

**HISTOTECHNICIAN
TRAINING PROGRAM
STUDENT HANDBOOK**



2016-2017

Student Handbook Procedures and Policies
Histotechnician Training Program

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Mt. San Antonio College
Associate Degree Histotechnician Training
Student Handbook

Introduction

Mt. San Antonio College began an Associate Degree Histotechnician Program in August 2001. This program trains histotechnicians for clinical, veterinary, and research laboratories.

On-campus technical training will focus on routine tissue sample preparation as well as special stains and techniques such as immunohistochemistry and in situ hybridization. The latter areas promise substantial growth as future career opportunities. Training on campus will include samples typically observed in clinical, veterinary and research facilities.

As a NAACLS accredited program, this program meets the requirements mandated by the American Society of Clinical Pathology (ASCP) Board of Certification. Effective January 2005, those who wish to take the certification exam offered must either complete a NAACLS accredited Histotechnician program or achieve an Associate Degree or at least 60 semester hours of academic credit with a combination of 12 semester hours of biology and chemistry and one year histotechnology experience. Partnerships with clinical, reference, and research facilities will provide work experience sites to qualify students for the Histotechnician AS degree, and to provide abundant practical experience. Graduates may also be ready to transfer to universities to complete Bachelor of Science degrees in related fields.

Students are expected to read the student handbook and retain for future reference. Students will sign that they have received and understand the policies and procedures of the Histotechnician Training Program.

Non-Discrimination Policy

Mt. San Antonio College provides opportunities for the pursuit of excellence for all students and staff through its educational programs and services. The purpose of all programs, services, activities, conferences, and college-endorsed competitions is to enrich the quality of human life. The college will provide open access to a college education and all support services without regard to sex, race, color, religious creed, national origin, age over 40, marital status, physical or mental disability (including HIV & AIDS), sexual orientation, or Vietnam Era Veteran Status.

If applicants need special accommodation in applying for or participating in the histotechnology program applicants are encouraged to inform the Histotechnician Training Program Director or Education Coordinator. Please refer to the Schedule of Classes for further information.

Admission Requirements

Mt. San Antonio College is an open access institution. Students eligible for college admission are eligible for the Histotechnician Program. At the present time, there is no

formal application process or selection process for the program. Before a selection process can be developed for the Histotechnician (HT) Program, a validation study must be done. The results of this study must indicate that students must acquire specific skills before entry into the HT Program. A study of this type must be done for at least 2 years.

Assessment

Most classes have basic skills prerequisites that must be assessed prior to registration. An application for admission must be submitted before taking placement tests. Assessment must be completed prior to orientation and registration.

Orientation

Orientation is required for all new students who are enrolling at Mt. SAC, unless otherwise exempted. Completion of orientation is required prior to registering for classes.

ESSENTIAL FUNCTIONS FOR ADMISSION AND RETENTION OF STUDENTS IN THE HISTOTECHNOLOGY PROGRAM

Implemented: Spring 2003

Histotechnology faculty have specified the following non-academic criteria (essential function/technical standards) which all applicants and enrolled students are expected to meet in order to participate in the Histotechnology program and professional practice.

1. **Observation**: The applicant/student must be able to participate actively in all demonstrations, laboratory exercises, and clinical experiences. The applicant/student must analyze patient specimens (cell samplings and tissues) using a variety of manual and automated techniques. Such analyses usually require the functional use of visual and somatic sensations.
2. **Communications**: The applicant/student must be able to communicate effectively and respectfully with fellow students, faculty, staff, and members of the health care team. Communication skills include speaking, reading, and writing, as well as the observation skills described above.
3. **Motor**: The applicant/student must have sufficient motor function to be able to perform basic manual and automated techniques, including multiple concurrent and repetitive tasks; possess all skills necessary to carry out diagnostic procedures; be able to interpret appropriate procedures; and be able to execute motor movements reasonably required to perform all of the functions described above.
4. **Intellectual/Conceptual, Integrative, and Quantitative Abilities**: The applicant/student must be able to measure, calculate, reason, analyze, evaluate and synthesize; which due to the detailed nature of some laboratory tasks, may require long periods of concentration. In addition, the applicant/student must be able to comprehend three-dimensional relationships and understand the spatial relationships of structures. The applicant/student must have the capacity to perform these skills in a timely fashion.
5. **Behavioral and Social Attributes**: The applicant/student must possess the emotional health required for full utilization of his or her intellectual abilities; the exercise of good judgment; the prompt completion of all responsibilities; and the development of mature, sensitive, and effective relationships with fellow workers, students and others. Applicants must be able to tolerate taxing workloads, function effectively under stress, adapt to changing environments, display flexibility, and learn to function in the face of uncertainties inherent in clinical problems. Integrity, concern for others, commitment, and motivation are personal qualities which each applicant/student should possess.

Students are expected to read the essential functions and determine if they meet the requirements. Students will sign off that they either meet the essential functions or that they could meet the essential functions with accommodations. The program coordinator will determine if reasonable accommodations can be made.

Program Goals

Enroll approximately 24 students into introductory HT courses per year. We hope to improve the training of entry-level histotechnicians thereby helping the California histology industry, which currently suffers from an insufficient number of qualified technicians.

Program Mission

The mission of this program is to prepare students to work as biomedical professionals in health care, pharmaceutical and biomedical research, and veterinary medicine; to interact with other biomedical professionals in an ethical manner; to develop the best possible technical skills in histology and to demonstrate at all times the utmost respect and concern for the well-being of those they serve.

Program Options

Students may complete an Associate Degree (AS) in Histotechnician Training or students may choose to complete the required classes for an Associate of Arts (AA) degree and transfer to an ancillary baccalaureate program.

