of horticulture will be included.

VOC AGP70 — Pet Shop Management

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 AGP71 — Canine Management

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, training and grooming of dogs.

VOC AGP72 — Feline Management

Care and management of cats. Includes breed identification and characteristics, grooming, showing, nutrition, practical care, behavior, breeding and housing.

VOC AGP73 — Tropical and Coldwater Fish Management

Care and keeping of marine and freshwater aquarium fishes, plants and invertebrates. Includes guidance on setting up aquariums, choosing compatible species, feeding, health care, breeding and raising fish.

VOC AGP74 — Reptile Management

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 AGP76 — Aviculture - Cage and Aviary Birds

Presents cage and aviary birds marketed in the wholesale and retail pet trade, including identification, nutrition, breeding, disease prevention and control, aviary construction and providing the proper environment. Includes information on psittacines, soft bills, finches, game birds, poultry and ornamental waterfowl.

VOC AGR01 — Horticultural Science

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.

VOC AGR02 — Plant Propagation/Greenhouse Management

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 spring and division. Stresses greenhouses and other environmental structures for plant propagation and production.

VOC AGR04 — Park Management

Management and operation of municipal park departments. Includes the development of budgets, purchasing, park policies, planning and scheduling.

VOC AGR05 — Park Facilities

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

Fundamentals and implementation of landscape design. Principles of design, the design process, drafting, graphics, site evaluation, landscaping materials, and plant usage. Projects emphasize residential and small commercial sites.

VOC AGR15 — Interior Landscaping

Design, Installation and maintenance practices used in interior landscaping. Includes identification, culture and care of plants suitable for interior use. Field trip required.

VOC AGR24 — Integrated Pest Management

Identifies common agricultural pests in Southern California and analyzes physical, biological and chemical pest control principles and practices. Stresses use, safety, equipment, laws, and regulations of pesticides.

VOC AGR25 — Floral Design 1

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

Contemporary design theory emphasizing creativity, self-expression and professional design situations.

VOC AGR27 — Floral Design 3

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

Identification, growths 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.

VOC AGR30 — Ornamental Plants - Trees and Woody Shrubs

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.

VOC AGR32 — Landscaping and Nursery Management

Operation and management of wholesale and retail nurseries. Includes site location and layout of areas; greenhouse management; soil mixes and proper use of fertilizers, insecticides, fungicides, herbicides and growth regulators; irrigation; mechanization; financing; personnel management; retail displays, advertising and customer relationships; federal, state and local laws and regulations. Field trips are included.

VOC AGR39 — Turf Grass Production and Management

Introduction to cultivation, maintenance and management of turf grasses utilized for athletic fields, golf courses, parks, cemeteries, commercial and residential lawns. Identification, installation, cultural requirements and maintenance practices are emphasized.

VOC AGR40 — Sports Turf Management

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 are included.

VOC AGR50 — Soils Science and Management

Principles of proper soil management to optimize plant growth, including management of air, water, nutrients and organic matter. Physical and chemical properties of soil that govern soil reactions and interactions. Field trips are included.

VOC AGR51 — Tractor and Landscape Equipment Operations

Selection, operation, repair and maintenance of power equipment used in the landscape industry. Includes 2WD and 4WD tractors, skip loader, skid steer loader, backhoe, lawnmowers, edgers, weed eaters, blower/vacuum, rotatillers, chainsaws, spraying equipment and all-terrain vehicles. Laboratory includes actual hands-on applications of this equipment.

VOC AGR52 — Hydraulics

Operation, maintenance and repair of hydraulic systems used on agriculture and industrial equipment. Emphasis: pumps, valves, cylinders, flow control, reservoirs, lines, motors and hydrostatic transmissions. Laboratory provides hands-on application of hydraulic systems.

VOC AGR53 — Small Engine Repair 1

Principles and repair of small engines used in landscape, industrial and agricultural applications. Includes repairs of lawnmowers, chainsaws, 2-cycle engine, 4-cycle engine, spraying equipment, all-terrain vehicles, and other related gas-powered equipment.

VOC AGR55 — Diesel Engine Repair

Repair and maintenance of diesel engines used to power industrial, landscape and agricultural equipment. Students gain actual hands-on experience maintaining, servicing and repairing diesel engines.

VOC AGR56 — Engine Diagnostics

Analysis and evaluation of tractor power failure. Students gain actual experience in the proper diagnostic procedures of power equipment. Service, maintenance and repair of tractor electrical systems: electrical wiring, voltage regulators, generators, alternators, switches, gauges, batteries and test equipment.

VOC AGR57 — Power Train Repair

Service, maintenance and repair of power trains. Students gain experience with clutches, transmissions, differentials, power take-off units, and final drive used to transmit power on tractors and other outdoor power equipment.

VOC AGR62 — Landscape Irrigation - Design and Installation

Design and application of turf and ornamental irrigation systems. Design techniques, sprinkler system components and hydraulic principles used in nursery management, interior design, residential and commercial landscaping. Special emphasis is given to water conservation incorporating controlled flow technologies.

VOC AGR63 — Landscape Irrigation Systems Management

A systematic approach to water conservation in the landscape. Repair techniques that will allow a current system to efficiently operate to its initial design. Trouble-shooting procedures including field testing of valves and controllers. Irrigation efficiency testing will be incorporated to demonstrate proper methods of water audits and system.

VOC AGR64 — Landscape Irrigation - Drip and Low Volume

Conservation of water in the landscape 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. Students will gain hands-on experience in design and installation techniques.

VOC AGR71 — Landscape Construction Fundamentals

Fundamentals of construction techniques and tools used in landscaping. Students will gain skills in construction projects that include surveying techniques, utilities (gas, water, electricity), woodworking and masonry.

VOC AGR72 — Landscape Hardscape Applications

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

Landscape laws, contracting and estimating as they pertain to landscape construction. Information covered will be helpful for Landscape Contractor's (C-27 classification) licensing exam administered by the state of California. Students gain hands-on experience of contracting and running a business.

VOC AGR75 — Urban Arboriculture

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 exams.

OCCUPATIONAL ARCHITECTURAL TECHNOLOGY

VOC ARC11 — Architectural Drawing

Basic graphic and drawing techniques, including architectural graphics, building construction fundamentals, and methods of drawings considered prerequisite to architectural design.

VOC ARC16 — Basic CAD and Computer Application

Basic CAD (Computer Aided Design and Drafting) and computer application in architecture, engineering and related fields (including basic word processing, spreadsheet, CAD and presentation applications). Students who repeat this course will improve skills through further instruction and practice.

VOC ARC18 — Architectural CAD and BIM

Intermediate CAD (Computer Aided Design and Drafting) specifically for architectural design and production. Portfolio of 2-D drawings and 3-D CAD models will be produced.

VOC ARC26 — Architectural CAD Illustration and Animation

Advanced architectural CAD drawings. Portfolio of working drawing and presentation applications of integrated 2-D and 3-D CAD models will be produced. Students who repeat this course will improve skills through further instruction and practice.

VOC ARC28 — Architectural CAD 3-D Illustration and Animation

Intermediate to advanced architectural CAD in 3-D illustration, rendering and animation. Virtual "walk-through" and "fly-through" of interior/exterior 3-D models with photo-realistic materials and lighting will be produced. Students who repeat this course will improve skills through further instruction and practice.

OCCUPATIONAL BUSINESS

VOC BA07 — Principles of Accounting - Financial

Introduction to financial accounting which provides the foundation for continued coursework in accounting. Includes accounting concepts and techniques essential to the administration of a business enterprise, analyzing and recording financial transactions, accounting valuation and allocation practices and the preparation, analysis and interpretation of financial statements. Gives the student the tools and methods needed for decision making.

VOC BA11 — Fundamentals of Accounting

Accounting vocabulary and theory, equations to solve word problems, percentages, simple and compound interest, payroll, business taxes, present value, investments, inventory, depreciation, financial statement analysis and ratios.

VOC BA68 — Business Mathematics

Reviews addition, subtraction, multiplication, division, decimals, percentages, fractions, sign numbers, equations and problem solving.

VOC BA70 — Payroll and Tax Accounting

Examines all areas of 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 — Financial Planning

Personal financial planning for students who wish to understand their own finances or assist others in money management. Topics include income taxes, consumer credit, budgeting home ownership, banking functions, insurance, retirement planning investing and time value of money.

VOC BA72 — Bookkeeping - Accounting

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 — Using Microcomputers in Financial Accounting

Application of basic accounting concepts utilizing ledger software program. Hands-on use of a microcomputer to process accounting transactions, prepare statements and reports, and complete accounting cycle tasks. Completion of a computerized accounting practice set will be required.

VOC BA76 — Using Microcomputers in Managerial Accounting

Analysis of financial data and preparation of managerial accounting reports using Excel software. Development of what-if formulas to be used as an aid in decision-making. Includes manufacturing and consolidation worksheets, financial statement analysis, and statements of cash flow.

VOC BM10 — Principles of Continuous Quality Improvement

History and evolution of thought in Continuous Quality Improvement, including the theories and methods of Deming, Juran and Crosby. The quality management process and tools for the continuous improvement of quality are presented. Relevant case studies are included.

VOC BM12 — Continuous Quality Improvement Team Building

Advisory Prerequisite: VOC BM 10
Provides comprehensive instruction in building and using Continuous Quality Improvement project teams including selection of team members and evaluation of team performance. Students completing the course will be qualified to participate as members of Continuous Quality Improvement teams, create and evaluate problem solutions applying tools for improvement planning and team decision making, and build an effective improvement plan.

VOC BM20 — Principles of Business

Overview of 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

International business environment with a global perspective. Includes 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

Practical information needed to participate in activities related to the exporting and importing of goods and services. Includes vocabulary, acronyms and information needed for an understanding of and participating in the exporting of goods and services.

VOC BM60 — Human Relations in Business

Behavior, personality, self-management, self-development, and elementary business psychology as an aid to furthering the student's business advancement and lifelong learning. Class discussions focus on the student's understanding of intrapersonal and interpersonal effectiveness with emphasis on communications, motivation, leadership and other related areas.

VOC BM61 — Business Organization and Management

Functions of management, techniques of decision making and problem solving, and methods used by the manager to achieve organizational goals. Various theories of management, lines of authority, functions of departments, and the importance of policies, procedures, and controls are discussed.

VOC BM62 — Human Resource Management

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

Organizing, starting, and operating a small business enterprise. Emphasis on entrepreneurial applications in a small business environment.

VOC BM85 — Special Issues in Business

Provide business majors with a forum to gain knowledge, develop techniques, problem solve and implement an actual business plan. Special emphasis will be placed on the particular project of the actual business used as the class project.

VOC B005 — Business English

Skills and techniques of English, as applied to business situations. Emphasis on effective document structure.

VOC B025 — Business Communications

Written communications including letters and memos meeting 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

Designed to help business people communicate more effectively in spoken communication situations such as training sessions, presentations, and professional discussions.

VOC B096 — Spelling and Vocabulary for Success

Advisory Prerequisite: VOC B005
Learn to spell and define troublesome words. Improve basic spelling and vocabulary used by business and industry. Includes proper use of dictionary; word division; adding suffixes and prefixes; synonyms; computer-related vocabulary; and business vocabulary.

VOC BS35 — Professional Selling

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

Organization and function of the 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

Principles and practices used in the management and merchandising of retail stores. Includes all aspects of the critical buying function, merchandising, promotional techniques, site selection, layout, staffing, market positioning and customer service.

VOC BS85 — Special Issues in Marketing

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.

**OCCUPATIONAL
COMPUTER INFORMATION SYSTEMS**

VOC BCDP — Basic Computing - Desktop Publishing

Basic desktop publishing to create and produce professional-looking publications.

VOC BCPP1 — PowerPoint Basics 1

Basic use of PowerPoint to create slide presentations.

VOC BCPP2 — PowerPoint Basics 2

Create PowerPoint presentations using text and object animation, video, audio and hyperlinks.

VOC CPBC1 — Basic Computing Level 1

Introduction to the personal computer, including terminology and basic computer operations in a Windows environment. Instruction is hands-on. Note: Students may take this class only 2 times consecutively.

VOC CPBC2 — Basic Computing Level 2

A hands-on course focusing on ways to create documents in applications such as Microsoft Word; includes basic computer maintenance and problem-solving techniques. Note: Students may take this class only 2 times consecutively.

VOC CPBC3 — Basic Computing Level 3

Prerequisite: VOC CP-BC2 Basic Computing Level 2
Designed to increase word processing skills through creative projects which introduce computer graphics. Students will further their understanding of proper computer care and maintenance.

VOC CPBE1 -- Basic Excel 1

Introduction to Excel, including terminology and working with data in a spreadsheet application.

VOC CPBE2 -- Basic Excel 2

Basic functions in Excel including formulas, sorting, filtering data and formatting tables.

VOC CPBE3 -- Basic Excel 3

Basic Excel including storing, manipulating and analyzing data in spreadsheets and displaying data graphically.

VOC CPCC — Creative Computing

Develops creative skills in utilizing graphic designs for projects such as business cards, letterhead, labels, flyers, posters, greeting cards and computer-generated fabric designs. Proper marketing skills will also be discussed.

VOC CS11 — Computer Keyboarding

Develops alpha and numeric keyboarding skills on a personal computer at a straight-clip rate of 25 to 40 gross words with a predetermined error limit. Includes keyboarding of letters, tables and manuscripts.

VOC CPCL — Computer Laboratory

A lab study program designed to complement the lecture materials presented in computer program instructional courses.

VOC CPNET — Internet Research - An Introduction

Includes e-mail, research, terminology and functional capabilities of the Internet.

VOC CS41 — Office Management Skills

Training and skill building in filing systems and procedures, proofreading, telephone techniques, faxing, emailing and electronic calendaring of events, appointments and meetings. (Formerly VOC CP28)

VOC CSB15 — Microcomputer Applications

Windows operating system 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

Macintosh computer skills including the operating system and word processing, database, spreadsheet and multimedia applications. (Formerly VOC CP10)

VOC CSB31 — Microsoft Word

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 publications documents using advanced formatting techniques and tools. (Formerly VOC CP20)

VOC CSB51 — Microsoft PowerPoint

Using PowerPoint to plan, design and produce effective presentations. Includes creating charts, diagrams, and storyboards; developing appropriate text content; adding sound, animation and movies. (Formerly VOC CP50)

VOC CSB61 — Desktop Publishing Software

Using desktop publishing software to integrate text and various graphic objects, design, edit and produce a variety of high-quality business publications. (Formerly VOC CP60)

VOC CSW15 — Web Site Development

Use of a professional visual Web-authoring application to plan, develop, implement, publish and maintain Web sites. Includes working with text and images, internal and external hyperlinks, image maps, tables, Cascading Style sheets, 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. (Formerly VOC CP13)

OCCUPATIONAL COMPUTER TECHNOLOGY

VOC CNT50 — PC Servicing

PC and peripheral servicing techniques, preventative maintenance, hardware configurations, software configurations, software diagnostics, and the use of test equipment.

VOC CNT52 — PC Operating Systems

Current operating systems required for A+ and Network+ Certification and general computer servicing. Topics include: identification of major components, installation, configuration, upgrading and troubleshooting.

VOC CNT54 — PC Troubleshooting

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 – Home Theater, Home Integration and Home Security Systems

Home theater, home integration, and other home management systems. Emphasis on home theater, home management PLCs, security hardware and programming and the installation and servicing of such systems. Prepares the student for the California State Contractors C-7 voltage systems license.

VOC CNT60 — A+ Certification Preparation

Prepares the student and qualified computer technician for the A+ certification examination. All aspects of the Core and OS test modules will be stressed through both lecture review and test simulation software.

VOC CNT62 — Network+ Certification Preparation

Prepares the student and/or A+ certified technician for the Network+ Certification Examination. Individuals preparing for a job in the computer networking industry or who wish to become Network+ certified will find this course invaluable.

OCCUPATIONAL CORRECTIONAL SCIENCE**VOC CRS10 — Introduction to Correctional Science**

The field of corrections: county jail, probation, the California youth authority and the Department of Corrections as members of the Criminal Justice System. Includes philosophy, past and present practices and the criminal justice and correctional processes.

VOC CRS15 — Control and Supervision of the Offender

Examine methods of controlling and supervising inmates. Emphasizes California's methods in rapidly-expanding institutions. Students will visit an offsite facility.

VOC CRS20 — Correctional Law

Legal and due process rights for inmates. Inmate rights vs. needs of society, State, federal and appellate court decisions.

VOC CRS25 — Probation and Parole

Historical development of probation and parole with emphasis on current California programs. Defines the roles of courts, parole boards and the duties and responsibilities of the staff of probation and parole agencies.

VOC CRS30 — Ethnic Relations in Corrections

Historical survey of racial, cultural, and gender biases in the American corrections system. Impact of cultural, racial and gender differences on correctional staff and client interaction.

VOC CRS35 — Interviewing and Counseling in Corrections

Techniques of interviewing and counseling with emphasis on practical application. Needs of the client and agency will be stressed.

VOC CRS40 — Crime and Delinquency

Criminal behavior and types of crime and effects on society and victims. Stresses property crime, property offender, motivation and methods of control used by society.

VOC CRS45 — The Violent Offender

Violent crimes of felony assault, robbery, rape, the various types of homicide, and the characteristics of both the offender and the victim.

OCCUPATIONAL ELECTRONICS**VOC EL10 — Introduction to Mechatronics**

An introduction to the field of mechatronics, 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

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

Use of the personal computer for simulation and troubleshooting of both analog and digital electronic circuits. Circuit analysis, value substitution, and fault diagnostics will be done with the emphasis on "Electronics Workbench/Multisim" software. Students who repeat this course will improve skills through further instruction and practice.

VOC EL50A — Electronics Circuits - Direct Current (DC)

DC circuit theory covering resistive circuits, basic components, Ohm's Law, Kirchoff's Law, and network theorems. (Students seeking a survey course in electronics could take ELEC 90, Survey of Electronics, rather than ELEC 50A or 50B.)

VOC EL50B — Electronics Circuits (AC)

AC circuit theory covering inductors, capacitors, impedance, filters, decibels, and resonance. Analysis involves the use of complex numbers. Stresses passive components.

VOC EL51 — Semiconductor Devices and Circuits

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 Circuits Theory

Analog and digital communication circuits theory. Emphasizes analog and digital modulation principles in AM, FM, SSB, PLL, FDM, TDM, modems, fiber optics, and telecommunications circuits.

VOC EL54A — Industrial Circuits Theory

Industrial electronic components and basic control circuits. Includes time delay controls, solid-state controls, relays, opto devices, DC motor control, transducers, SCR, and UJT devices.

VOC EL54B — Industrial Electronic Systems

Expands on circuit theory and demonstrates systems application of industrial electronics including robotics, industrial production, automation, programmable and motor controllers. Emphasis is on programmable logic controllers.

VOC EL55 — Microwave Communications

Microwave components and circuits. Stresses transmission lines, Smith Charts, impedance matching, antenna characteristics, wave propagation, frequency analysis and measurement techniques.

VOC EL56 — Digital Electronics

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

Assembly and fabrication techniques in basic soldering, de-soldering and surface mount technology. Construction of coaxial and Category 5 cabling and connectors. Includes an overview of types of printed circuit board design. Students who repeat this course will improve skills through instruction and practice.

VOC EL62 — Advanced Surface Mount Assembly and Rework

Advanced course in assembly and repair (soldering) on surface mount assemblies. Prepares for the IPC surface mount assembly and rework certifications.

VOC EL74 — Microcontroller Systems

Emphasizes the software/hardware architecture for the typical microprocessor environment. The software instruction set and the hardware interface circuit design are covered for the microprocessor. Fundamentals and terms are covered for the personal computer (PC).

VOC EL76 — FCC General Radiotelephone Operator Licence Preparation

Prepares qualifies electronics and aviation technicians for the FCC commercial general radiotelephone operator license (GROL).

VOC EL81 — Laboratory Studies in Electronics Technology

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 EM65A — Mathematics of Electronics- DC
Mathematics of DC circuits analyzing passive circuits including Ohm's Law, Kirchoff's Law, voltage dividers, current dividers, and network theorems.

VOC EM65B — Mathematics of Electronics - AC
Mathematics of AC circuits analyzing passive circuits including resistance, reactance, impedance, resonance, and complex numbers (polar and rectangle).

VOC TCH60 — Customer Relations for the Technician

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.

OCCUPATIONAL ELECTRONICS AND COMPUTER TECHNOLOGY

VOC EST50 — Electrical Fundamentals for Cable Installations

Electrical fundamentals for cable and wire installations and other low voltage systems. Includes DC/AC, solid-state devices, digital and microprocessor devices and their application to cable installations. Prepares students for the California State Contractors C-7 low voltage systems license.

VOC EST52 — Fabrication Techniques for Cable Installation

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.

VOC EST54 — Cabling and Wiring Standards

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. Prepares students for the California State Contractors C-7 low voltage systems license.

VOC EST56 — Home Electronic Systems

Home theater, home integration, and other home management systems. Emphasis on home theater, home management PLCs, security hardware and programming and the installation and servicing of such systems. Prepares students for the California State Contractors C-7 low voltage systems license.

VOC EST62 — Electronic Troubleshooting - 1

Troubleshooting basic electronic circuits and systems to component level. Circuits include: power supplies, amplifiers, audio circuits, home theater audio (Dolby 5.1) and video circuits (analog TV).

VOC EST64 — Electronic Troubleshooting - 2

Troubleshooting advanced electronic video circuits and systems to component level. Includes digital TV and HDTV (plasma, LCD, DLP).

VOC EST70 — C-7 Low Voltage Systems License Preparation

Prepares students for the California State Contractors C-7 Low Voltage Systems license examination.

OCCUPATIONAL FASHION AND FASHION DESIGN

VOC FSH08 — Introduction to Fashion

Fashion industry from concept to consumer: industry background and technology. Includes design, manufacturing, distribution, sales and promotion with emphasis on career opportunities and qualifications.

VOC FSH09 — History of Costume and Fashion

A 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.

VOC FSH10 — Clothing Construction 1

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

Advanced industry construction techniques using overlock and single needle machines.

VOC FSH15 — Aesthetic Design in Fashion

Design principles and influences in apparel selection and fashion design. Projects applying design elements and principles using CAD software.

VOC FSH17 — Textiles

Manufacturing of textiles/fabrics and factors that determine the suitability for end use. Topics covered include natural and synthetic fibers, yarns, fabric construction, dyes, finishes, legislation and care. Emphasis is placed on selection criteria for textile product design and recent developments in the textile field.

VOC FSH20 — Illustration for Fashion and Costume Design

Drawing techniques for fashion and theatrical costume design. Application of the basic techniques used in drawing a well-proportioned male and female figure and in rendering garment flats using texture, fabric and design detail. Students will explore a variety of mediums.

VOC FSH21 — Patternmaking 1

Theory and application of basic flat patternmaking techniques to create garment designs using industry standards. By means of dart and seam manipulation, patterns will be created, constructed and fitted.

VOC FSH22 — Fashion Design By Draping

Three-dimensional dress design through draping fabrics directly to a dress form to create original designs and patterns or interpret fashion illustrations. VOC FSH21 is recommended as a pre-requisite for this course.

VOC FSH23 — Patternmaking 2

Intermediate pattern drafting and flat patternmaking, with the introduction to the sizing of patterns/grading. Development of patternmaking skills to include two-way stretch knits, swimwear, and complex construction. Students apply commercial manufacturing standards in producing size ranges for misses' and women's wear, to include skirts, pants, bodices, sleeves and collars.

VOC FSH62 — Retail Store Management and Merchandising

Principles and practices used in the retail buying and merchandising environment. This course emphasizes the buyer's role in merchandising management, pricing strategies, promotion, retail formulas and costing calculations.

OCCUPATIONAL GEOGRAPHY

VOC GOG10 — Introduction to Geographic Information Systems

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.

OCCUPATIONAL HEALTH

VOC ANA50 — Basic Anatomy and Physiology

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 CPR01 — BLS Heartsaver Course - Adult

This three (3) hour course is designed to teach the life-saving skills of Cardiopulmonary Resuscitation, the first aid techniques for choking emergencies, and how to respond to general life-threatening emergency situations. Students will learn about the risk factors associated with heart attacks and strokes. Successful completion of the course will provide the student with an American Heart Association Heartsaver CPR Level A Completion Card, renewable in two years.

VOC HHA — Home Health Aide

Preparation to work in a skilled nursing facility and to pass the California Long-Term Care CNA exam.
Co-requisite: Enrollment in VOC HLTH 05

VOC HTH01 — Certified Nursing Assistant

Prepares participant to work in a skilled nursing facility and pass California Long-Term Care CNA exam.

Prerequisites:

- Current American Heart Association BLS for Health Care Providers card (must be valid for course duration)
- Completed Technology and Health Division Student Medical History and Physical exam form within the last 3 months
- Current Live scan fingerprint documentation.
- Valid identification (CA driver's license or CA.ID card) and Social Security card

Co-requisite: Enrollment in VOC HLTH 05

VOC HTH04 — Acute Care Nursing Assistant

This course Preparation of CNA to provide basic personal care to patients in acute care facilities and hospitals.

VOC HTH05 — Health Careers Resource Center

Health occupational training and experience using instructional equipment and simulators for health occupation competencies.

VOC HTH12 — Medical Terminology

Medical terminology used in various allied health fields.

VOC HTH18 — In-Home Care of Alzheimer's and Dementia Clients

Information and educational activities with techniques to enhance one's ability to work with Alzheimer's/Dementia consumers, with an emphasis on effective communication skills and appropriate activities when working with consumers and delivering direct care.

VOC IHSS — In-Home Support Services

Preparation to assist elderly, disabled and ill persons living at home. Communication skills, maintenance of a healthy environment and procedures for emergencies. Physical, emotional and developmental characteristics of the patients served; personal hygiene, safe transfer techniques and basic nutrition.

VOC PT81 — Physical Therapy Aide

Role and skills of physical therapy aide. Includes terminology, procedures and interpersonal skills.

VOC RDTEC — Intravenous Therapy for Radiologic Technology

Principles of techniques of venipuncture. Includes anatomy and physiology of sites, instruments, intravenous (IV) solutions, equipment, puncture techniques, hazards and complications, emergency care, post-puncture care.

OCCUPATIONAL INTERIOR DESIGN

VOC ID10 — Introduction to Interior Design

Practice of interior design and the planning of total interior environments that meet individual, functional and environmental needs. Fieldtrips may be required.

VOC ID10L — Introduction to Interior Design Lab

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

Analysis, application and evaluation of products and materials used in interior design. Fieldtrips are required.

VOC ID14 — History of Furniture and Decorative Arts

Historic development of structure, interior spaces, furniture and decorative arts throughout the world. Interior architecture is illustrated in this overview of design heritage and antiquity to present. Emphasis is placed on style development as it relates to social, economic and political influences as well as the use of materials and technology. Fieldtrips may be required.

VOC ID100 — Fundamentals of Interior Design

Application of design principles and elements in planning of total interior environments that meet individual, functional, legal and environmental needs. Selection of all materials and products used in interior environments will be emphasized for the functional aesthetic quality. (Recommend concurrent enrollment in ID 105.)

OCCUPATIONAL MANUFACTURING TECHNOLOGY

VOC MF10 — Mathematics & Blueprint Reading for Manufacturing

Applications of mathematical principles, including fractions, decimals, ratio/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

Manual and computerized manufacturing, manual lathes and mills, tool nomenclature and Computerized Numerical Control (CNC) operations. Operation of CNC machines. Students who repeat this course will improve skills through further instruction and practice.

VOC MF12 — Manufacturing Processes 2

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 MF38 — MasterCAM 1

Use MasterCAM software to create wire-frame part geometry, add tool paths and create CNC code for CNC mills and CNC lathes. Students who repeat this course will improve skills through further instruction and practice.

VOC MF38B — Advanced MasterCAM

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. Students who repeat this course will improve skills through further instruction and practice.

VOC MF38C — MasterCAM Solids

Using MasterCAM software to design wire drawings, translate to solids drawings, and generate code from a solids creation to meet industrial standards. Students who repeat this course will improve skills through further instruction and practice.

VOC MF85 — Manual Computerized Numerical Control (CNC) Programming

Theory and practice in manually developing CNC programs. Methods of transmitting data to CNC machines and physical set-up and operations of CNC equipment. Students who repeat this course will improve skills through further instruction and practice.

OCCUPATIONAL NUTRITION

VOC NF81 — Cooking for Your Heart and Health

Basic food preparation knowledge, skills, and experience. Principles and techniques of healthful food preparation and investigation of chronic disease prevention through dietary means. Includes laboratory experience in preparation of healthful foods and meals. Basic food preparation knowledge, skills, and experience is advised. Off-campus meetings may be required.

VOC NF82 — Vegetarian Cuisine

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. Basic food preparation knowledge, skills, and experience advised. Off-campus meetings may be required.

OCCUPATIONAL PHOTOGRAPHY AND PHOTOGRAPHICS

VOC CPDI — Digital Photography for the Beginner

Operation of digital cameras, image management and composition, development of research skills using the Internet, and imaging graphics software. A hands-on course which includes scheduled field trips.

VOC GRP10 — Photo Imagery

Adobe Photoshop software skills, techniques and digital workflow practices from digital image editing and retouching to the composited imagery commonly created for using photography, commercial design, printing and publishing, the Internet and multimedia authoring production.

VOC GRP12 — Photoshop Imagery Extended

Adobe Photoshop Extended software skills and techniques for the creative photorealistic imagery commonly used in photography, commercial design, printing and publishing, the Internet and multimedia authoring production.

VOC GRP15 — InDesign Graphics

Adobe InDesign software skills, techniques and digital workflow practices commonly created for use in essential computer graphics production processes for commercial design, printing and publishing, the Internet and multimedia authoring production.

VOC GRP16 — Illustrator Graphics

Adobe Illustrator software skills, techniques and digital workflow from essential digital drawing basics to creatively conceived illustrative imagery and renderings commonly created for use in commercial design, printing and publishing, the Internet and multimedia authoring production.

VOC GRP18 — 3D Graphics Imagery

3D graphics modeling software skills and production techniques from 2D orthographic drawing to the creatively conceived 3D imagery and animated environments commonly created for self-expression, entertainment, commercial design, printing and publishing, the Internet and multimedia authoring production.

VOC GRP20 — Multimedia Graphics

Multimedia graphics software skills and production techniques for combining text, image, audio, video, animation and scripting media to author multimedia projects commonly created for self-expression, entertainment, commercial design, the Internet and multimedia production.

VOC GRP48 — Introduction to Digital Design Systems

Introduction to digital design systems as they relate to computer graphics. CPU type and speed, graphic accelerators, storage media, digital color space, input/output devices, and scanning devices will be emphasized. Software unique to digital design and file management techniques will also be presented.

VOC PH001 — Laboratory Studies in Black & White Photography

Extended black and white laboratory experiences to supplement those available in the regular program. Provides students the opportunity to pursue more advanced projects and experiments.

VOC PH01A — Lab Studies: Beginning Black and White Photography

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 — Lab Studies: Advanced Black and White Photography

Extended advanced black and white laboratory experiences with medium and large format cameras to improve skills and pursue more advanced photographic printing, and enlarging techniques.

VOC PH01C — Lab Studies: Studio Photography

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 — Lab Studies: Computer Applications in Photography

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 PH009 — Digital Image Editing for Photographers

Software and techniques including digital workflow practices, digital image editing, enhancing and retouching methods commonly used in photography.

VOC PH010 — Basic Digital & Film Photography

The basic mechanical, optical and chemical principles of photography, including digital image systems. Laboratory experience involves problems related to camera and image output techniques.

VOC PH011 — Intermediate Photography

Current professional 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 and digital cameras, computer basics for professional photographers and studio lighting. Students must furnish a digital single lens reflex (DSLR) camera. Field trips may be required.

VOC PH012 — Photographic Alternatives

Alternative photographic processes. Instant films: lifts and transfers, specialized lighting, stain toning, emulsion coating, scenography and hand-made camera construction will be applied to produce images not considered common to making photographic prints.

VOC PH014 — Commercial Lighting

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

Survey of the history of photography from circa 1839 to the present. An introduction to concepts of photographic representation and their impact on society.

VOC PH016 — Fashion Photography

Professional illustrative, editorial and advertising fashion photography. Studio and location production in digital capture. Business aspects of operation and working with clients are presented. Off-campus assignments may be required.

VOC PH017 — Photocommunication

Affects that camera controls have on visual communication with photographs. Includes message enhancement using optical and digital controls, depth of field, lenses, lighting, composition, book, black and white vs. color images, and documentary and journalistic styles.

VOC PH018 — Portraiture and Wedding Photography

Professional studio and field techniques and procedures for informal, formal, and environmental portraits with an emphasis on wedding photography. Includes lighting, color correction, digital techniques, photographic critique, and posing for individuals, couples, families and groups in the studio and on location. Also includes business and legal issues for wedding and portrait photography businesses. Off-campus assignment required.

VOC PH019 — Digital Color Management

Digital color management software and hardware skills, techniques and digital workflow practices commonly used in photography.

VOC PH020 — Color Photography

An introduction to current methods of producing color media, color negatives, positive transparencies, and outputting color prints.

VOC PH021 — Exploring Color Photography

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

Advanced software and techniques for digital image editing, archiving and retouching used in commercial photography.

VOC PH028 — Photo Portfolio

Development of a photography portfolio and marketing materials for use in job application or gallery exhibition purposes. Field trips may be required.

VOC PH030 — Commercial & Illustrative Photography

Overview of the commercial photographic industry. Exploration of the various commercial photography specialties including studio product and people photography, lifestyle, fashion and industrial/location with an emphasis on the development of a personal creative style. Field trips may be required.

OCCUPATIONAL THEATER AND THEATER ARTS

VOC THR14 — Stagecraft

Theory and practice of scenery construction and stage lighting. Practical work in scene design and construction and lighting layouts, with the opportunity to perform these tasks in actual theatre situations. By virtue of the wide range of productions staged by the department, students who repeat this course will increase their skills and proficiency.

VOC THR15 — Play Rehearsal and Performance

Planning, preparation and presentation of college-sponsored dramatic presentations. Emphasis on acting with some technical theater assignments. Students who repeat this course will improve skills through further instruction and practice. Attendance at performances is required.

VOC THR16 — Theatrical Make-Up

An introduction to the theory and practice of make-up for the stage. The student will gain practice in the design and application of straight, stylized character, and other make-up techniques.

VOC THR18 — Technical Theater Practicum

Participation in the 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. Students who repeat this course will improve skills through further instruction and practice.

VOC THR19 — Theatrical Costuming

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.

VOC THR60 — Children’s Theatre

Theory and practice of children’s theater. Evaluates play production techniques and literature for an audience of children. Includes analysis of plays for children and actual experience in acting, and producing children’s plays for public presentation. Field trips are required.

OCCUPATIONAL TUTOR TRAINING

VOC TR10A — Introduction to Tutoring

Introduction to tutoring, with an emphasis on tutoring strategies, problem solving and working with a diverse student population.

VOC TR10B — Tutoring in the Language Arts

Tutoring in the English language with an emphasis on approaches to working with students on written drafts and addressing the needs of non-native speakers.

VOC TR10C — Tutoring as a Supplemental Instructor

Tutoring as a Supplemental Instructor with an emphasis on tutoring in the classroom and in small groups under the supervision of a designated instructor.

VOC TR10D — Tutoring in Mathematics

Tutoring in mathematics with an emphasis on strategies to promote active learning and dealing with specific obstacles in developmental algebra.

VOC TR10R — Tutoring in Reading

Methods of assessment, management of sessions and application of strategic reading processes. This course prepares students to become reading tutors for all READ students.

OCCUPATIONAL WELDING

VOC WL30 — Metal Sculpture

For students interested in art seeking the proper operation of welding processes related to the sculpting industry. Emphasizes the fundamentals of three-dimensional design. Includes demonstrations and exercises in welding as it relates to the art industry.

VOC WL40 — Introduction to Welding

Fundamentals of welding processes related to the areas of fabrication, construction, machine tool, aerospace and the transportation industries.

VOC WL50 — Oxyacetylene Welding

Oxyacetylene fusion welding, non-fusion welding and cutting. Develops understanding of and fundamental skills in modern welding practices.

VOC WL51 — Basic Electric Arc Welding

Electric arc welding, weld symbols, standard electrode and alloy electrode selection, American Welding Society (AWS.) procedure for certification.

VOC WL53A — Welding Metallurgy

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

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

Develops manipulative skills and techniques for Shielded Metal Arc (SMAW) and (Flux Cored Arc (FCW) welding processes in the flat and horizontal positions using AC and DC welding currents on carbon steel.

VOC WL70B — Intermediate Arc Welding

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

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 — Fabrication and Construction Welding

Theory and practical applications of welding used in industry and construction. Designed to adapt and upgrade skills to industry standards. Includes project models such as ornamental iron gates and fences and material storage components.

VOC WL81 — Pipe and Tube Welding

Advanced course designed to enable students with “all positions” welding skills in SMAW to apply welding skills to the pipe welding industry. Welding processes will include SMAW, GRAW, GMAW, FCAW on a variety of materials and configurations on sub-critical and critical piping and tubing.

VOC WL90A — Gas Tungsten Arc Welding

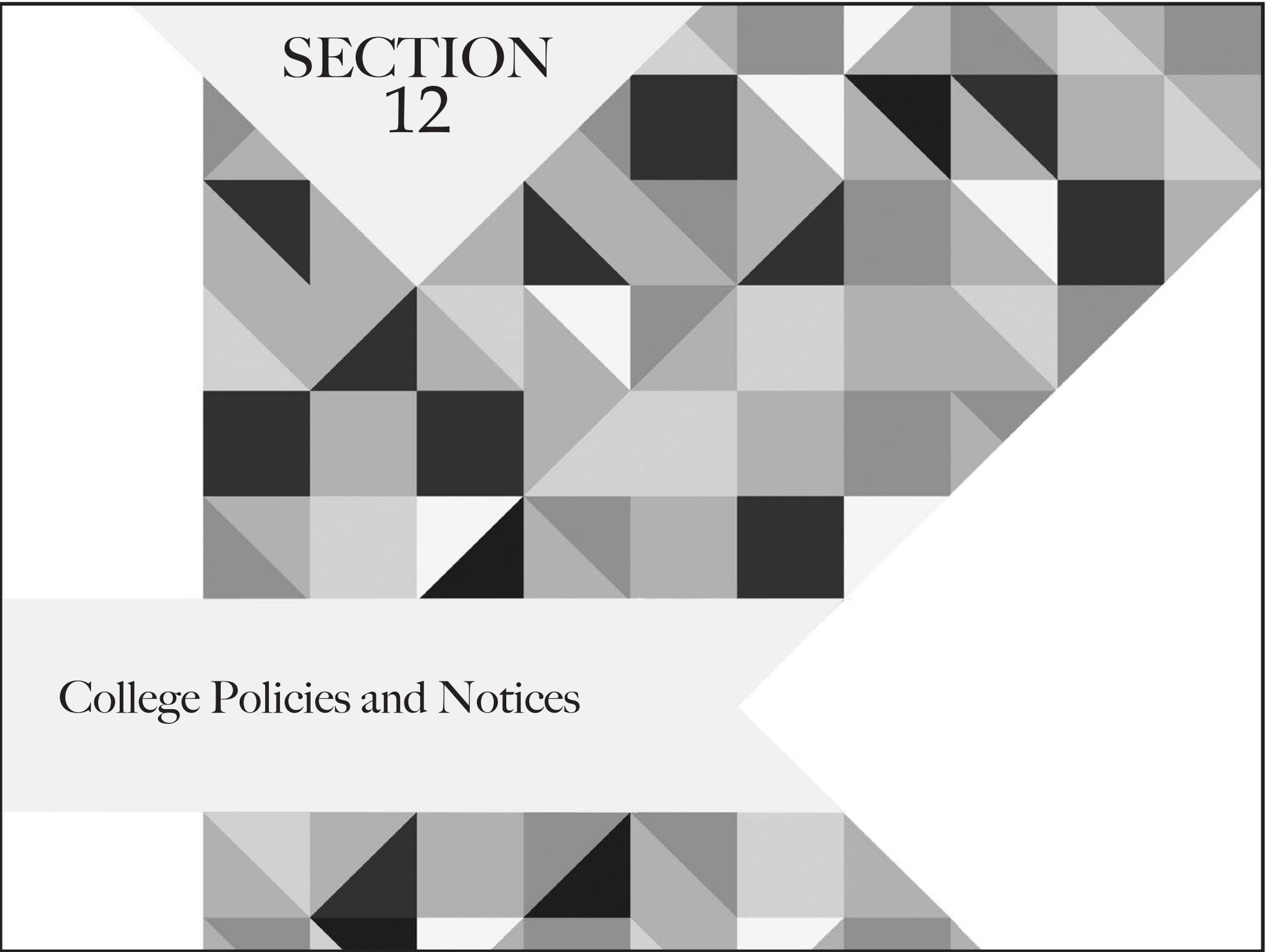
Advanced Gas Tungsten Arc Welding (GTAW) or tungsten inert gas (TIG) of steel, aluminum, corrosion resisting steel (CRES), and exotic metals. All position welds with many surfaces and transitions.

VOC WL90B — Semiautomatic Arc Welding Process

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

The art of welding and cutting metals commonly used in the automotive industry. Gas Metal Arc (GMAW/MIG), Gas Tungsten Arc (GTAW/TIG), Plasma Arc Cutting (PAC), Oxy-fuel Cutting (OFC) and welding will be covered.



SECTION
12

College Policies and Notices

COLLEGE POLICIES

For detailed information regarding Mt. San Antonio College Board of Trustees Policies (BP) and Administrative Procedures (AP), go to <http://www.mtsac.edu/governance/trustees/apbp/>

Accommodations and Academic Adjustments for Students with Disabilities

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. 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 <http://www.mtsac.edu/governance/trustees/policies.html> and in Disabled Student Programs & Services, Ext. 4290.

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). 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. Disabled Student Programs and Services (DSP&S) may authorize a person to be a Personal Care Attendant (PCA) when the need for such accommodation is authorized by DSP&S 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, race, color, ancestry, medical condition, marital status, veteran status, sexual orientation, or physical or mental disability (including HIV and AIDS), 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 **Lorraine Y. Jones, Director EEO Programs**, 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: <http://extranet.cccco.edu/Divisions/Legal/Discrimination.aspx>. 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 Violence

Sexual violence, including sexual assault, harassment, rape and stalking, are crimes that are not tolerated on this campus. Mt. San Antonio College has adopted Board policies and procedures to address sexual crimes, 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 criminal charges and disciplinary action, shall be applied whether the violator is an employee, student or member of the general public.

Services available to help assure student safety include:

- Public 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 ext. 4233 or (909) 274-4233.
- Blue emergency telephone towers located throughout the campus and parking lots access Public Safety immediately for assistance.
- Public Safety can be reached at (909) 274-4555.
- Call 911 for any emergency. Be prepared to identify your exact location.
- Contact Student Life Office at ext. 4525 to report incidents.
- Student Health Services at ext. 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 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 Public Safety within twenty-one (21) calendar days of issuance of the citation. (BP 3565, AP 3565)

Standards of Conduct

(BP 5500) Adopted 6/23/04

Copies of the Standard of Conduct Policy can be obtained in Building 9C. 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:

1. Causing, attempting to cause, or threatening to cause physical injury to another person.
2. 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.
3. 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.

4. Committing or attempting to commit robbery or extortion.
5. Causing or attempting to cause damage to College property or to private property on campus.
6. Stealing or attempting to steal College property or private property on campus, or knowingly receiving stolen College property or private property on campus.
7. Willful or persistent smoking in any area where smoking has been prohibited by law or by regulation of the College.
8. Committing sexual harassment as defined by law or by College policies and procedures.
9. 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.
10. Engaging in intimidating conduct or bullying against another student through words or actions.
11. 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.
12. Disruptive behavior, willful disobedience, habitual profanity or vulgarity, or the open and persistent defiance of the authority of, or persistent abuse of, College personnel.
13. Cheating, plagiarism (including plagiarism in a student publication), or engaging in other academic dishonesty.
14. Dishonesty, forgery, alteration or misuse of College documents, records or identification; or knowingly furnishing false information to the College.
15. Unauthorized entry upon or use of College facilities.
16. Lewd, indecent or obscene conduct on College-owned or controlled property, or at College-sponsored or supervised functions.
17. 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.
18. Persistent, serious misconduct where other means of correction have failed to bring about proper conduct.
19. 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.

20. Harassment of students and/or College employees that creates an intimidating, hostile, or offensive environment.
21. 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.

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

Cheating (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

A professor who determines that a student has cheated may give the student a failing grade for the assignment and should 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.”*

*Adopted, with permission of California State University, Los Angeles, from their policy printed in the 1987-88 General Catalog.

Student Complaints/Grievance Process

Students are protected against capricious, arbitrary, unreasonable, unlawful, false, malicious or professionally inappropriate evaluations or behavior by a faculty member. 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 with reference to the rights of disabled students.

Students can obtain Grievance Procedures and forms on-line at <http://www.mtsac.edu/studentlife/studentgrievances.html>.

Students are encouraged to follow the Mt. San Antonio College Complaint and Grievance process before attempting to file a complaint with the State. Issues that are not resolved at the campus level may be presented:

- To the Accrediting Commission for Community and Junior Colleges (ACCJC) at <http://www.accjc.org/complaint-process> if your complaint is associated with the institution’s compliance with academic program quality and accrediting standards. ACCJC is the agency that accredits the academic programs of the California Community Colleges.
- To the CCC Chancellor’s Office if your complaint does not concern CCC’s compliance with academic program quality and accrediting standards. <http://californiacommunitycolleges.ccco.edu/complaintsform.aspx>

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 may obtain Grievance Procedures and forms from the Student Life Office, Building 9C. It is recommended that students meet with the Student Life Director regarding the grievance prior to starting the process since timelines are established for every step of the process and must be met precisely.

The process for filing and pursuing a grievance includes two levels: in Level I (informal level) the student picks up the grievance forms and official procedures from Student Life and attempts to resolve the problem by meeting first with the faculty member (or staff member/administrator for non-academic grievances) and then the faculty member’s department chair or immediate supervisor. If the complaint is not resolved at that level, the student will meet with the division dean of the faculty defendant in an effort to resolve the problem. In the event that the problem cannot be resolved within 10 school 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 deadlines.

A Grievance Review Committee chaired by the Dean of Student Services will review the grievance documents. This Committee may forward the grievance for a formal hearing process to seek clarification from the parties involved. If the student or faculty/staff member chooses to appeal the decision of the Committee, the appeal is submitted to the College President. The final appeal process resides with the Board of Trustees; their decision concludes the grievance process (AP 5530).

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.

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 sex, race, color, religious creed, national origin, ancestry, age over 40, marital status, physical or mental disability (including HIV & AIDS), sexual orientation, or Vietnam Era Veteran Status. 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).

Public 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 website at www.mtsac.edu by clicking on Public Safety. Copies of the annual report can be obtained from the Public Safety Department in Building 23. A Public Safety 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 Public Safety Department or call 911. When using an on-campus extension, call 9-911. Incidents may be reported to Public Safety by calling (909) 274-4555, 24 hours a day, seven days a week. Public 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 Public Safety Department. The Public 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 Public 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 Public 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 Public 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 Public 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)

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

PUBLIC SAFETY DEPARTMENT STATISTICAL CRIME REPORT

Violation	2011	2012	2013
Murder - Non-Negligent Manslaughter	0	0	0
Murder - Negligent Manslaughter	0	0	0
Sex Offenses - Forcible	1	1	0
Sex Offenses - Non-Forcible	0	0	2
Robbery	0	1	0
Aggravated Assault	3	1	1
Burglary	6	4	11
Motor Vehicle Theft (GTA)	5	8	10
Arson	0	0	0
Liquor Law Violations	3	0	2
Drug Law Violations	11	8	5
Illegal Weapons Violations	3	1	2
Hate Crimes - Race	1	0	0
Hate Crimes - Gender	0	0	0
Hate Crimes - Religion	0	0	0
Hate Crimes - Sexual Orientation	0	0	0
Hate Crimes - Ethnicity/National Origin	0	0	0
Hate Crimes - Disability	0	0	0
Dating Violence	-	-	0
Domestic Violence	-	-	0
Sexual Assault	-	-	0
Stalking	-	-	1

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> 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.]:

- 1) type of information and material contained within the student's educational record;
- 2) the official responsible for the maintenance of each type of record;
- 3) the procedure for student review and inspection of the educational record;
- 4) the procedure for challenging the contents of the educational record;
- 5) the charges to the student for reproducing copies of the record if requested;
- 6) 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 7) 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:

1. Financial records of the parents of the student(s).
2. 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.
3. 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.
4. 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.
5. 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.

Release of Educational Records Information

1. Any release of a student's educational records, with the exception listed below, must be made with the student's written consent.
2. 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:
 - a. College staff members; provided that such employees have a legitimate educational interest to inspect such a record.
 - b. 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.

- c. Accrediting organizations in order to carry out their accrediting functions.
 - d. Organizations conducting studies on behalf of the institution.
 - e. Officials of other schools or school systems in which the student seeks or intends to enroll subject to the rights of students.
 - f. Agencies or organizations in connection with a student's application for financial aid.
 - g. 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.
 - h. 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.
 - i. 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.
3. Directory Information:
- a. "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.
- b. 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.
 - c. 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 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>

SECTION 13

Faculty and Academic
Administrators

A**Albertson, Toni (2006)**

English, Literature & Journalism
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

Allende, Kristina (2001)

English, Literature & Journalism
A.A., Mt. San Antonio College
B.A., M.A., California State University, Fullerton

Al-Malood, Fawaz (2003)

Consumer & Design Technologies
B.S., University of South Carolina
M.B.A., Columbus University, Mississippi
Ph.D., Pacific Western University, Hawaii

Alvarez, Hansel (2007)

English, Literature & Journalism
B.A., California State University, San Bernardino
M.A., California State Polytechnic University,
Pomona

Alvarez-Galvan, Maya (2000)

English, Literature & Journalism
B.A., M.A., California State University, Los Angeles
M.A., California State Polytechnic University,
Pomona
Ph.D., University of Southern California

Anderson, Alison (2006)

Biological Sciences
B.S., California State University, Bakersfield
M.S., California State Polytechnic University,
San Luis Obispo

Anderson, Cynthia B. (1986)

Biological Sciences
B.S., Arizona State University
M.S., University of Illinois

Anderson, Daniel P. (2000)

Physics, Engineering
B.S., University of California, Los Angeles
M.S., California State Polytechnic University,
Pomona

Anderson-Perry, Carolyn (2004)

Nursing
A.S.N., Los Angeles Southwest College
B.S.N., California State University,
Dominguez Hills
M.S.N., University of Phoenix

Andrews, Barry (2001)

Computer Information Systems
B.S., Indiana University
M.S., California State University, Fullerton

Ano, Gene (2006)

Psychology, Education
M.A., Ph.D., Bowling Green State University

Aquino, Lloyd (2007)

English, Literature & Journalism
B.A., M.A. California State Polytechnic University,
Pomona

Arballo, Madelyn A. (1998)

Director, Adult Basic Education
B.A., Pitzer College
M.A., California State University, Los Angeles
Ed.D., California State University, Long Beach

Archibald, Jeffrey D. (2000)

Communication
B.A., Cornell University
M.S., Illinois State University

Arntson, Roxan (2014)

Communication
B.A., Arizona State University West
M.A., California State University, Long Beach

Arterburn, Pamela (1986)

English, Literature & Journalism
B.A., M.A., California State Polytechnic University,
Pomona

Arvidson-Perkins, Genene (1988)

Nursing
A.S.N., Mt. San Antonio College
B.S.N., California State University, Fullerton
M.S.N., California State University, Los Angeles
PHN Certificate
FPN, Azusa Pacific University

Augustus, Robert (2008)

Sign Language & Interpreting
B.A., California State University, Northridge
M.A., Gallaudet University

Avila, Rocio (2006)

English, Literature & Journalism
B.A., California State Polytechnic University,
Pomona
M.A., California State University, Fullerton

B**Bacigalupi, Stacy (2006)**

Psychology, Education
B.A., University of California, Santa Barbara
M.A., California State University, Fullerton

Bartman, Sydney (1986)

English, Literature & Journalism
A.A., Mt. San Antonio College
B.A., University of La Verne
M.A., University of California, Riverside

Beam, Teresa (1991)

Chemistry
B.S., Ohio University
M.S., California State University, Fullerton

Becker, Liza (1998)

Director, ESL
B.A., California State University, Los Angeles
M.S., California State University, Fullerton
Ed.D., California State University, Long Beach

Belinski, Victor A. (2006)

Chief Technology Officer
B.A., M.A., University of California, Los Angeles

Beydler, David (2011)

Mathematics
B.S., Harvey Mudd College
M.S., California State University, Los Angeles

Birca, Alina (2005)

Mathematics, Computer Science
B.S., University Alexandru Ioan Cuza de Iasi
M.A., California State University, San Bernardino

Blake-Judd, Jemma (1990)

Associate Dean, Technology & Health
B.A., M.A., California State Polytechnic University,
Pomona

Blyzka, John V. (2001)

Computer Information Systems
B.S., University of California, Irvine
M.S., California State University, Fullerton

Boehner-Staylor, Maya (2001)

English, Literature & Journalism
B.A., California State University, Los Angeles
M.A., Northwest Missouri State University

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/Head Coach, Women's Soccer
B.A., California State Polytechnic, Pomona
M.A., Azusa Pacific University

Faculty and Academic Administrators

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)***Disabled Student Programs & Services*B.A., University of California, Riverside
M.S., California State University, Los Angeles**Bradshaw, George R. (2007)***Dean, Enrollment Management*B.A., M.A., California State University,
San Bernardino
Ph.D., University of Utah**Brantingham, John (2002)***English, Literature & Journalism*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**Briggs, Christopher (2012)***Biological Sciences*B.S., University of California, Berkeley
M.S., University of California, Riverside**Bro, Glenda (1991)***American Language*B.A., Dana College
M.S., University of Nebraska
TESOL Certificate, California State University,
Fullerton**Brown, Ronald (2006)***Fine Arts*

B.F.A., M.F.A., Art Center College of Design

Brown, Stephen (2013)*Director, CalWORKs*B.S., M.S.W., Jackson State University
Ph.D., University of La Verne**Burgoon, Steve (2002)***Commercial and 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)***Learning Assistance*

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**Burnett, Cynthia D. (1997)***Counseling*B.S., Northern Illinois University
M.A., International Christian Graduate University
M.S., California State University, Long Beach**Butler, Thomas (2011)***Fine Arts*B.A. Laguna College of Art and Design
M.F.A., California State University, Long Beach**C****Calzada, Silver (1999)***Counseling*B.A., Pitzer College
M.A.T., Harvard University**Cannon, Holly (1988)***English, Literature & Journalism*

B.A., M.A., California State University, Northridge

Cannon, Kathleen (2005)*History & Art 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**Castillejos, Manuel (1989)***Foreign Languages*B.A., California State University, San Diego
M.A., California State University, Fullerton**Cavion, Deborah (1994)***Associate Dean, Kinesiology/Athletics / Dance**Associate Athletics Director*
B.S., California State Polytechnic University,
Pomona
M.A., Azusa Pacific University**Cevallos-Castaneda, Susana (2005)***Learning Assistance*

B.A., M.S., California State University, Fullerton

Chang, Chih-Ping (Andrew) (1997)*Foreign Languages*B.Ed., National Changhwa University of Education
M.A., National Taiwan Normal University
Ph.D., University of Southern California**Charbonneau, David (2007)***Director, The Writing Center*M.A., Northern Illinois University
Ph.D., University of Wisconsin - Madison**Chavez, Dolores (2008)***Mathematics, Computer Science*B.A., University of California, Riverside
M.A., California State University, San Bernardino**Chavez, Raul S. (2000)***History & Art History*B.S., California State Polytechnic University,
Pomona
M.A., California State University, Los Angeles
Ph.D., University of California, Riverside**Chen, Jenny S. (1998)***Chemistry*B.S., University of California, Irvine
M.S., Ph.D., University of California, Los Angeles**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.N., University of California, Los Angeles Lifetime
Instructor Credential, National Taiwan Normal
University
Ph.D., Western University of Health Sciences**Chen, Meghan M. (2000)***Dean, Library & Learning Resources*B.A., University of California, Los Angeles
M.P.A., California Lutheran University
M.A., California State University, Los Angeles**Childress, Scot (2014)***Mathematics*B.A., California State University Fullerton
PH.D., University of California, Riverside**Christopher, Micol (2005)***Earth Sciences, Astronomy*B.A., Harvard University
M.S., Ph.D., California Institute of Technology**Churchill, Peter (2005)***English, Literature & Journalism*

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 J. (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

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

Czaja, James (2013)*Vice President, Human Resources*

A.A., Orange Coast College
B.A., University of California, Irvine
M.S., California State University, Fullerton

D**Daland, William (2005)***Counseling*

B.A., California State University, Fullerton
M.S., California State University, Long Beach

Danson, Erin (2014)*English, Literature and Journalism*

B.A., M.A., California State University, Fullerton

Davis, Maria (2005)*Consumer Science & Design Technologies*

B.A., American InterContinental 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 B. (1997)*Fine Arts*

B.A., M.F.A., Central Washington University

Denny, Joseph (2010)*Electronics and Computer Technology*

B.A., Azusa Pacific University
B.S., California Polytechnic State University,
Pomona
M.A., California State University, Fullerton

DePaola, Gina (1991)*English, Literature & Journalism*

B.S., Metropolitan State College, Denver
M.S., California State University, Long Beach

Diem, Andrea (1991)*Sociology, Philosophy*

B.A., University of California, San Diego
M.A., Ph.D., University of California, Santa Barbara

Di Mauro, Eileen (1991)*Chemistry*

B.A., University of California, Santa Barbara
M.S., University of California, Irvine

Distante, Debbie (2000)*Librarian*

B.A., Morningside College
M.A., University of Iowa

Domico, Brenda L. (1997)*Accounting & Management*

B.S., M.B.A., California State Polytechnic
University, Pomona
Certified Managerial Accountant

Dorame, Francisco (2014)*Associate Dean, Counseling*

B.A., M.A., California State University, Northridge
Ed.D., California Lutheran University

Dorough, George D. (1991)*Sign Language*

A.A., Rochester Institute of Technology
B.A., M.Ed., University of Massachusetts

Dougherty, Michelle (2007)*English, Literature & Journalism*

B.A., M.A., California State Polytechnic University,
Pomona

Dowdle, Michael (2005)*Psychology, Education*

A.A., Butte Community College
B.A., M.A., California State Polytechnic University,
Chico

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 & Art History*

A.A., Riverside Community College
B.A., M.A., Ph.D., University of California, Riverside

Eatman, Elisabeth (2006)*Consumer & Design Technologies*

B.F.A., California State University, Long Beach

Edson, Thomas (2006)*English, Literature & Journalism*

B.A., University of California, Irvine
M.A., Chapman University

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)*Disabled Student Programs & Services*

B.S., Liberty University
M.A., Psy.D., Biola University

Enke, Gary D. (1990)*English, Literature & Journalism*

B.A., St. Joseph College
M.A., Claremont Graduate School

Esslinger, Sandra (2002)*History & 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, California Bar Association

Estrada, Maria (2004)*English, Literature & Journalism*

B.A., M.A., California State Polytechnic University,
Pomona

Ezzell, Sun (2006)*Learning Assistance*

B.A., M.A., Humboldt State University

F**Farve, Debra (1988)***English, Literature & Journalism*

B.A., Xavier University
M.A., University of Notre Dame
Ed.D., University of Southern California

Faculty and Academic Administrators

Felix, Diana (2011)*Counseling*B.A., University of California, Santa Barbara
M.S., California State University, Long Beach**FioRito, Arleen M. (2000)***Nursing*A.S., A.A., Mt. San Antonio College
P.H.N., B.S.N., M.S.N., CNS, California State
University, Dominguez Hills
FNP, Azusa Pacific University**Fowler, Jamaika (2011)***Counseling*B.S., California State Polytechnic University,
Pomona
M.S., California State University, Long Beach**Frahs, Paul (2004)***English, Literature & Journalism*B.A., State University College, Potsdam, New York
M.A., University of California, Irvine**Frickert, Allison (2008)***History & Art History*

B.A., M.A., California State University, Fullerton

Fulbright Dennis, Wanda (1990)*Counseling*B.A., Fresno Pacific College
M.S., California State University, Los Angeles
Ed.D., University of La Verne**G****Galbraith, Jennifer (1988)***Associate 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)*Welding*

B.S., Azusa Pacific University, Azusa

Garrett, Jean (1989)*English, Literature & Journalism*A.A., Mt. San Antonio College
B.A., M.A., California State Polytechnic University,
Pomona**Garrett, LeAnn (2001)***Librarian*B.S., University of Wisconsin – Stout
M.L.I.S., Ph.D., University of Hawaii at Manoa**Garwick, Jennifer (2006)***Agricultural Sciences*B.S., California State Polytechnic University,
Pomona**Gau, Jim (2000)***Computer Information Systems*B.E., Feng Chia University
M.B.A., California Lutheran University**Gilbert, Cheryl (2013)***Mental Health*

B.S., University of La Verne

Golden, Dafna (2001)*Geography & Political Science*B.S., Humboldt 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 and Journalism*B.A., California State University, Fullerton
M.F.A., Chapman University**Gonzales, Barbara (2002)***Learning Assistance*A.A., Mt. San Antonio College
B.A., M.Ed., University of La Verne**Graham, Chris Giles (1991)***Mathematics, Computer Science*B.A., Pomona College
M.S., Chadron State College
M.S., California State University, Los Angeles
Ph.D., Claremont Graduate University**Greco, Victoria (1999)***Disabled Student Programs & Services*B.A., California State University, Fullerton
M.A., California State University, San Bernardino**Gregoryk, Michael D. (2005)***Vice President, Administrative Services*

M.S., University of California, Los Angeles

Griffith, Hugh M. (1998)*Mathematics, Computer Science*B.A., University of California, Berkeley
M.S., California State University, Los Angeles**Grimes-Hillman, Michelle (2000)***Psychology, Education*

B.A., M.A., California State University, Fullerton

Guth, Scott A. (1990)*Mathematics, Computer Science*A.A., San Bernardino Valley College
B.S., M.S., California Polytechnic State University,
San Luis Obispo**Guo, Hong (2013)***Librarian*B.A., M.L.I.S., University of California, Los Angeles
M.S., California State University, Los Angeles**H****Hagner, Dirk (2007)***Fine Arts*

M.A., University of Essen, Duisburg, Germany

Halabi, Solene (2008)*Foreign Languages*

M.A., California State University, Fullerton

Hall, Martha (2007)*Learning Assistance*B.A., University of California, Riverside
M.A., Claremont Graduate University**Hanson, Grace (1996)***Director, Disabled Student Programs & Services*B.A., M.A., California State University, Long Beach
Transition Services for Individual with Disabilities
Certificate**Harper, Michael W. (2000)***English, Literature & Journalism*

B.A., M.A., San Diego State University

Hart, Jeremy (2012)*Counseling*B.A., California State University, Dominguez Hills
M.A., California State University, Dominguez Hills**Hartman, Laurie (2007)***Commercial and Entertainment Arts*

B.F.A., Rochester Institute of Technology

Hatch, Rebecca (2001)*Sociology, Philosophy*B.A., California Lutheran University
M.S., Ph.D., University of Southern California**Heard, Lance (2008)***Public Services*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**Hernandez, Alina (1988)***Counseling*A.A., Santa Ana Community College
B.A., M.A., California State University, Fullerton
Ph.D., University of Southern California

Hernandez, Corie (2011)

Psychiatric Technician
B.S., California State University, Fullerton

Hernandez, Cristina M. (1997)

History & Art History
B.A., M.A., University of California, Santa Barbara

Herrera, Irene (2000)

Director, EOPS
B.S., California State University, Fullerton
M.S., California State University, Los Angeles

Hight, Lynette C. (1971)

English, Literature & Journalism
B.A., M.A., California State University, Los Angeles

Hill-Enriquez, Evelyn (1991)

American Language
A.A., Mt. San Antonio College
B.A., M.A., California State University, Fullerton
TESOL Certificate

Hirsch, Jamie (2012)

Fire Technology
B.S., California State University, Long Beach

Ho, Robert I. (1984)

Architecture & Engineering Design Technology
B.S., Cheng Kung University
M.Arch., University of Minnesota
NCARB, National Council of Architectural
Registration Boards
California Licensed Architect

Hoffman, Harlan (2005)

History, Art History, Geography, Political Science
B.A., M.A., California State University, Fullerton
Ph.D., University of California, Riverside

Hoggan, Lynda Smith (1996)

Biological Sciences
B.S., Slippery Rock University
M.P.H., University of California, Los Angeles

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)

Associate Dean, Natural Sciences (Interim)
B.S., M.S., New Mexico Institute of Mining
& Technology

Horton, Tamra (2000)

English, Literature & Journalism
B.A., University of California, Davis
M.A., University of Wyoming
Ph.D., Louisiana State University

Hosea, Phebe (2007)

Mathematics, Computer Science
B.S., M.S., University of California, Irvine

Howell, Luisa (2002)

Foreign Languages
B.A., M.A., California State University, Sacramento

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 & Design Technologies
B.A., Davidson College
M.S., University of Maryland

J**Jackson, Christopher (2005)**

*Kinesiology/Athletics /
Head Coach, Women's Water Polo and Swimming*
B.S., California State University, Fullerton
M.S., Azusa Pacific University

Jaeggi, Scott (2013)

Medical Services
A.A., Rio Hondo Community College

Jagodka, Ralph F. (1997)

Accounting & Management
B.S., Western Illinois University
M.B.A., Pepperdine University
Ed.D., University of La Verne

James, Stephen (2012)

Industrial Design
B.A., California State University, Northridge

Jastrab, Robert (2001)

Kinesiology/Athletics / Head Coach, Men's Football
B.A., University of Miami
M.S., University of Nevada

Jefferson, Paul (2001)

Public Services
A.S., Los Angeles City College
B.S., Pepperdine University
M.A., John F. Kennedy University

Jenkins, James D. (1992)

Dean, Humanities & Social Sciences
B.A., M.A., California State Polytechnic University,
Pomona

Jennum III, Joe E. (1997)

*Dean, Kinesiology/Athletics / Dance /
Athletics Director*
B.S., California State Polytechnic University,
Pomona
M.S., California State University, Fullerton

Jobbitt, Rafaela (2012)

History & Art History
B.S., University of Lisbon, Portugal
M.A., University of Toronto, Canada

Johnson, Mary T. (1997)

Computer Information Systems
B.A., California State University, Fullerton
M.S., Azusa Pacific University

Johnson, Michelle (1998)

Mathematics, Computer Science
B.S., M.S., University of California, Irvine

Jones, Lorraine (2008)

Human Resources
B.A., Millersville University of Pennsylvania
M.S.W., Howard University

Jones, William D. (1992)

History & Art History
A.A., Mt. San Antonio College
B.A., University of California, Los Angeles
M.A., Ph.D., Claremont Graduate School

Judd, Matthew T. (1990)

Dean, Natural Sciences
B.A., University of California, Berkeley
M.A., Claremont Graduate School

K**Kakiba-Russell, Karyn N. (1990)**

Biological Sciences
B.S., M.S., California State University, Los Angeles

Kaljumagi, Eric (1999)

Learning Assistance
B.S., University of California, Davis
M.A.T., University of California, Davis

Faculty and Academic Administrators

Kamaka, Ron (2006)

*Kinesiology/Athletics / Assistant Coach,
Cross Country / Head Coach, Men's Track and Field*
B.A., Sonoma State University
M.S., Azusa Pacific University

Karn, Tamara (2001)

English, Literature & Journalism
B.A., University of California, Los Angeles
M.A., Chapman University

Kemp, Kurt A. (2000)

Foreign Languages
A.A., Mt. San Antonio College
B.A., California State University, Fullerton
M.A., University of California, Los Angeles

Keys, S. Carolyn (2001)

Dean, Student Services
B.A., California State University, Fullerton
M.B.A., National University, La Jolla

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 S. E. (2000)

Mathematics, Computer Science
B.S., M.S., California State University, San Diego

King, Nancy L. (1988)

Counseling
B.S., University of California, Los Angeles
M.S., University of Southern California

Kirchgraber, Albert (1999)

Mathematics, Computer Science
B.S., California State Polytechnic University,
Pomona
M.A., California State University, Fullerton

Kittle, Paul (2004)

Librarian
B.A., University of California, Riverside
M.S., Loma Linda University
M.S.L.S., University of Southern California

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, Education
B.A., University of California, Berkeley
Ph.D., University of California, Santa Barbara

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, Education
B.S., University of Florida
M.A., Ph.D., University of Maryland, College Park

Kordich, Jason (2014)

English, Literature and Journalism
B.A., University of California, Berkeley
M.A., California State University, Fullerton

Kunkler, Constance (2006)

Nursing
A.S.N., A.A. 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

L**Lackey, Hilary (2010)**

Earth Sciences and Astronomy
B.A., Smith College
M.S., Ph.D., University of Wisconsin

Lancaster, Stephen (2011)

Mathematics
M.A., Ph.D., The University of Oklahoma

Landeros, Darlene (2001)

Child Development
A.A., Rio Hondo Community College
B.A., University of La Verne
M.A., Pacific Oaks College

Lane, David C. (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

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)

American Language
M.A., Azusa Pacific University
Ph.D., Claremont Graduate University

Ledeboer, Lisa (2006)

Consumer Science & Design Technologies
B.S., Iowa State University
M.S., California State University, Northridge

Lee, Eddie (2006)

Counseling
B.A., California State Polytechnic, Pomona
M.S., California State University, Long Beach
Ed.D., California State University, Fullerton

Leung, Jenny (2006)

Chemistry
B.S., M.S., University of California, Irvine

Lobb, Elizabeth A. (1998)

Geography & Political Science
B.A., University of California, Berkeley
M.A., University of Washington

Loera-Ramirez, Dionne (2001)

English, Literature & Journalism
B.A., M.A., California State University, Fullerton

Long, Susan (1998)

Dean, Arts
B.A., M.A., California State University, Long Beach
Ed.D., Pepperdine University

Lopez, Audra (2001)

Agricultural Sciences
B.S., M.S., California State Polytechnic University,
Pomona

Louie, Charis (2000)

Psychology, Education
B.A., Pomona College
M.A., University of Missouri
Ph.D., University of Missouri, Columbia

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

Lynes, Billie (2006)

Nursing
A.S.N., Mt. San Antonio College
B.S.N., M.S.N., FPN, 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
- Madrigal, Paulo (2009)**
Director, Community & Career Education
A.A., Mt. San Antonio College
B.S., California State Polytechnic University,
Pomona
M.S., University of La Verne
- 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 & Journalism
B.A., M.A., California State Polytechnic University,
Pomona
Ph.D., University of California, Irvine
- Malmgren, Irene (2013)**
Vice President, Instructional Services
B.A., M.A., California State University, Fullerton
M.A., Chapman College
Ed.D., University of La Verne
- Maloney, Clark (2012)**
Kinesiology & Athletics
Head Coach, Men's Basketball
B.A., Mid America Nazarene College
M.Ed., Azusa Pacific University
- Martinez, Regina (2014)**
Business Management
B.S., M.B.A., University of La Verne
- Mason, Martin (2002)**
Physics, Engineering
B.S., University of California, Riverside
M.S., University of California, Riverside
- Masoomian, Rasool (2001)**
Business Administration
M.S., M.A., Ph.D., State University of New York
- Mauch, Thomas (2005)**
Dean, Counseling
B.A., California State Polytechnic University,
Pomona
M.S., California State University, Fullerton
- Mbuthi, Stanley W. (1998)**
Counseling
A.A., Mt. San Antonio College
B.A., California State Polytechnic University,
Pomona
M.S., California State University, Los Angeles
- McCormick, Elizabeth (1991)**
English, Literature & Journalism
B.A., Barnard College
M.A., Ph.D., Claremont Graduate University
- McFarland, Thomas (1997)**
Accounting & Management
B.S., M.B.A., California Polytechnic University,
Pomona
- McFaul, Jason (1999)**
English, Literature & Journalism
B.A., M.A., University of the Pacific
- McGeough, Daniel (1986)**
Accounting & Management
B.A., California State University, Fullerton
M.B.A., California State University, Long Beach
Certified Public Accountant
- McGowan, Joumana (2010)**
Executive Dean, Instructional Services
A.A., Mt. San Antonio College
B.A., M.B.A., California State Polytechnic
University, Pomona
Ed.D., University of Southern California
- McGowan, Richard (1991)**
Continuing Education
B.S., San Diego State University
M.B.A., California State Polytechnic University,
Pomona
Certified Public Accountant
- McGraw, Jill (1991)**
Mental Health Technology
A.S., Santa Ana College
B.V.E., California State University, Long Beach
- McGruder, Charles (1992)**
Sociology, Philosophy
B.A., University of Redlands, Johnston College
M.A., Ph.D., Claremont Graduate School
- McIntosh, William (1999)**
Music
B.A., B.M., Biola University
M.M., California State University, Long Beach
- McKee, Catherine (1995)**
Business Administration
B.A., University of California, Berkeley
J.D., University of San Diego School of Law
Member, California Bar Association
- McLaughlin, David L. (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
- McMullin, Janet (1990)**
Mathematics, Computer Sciences
B.S., M.S., Northern Illinois University
- McPhail, Yuki (1992)**
Foreign Languages
B.A., Carthage College, Wisconsin
M.A., Fuller Theological Seminary, Pasadena
- Meggelin, Nancy (1998)**
Mental Health Technology
B.S.N., University of Phoenix
M.S.N., Ed., University of Phoenix
- Mehta, Jaishri (1999)**
Computer Information Systems
B.A., M.A., Florida Institute of Technology
- 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., University of Buffalo
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, Kenneth (2011)**
Electronics
B.S., California State Polytechnic University,
Pomona
M.S., California State University, Fullerton
- Mirman, David (2000)**
Biological Sciences
B.A., University of Pennsylvania
M.S., University of California, Davis

Faculty and Academic Administrators

Mrofka, David (2011)*Earth Sciences*

B.S., Ph.D., University of California, Riverside

Muñiz, Laura A. (2005)*Counseling, EOP&S/CARE*

A.A., Mt. San Antonio College

B.S., California State University, Fullerton

M.S., University of La Verne

Munro, Matthew J. (1998)*Mathematics, Computer Science*

B.S., University of Washington

M.A., University of Colorado

Myers, Richard (2011)*English, Literature and Journalism*

B.S., University of La Verne

M.A., California State Polytechnic University,
Pomona**N****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

Nazzal, Jane (2012)*Learning Assistance*

B.A., M.Ed., University of California, Los Angeles

Nejad, Iraj Behbahani (1992)*Chemistry*

B.S., Judi Shapur University, Iran

Ph.D., Michigan State 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

Newman, Charles (2000)*Chemistry*

B.S., Northern Arizona University

Ph.D., University of California, San Diego

Nguyen, Bao-Chi (2010)*Mathematics, Computer Sciences*

B.S., University of California, Los Angeles

Ph.D., Massachusetts Institute of Technology

Nguyen, Kim-Leiloni (Loni) (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 X. (2014)*Chemistry*

B.S., University of California, Irvine

Ph.D., California Institute of Technology

Nitta, Akira (Art) (2006)*Mathematics, Computer Science*

B.A., University of Irvine

M.S., California State Polytechnic University,
Pomona**Nixon, Bruce (1999)***Mental Health Technology*B.S., California State Polytechnic University,
Pomona**O****O'Brien, Paul (1999)***English, Literature & Journalism*

B.A., University of California, Los Angeles

M.A., San Jose State University

Ocampo, James (1990)*Director, Assessment & Matriculation*

B.A., M.A., California State University, Northridge

Olds, Jennifer (2008)*English, Literature & Journalism*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

Ott, Serena (2012)*Foreign Languages*

B.A., University of Bologna, Italy

M.A., University of Saarland, Germany

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 / Head Coach, Men's Baseball*

B.A., University of California, Irvine

M.Ed., Azusa Pacific University

Parra, Heidi R. (1992)*Mathematics, Computer Science*

A.A., Cerritos College

B.A., M.A., California State University, Fullerton

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 Polytechnic University, Pomona

M.Div. St. Johns Theological Seminary

Pedersen, Kirk (1998)*Fine Arts*

B.A., Midland College

M.A., San Francisco State University

M.F.A., Claremont Graduate School

Pellitteri, John (1999)*Counseling, ESL*

B.A., California Polytechnic University, Pomona

M.S., University of La Verne

M.A., Psy.D., California School of Professional
Psychology**Perez, Anabel (2007)***Counseling, Bridge Program*

B.A., University of California, Los Angeles

M.S., California State University, Long Beach

Perez, Christopher G. (2008)*Mathematics & Computer Science*

B.S., California State University, San Bernardino

M.S., California State University, Los Angeles

Perez, Jason (2013)*Commercial and 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

Perkins, Robert (2001)*Architecture & Engineering Design Technology*

B.S.C.E., Princeton University

M.Arch., University of Colorado

Phillips, Jamie (2008)*Agricultural Sciences*B.S., M.S., California State Polytechnic University,
San Luis Obispo**Petersen, Craig A. (1981)***Biological Sciences*

B.S., M.S., California State University, Los Angeles

Plesetz, Sarah (2008)*Nursing*

A.S., Los Angeles County School of Nursing
 A.A., Mt. San Antonio College
 B.S.N., M.S.N., P.H.N., Ed., California State
 University, Dominguez Hills

Pop, Horia C. (1998)*Mathematics, Computer Science*

B.A., University of Bucharest
 M.S., University of Iowa
 M.A., Ph.D., University of Southern California

Potter, Don (2009)*Manager, Deaf and Hard of Hearing Services, DSP&S*

B.A., University of Minnesota
 RID, CI/CT, NADV

Poulter, Shane (2007)*Counseling*

B.A., California State Polytechnic University,
 Pomona
 M.A., California State University, Dominguez Hills

Presch, Melissa (2008)*Biological Sciences*

B.A., California State University, Fullerton
 M.S., California State University, San Bernardino

Purcell, Robert (2011)*Kinesiology/Athletics**Assistant Coach, Football*

B.A., M.S., Azusa Pacific University

Q**Quinn, Barbara (2006)***Disabled Student Programs & Services*

B.A., California State University, Fullerton
 M.S.W., University of Southern California

Quintana-Mullane, Kimberly (2004)*English, Literature & Journalism*

A.A., Mt. San Antonio College
 B.A., M.A., California State Polytechnic University,
 Pomona

R**Ramey, Martin A. (2011)***Business Administration*

B.A., Arizona State University
 J.D., University of San Diego
 LL.M., Indiana University
 Member, California Bar Association

Reinhart, Liesel (1997)*Communication*

B.S., University of Colorado
 M.P.S., Cornell 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, Eloise M. (2012)*Disabled Student Programs & Services*

B.A., University of Nevada, Las Vegas
 M.S., California State University, Los Angeles
 Career Counseling Certificate

Reyes, Mary-Ellen (1998)*Mental Health Technology*

A.A., Chaffey College

Richardson, Lanny (1995)*Air Conditioning & Welding*

A.S., Mt. San Antonio College

Rickard, Malcolm (2008)*Physics and Engineering*

B.A., M.S., San Francisco University
 Ph.D., University of Colorado

Rillorta, Linda C. (1989)*Sociology, Philosophy*

A.A., Pasadena City College
 B.A., M.A., Ph.D., University of Southern California

Ritz, Karol E. (1997)*Dance*

B.A., University of California, Irvine
 M.A., California State University, Fullerton

Rivas, Hector (2007)*Commercial and Entertainment Arts*

B.A., California Polytechnic University, Pomona
 M.B.A., Keller Graduate School of Management

Rivas, Tony M. (2005)*Counseling, EOP&S/CARE*

A.A., Santa Ana College
 B.A., San Jose State University
 M.S., California State University, Long Beach

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.S.Ed., University of Southern California

Roche, William (2012)*Computer Information Sciences*

B.S., M.S., California State University, Fullerton

Rogers, Bruce (1994)*Music*

B.S., University of Connecticut
 M.A., Claremont Graduate University

Rogus, Linda (2005)*Aeronautics and 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 and 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 and Dance*

B.A., University of Virginia
 M.A., California State University, Long Beach

Romero, Oscar (2007)*Nursing*

A.S., Mt. San Antonio College
 R.N., Los Angeles County - University of Southern
 California School of Nursing
 MSN, California State University, Fullerton /
 University of California, Irvine

Rowley, Dianne (2012)*Learning Assistance*

B.A., California State Polytechnic University,
 Pomona
 M.Ed., Azusa Pacific University

Rubenstein, Susie (2005)*Fine Arts*

B.A., University of California, Santa Cruz
 B.F.A., Kansas City Art Institute
 M.F.A., Cranbrook Academy

Ruh, Marc T. (1997)*Kinesiology/Athletics /**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

Faculty and Academic Administrators

Russell, Paul (1988)*Learning Assistance*B.S., California State Polytechnic University,
Pomona

M.Ed., California Lutheran College

S**Salinger, Aaron (2011)***Foreign Languages*

B.A., University of California, Santa Cruz

M.A., University of New Mexico

Sampat, Michelle (2007)*Learning Assistance*

B.A., Pomona College

M.A., Claremont Graduate School

J.D., Whittier Law School

Sanchez, Andrew (2001)*Mental Health Technology*

A.S., R.N., Mt. San Antonio College

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, Lisbet (2008)*Foreign Languages*

B.A., B.A., California State University, Los Angeles

M.A., New Mexico State University

Sanchez, Juan (2005)*Kinesiology/Athletics / Head Coach, Men's Soccer*

B.S., California State University, Los Angeles

M.Ed., University of La Verne

Sardinas, Ignacio (2008)*Architecture and Engineering Design Technology*B.A., California State Polytechnic University,
Pomona**Schmidt, Sherry (1985)***Biological Sciences*

B.A., University of Montana

M.A., California State University, Fullerton

Schnurbusch, Karen (2002)*Physics & Engineering*

B.S., University of California, Santa Barbara

M.S., University of Illinois, Urbana-Champaign

Sciore, Donald (1999)*Associate Dean, Instructional Services*

B.F.A., California State University, Fullerton

M.S., Capella University

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

Sherwood, Kelly (2009)*Medical Services Department*

A.A., Lake Tahoe Community College

B.S., Excelsior College

Sholars, Joan (1991)*Mathematics, Computer Science*

B.A., M.A., California State University, Fullerton

Shull, Stephen (2006)*Fire Technology*

B.S., Southern Illinois University

M.S., California State University, Long Beach

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

Sloan, Sayedeh Omideh (2008)*Assistant Director, Adult Basic Education*

B.A., George Washington University

M.A., Ph.D., University of California, Santa Barbara

Smith, Bailey K. (2009)*Director, Learning Assistance Center*

B.A., University of California, Santa Cruz

M.A., University of Wisconsin - Milwaukee

Smith, Daniel E. (1998)*Commercial and Entertainment Arts*

B.A., California State University, Fullerton

Smith, Jim (1998)*Counseling*

A.A., Fullerton College

B.A., M.A., California State University, Fullerton

Smith, John K. (2001)*Public Services*

B.A., M.S.W., Indiana University

Ph.D., International University for Graduate
Studies**Soares, Darrow (1992)***Air Conditioning, Welding, & Water Technologies*

A.A., Riverside City College

B.A., University of California, Riverside

M.A., California State University, San Bernardino

Soto, Lina (2001)*Counseling*

B.A., University of California, San Diego

M.A., San Diego State University

Stewart-Thomas, Michelle (2007)*Sociology, Philosophy*

M.S., Purdue University

M.S., M.A., Fuller Theological Seminary

Ph.D., University of Southern California

Stokes, Nona (1990)*American Language*

B.S., Howard University

M.S., Ph.D., Georgetown University

Stone, James (2008)*Geography & Political Science*

M.A., University of Kentucky

M.F.A., Ph.D., Chapman University

Strand, Richard W. (2001)*Theater*

B.S., Eastern Michigan University

M.F.A., University of Iowa

Strope, Byron (1990)*Aircraft Maintenance & Manufacturing*

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

Stuard, Bob (1986)*Sign Language*

A.A., San Diego Mesa College

B.A., University of California, San Diego

M.B.A., California State University,
Dominguez Hills**Sullivan, Landon (2014)***Agricultural Sciences*

B.S., M.A., University of Arkansas

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

Swift, Crystal Lane (2008)

Communication
B.A., California Baptist University
M.A., Ball State University
Ph.D., Louisiana State University

T**Takahashi, Shelley (2014)**

Architecture and Engineering Design Technology
B.S., California State University, Long Beach
M.B.A., Pepperdine University

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

Tatoian, Vahe (1990)

Physics, Engineering
B.S., Yerevan University, Armenia
M.S., Drexel University

Tellez, April (2008)

History & Art History
B.A., M.A., University of California, Riverside

Terreri, Joseph P. (1989)

Mathematics, Computer Science
B.S., M.S., California State Polytechnic University,
Pomona

Teske, Margaret (2002)

Manager, ESL Instructional Support
B.S., University of Northern Colorado
M.S., Colorado State University

Thankamushy, Sreekanth (2014)

Commercial and Entertainment Arts
B.S., Mahatma Gandhi University, India
M.F.A., University of California, Los Angeles

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

Thomas, James D. (1998)

English, Literature & Journalism
B.A., Westmont College
M.A., Ph.D., Claremont Graduate University

Todd, Douglas (1995)

Kinesiology/Athletics
Head Coach, Women's Cross Country /
Assistant Coach, Men's Track and Field
A.A., El Camino College
B.A., California State University, Long Beach
M.A., California State University, Dominguez Hills

Tolano-Leveque, Maryann (2009)

Director, Student Life
B.S., M.A., California State Polytechnic University,
Pomona
Ed.D., University of Southern California

Ton, Chan-Phuong (2005)

Counseling
B.A., University of California, San Diego

Tran, Frank (2002)

Mathematics, Computer Science
B.S., University of California, Davis
M.A., University of California, Santa Barbara

Tran, Niki (2011)

Interior Design
B.F.A., California State University, Long Beach

Trejo, Lyssette (2009)

Counseling
B.A., California State University, Fullerton
M.S., University of La Verne

Troxell, Cameron (2001)

Mathematics, Computer Science
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	STAFF PARKING
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	30 MINUTE PARKING
	PARKING METERS
	VAN ACCESS SERVICES
	FOOD / SUPPLIES
	EMERGENCY * BLUE PHONE
	OUTDOOR GREEN PUBLIC PHONE
	SMOKING AREA

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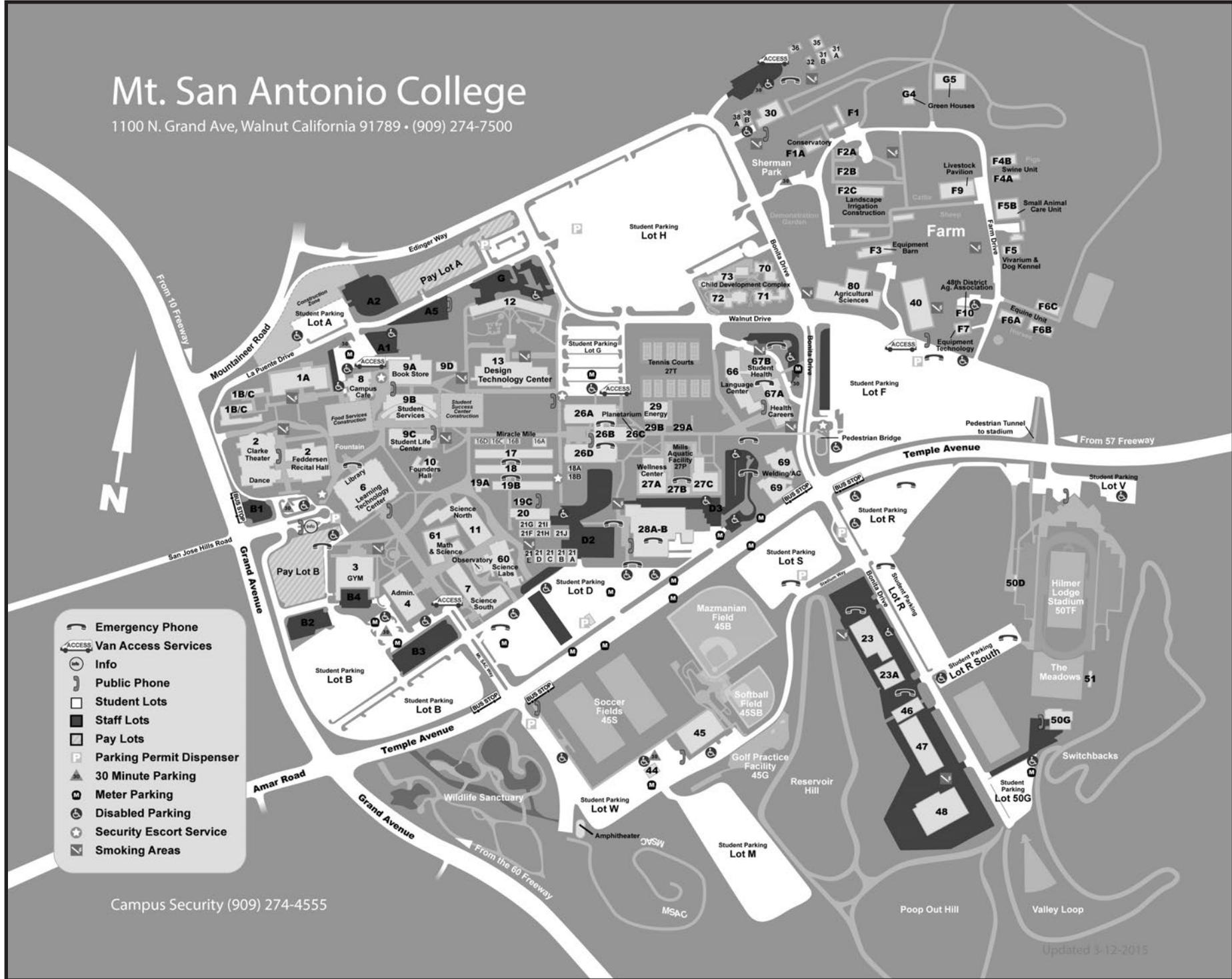
Mt. San Antonio College

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-  Emergency Phone
-  Van Access Services
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-  Public Phone
-  Student Lots
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-  Disabled Parking
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-  Smoking Areas

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Updated 3-12-2015



MISSION

The mission of Mt. San Antonio College is to support all students in achieving their full educational potential in an environment of academic excellence.



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