Course Requirements for an Associate of Science Degree in Histotechnician Training

In addition to the general education requirements students must complete:

Human Anatomy (ANAT 35)	5.0
Introductory Human Physiology (ANAT 10B), <u>or</u>	4.0
Human Physiology (ANAT 36) <u>or</u>	5.0
Introduction to Immunology (MICR 26)	3.0
Microbiology (MICRO 22), <u>or</u>	4.0
Principles of Microbiology (MICR 1)	5.0
Chemistry for Allied Health Majors (CHEM 10), <u>or</u>	4.0
Introduction to General Chemistry (CHEM 40), <u>or</u>	4.0
General Chemistry I (CHEM 50)	5.0
Introduction to Histotechnology (HT 1)	1.0
Scientific Basics for Histotechnicians (HT 2)	3.0
Histology (HT 10)	3.0
Beginning Histotechniques (HT 12)	5.0
Advanced Histotechniques (HT 14)	5.0
Histochemistry/Immunohistochemistry (HT 16)	4.0
Work Experience in Histotechnology (HT 17)	4.0

Refer to the schedule of classes for general education requirements or consult with an advisor. Students wishing to transfer to a baccalaureate program are advised to consult with an advisor.

Core Course Descriptions

ANAT 35 – Human Anatomy

5.0 Units

54.0 hours lecture 108.0 hours lab

Prerequisite *BIOL 1, 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 10B – Introductory Human Physiology

4.0 Units

54.0 hours lecture 54.0 hours lab

Prerequisite: *ANAT 10A or ANAT 35*

Advisory: *CHEM 10 or CHEM 40*

An 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 36 – Human Physiology

5.0 Units

(May be taken in place of ANAT 10B)

54.0 hours lecture 108.0 hours lab

Prerequisite: Prerequisite *BIOL 1, BIOL 4, or BIOL 4H and 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.

MICR 26 – Introduction to Immunology

3.0 Units

(May be taken in place of ANAT 10B)

54.0 hours lecture

Prerequisite: *MICR 22 or MICR 1*

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.

CHEM 10 – Chemistry for Allied Health Majors **5.0 Units**

54.0 hours lecture 71.0 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 40 – Introduction to General Chemistry **5.0 Units**

(May be taken in place of CHEM 10)

54.0 hours lecture. 71.0 hours lab

Prerequisite: Eligibility for MATH 71

Advisory: Eligibility for ENGL 1A

Measurements, structure and properties of matter, chemical reactions, 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 1 **5.0 Units**

(May be taken in place of CHEM 10)

54.0 hours lecture. 108.0 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.

MICR 22 – Microbiology **4.0 Units**

54.0 hours lecture 54.0 hours lab

Prerequisite: CHEM 10 or CHEM 40.

Advisory: BIOL 1 or BIOL 4 or BIOL 4H

Fundamental concepts of microbiology; viruses, bacteria, fungi, protozoa and parasitic worms.

MICR 1 – Principles of Microbiology

5.0 Units

(May be taken in place of MICR 22)

54.0 hours lecture

108.0 hours lab

Prerequisite: CHEM 10 or CHEM 40.

Fundamental concepts of microbiology with emphasis on bacteria. Survey of microbial classification, morphology, physiology and genetics; beneficial and pathological aspects; growth and control of microbes; virology, immunology, and host-microbe interactions. Important infectious diseases of humans are surveyed. Laboratory exercises examine microbial morphology, physiology and genetics, as well as environmental influences of microorganisms. Laboratory techniques include culturing, examining, and identifying microorganisms. Field trips are required

HT 1 – Introduction to Histotechnology

1.0 Unit

18.0 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

3.0 Units

54.0 hours lecture

Advisory: Eligibility for ENGL IA, CHEM 10

Defines all aspects of general laboratory issues including general laboratory protocols, GLPs, safety, ethics, and terminology relative to the preparation of tissue samples.

HT 10 – Histology

3.0 Units

36.0 hours lecture

54.0 hours lab

Prerequisite: ANAT 35

Microscopy, cell structure, cell reproduction and staining. Identification of tissues, organs and special microstructures, and their detailed morphology. Involves distinguishing normal features from pathological conditions.

HT 12 – Beginning Histotechniques**5.0 Units**

54.0 hours lecture 108.0 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**5.0 Units**

54.0 hours lecture 108.0 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/Immunohistochemistry**4.0 Units**

54.0 hours lecture 54.0 hours lab

Prerequisite: HT 10 and HT 12

Practical applications and fundamentals of enzyme and immunological reactions as they relate to tissue staining. Field trip required.

HT 17 – Clinical Experience in Histotechnology 4 Units

240.0 hours lab required

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 Coordinator.

Related Courses (not required for Histotechnician AS Degree)

BIOL 8 – Cell and Molecular Biology

4.0 Units

54.0 hours Lecture

54.0 hours Lab

Prerequisite: BIOL 4 or BIOL 4H and CHEM 50

Introduction to 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 34 — Fundamentals of Genetics

3.0 Units

54.0 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

1.0 Units

54.0 hours Lab

Corequisite: Bio 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.

Histotechnician Training Program Course Availability Course Grid

Course	Title	Prerequisite	Semester Offered	Format	Days	Time	Length
HT 1	Introduction to Histotechnology	Advisory of ENGL 1A	Fall	Lecture	TTh	3:00 to 4:05	8 weeks
HT 2	Scientific Basics for Histotechnicians	Advisory of ENGL 1A, CHEM 10	Fall	Lecture	TTh	1:15 to 2:40	16 weeks
HT 10	Histology	ANAT 35	Fall	Lecture Lab	TTh TTh	9:45 to 10:50 11:30-12:55	16 weeks
HT 12	Beginning Histotechniques	HT 1, HT 2 Advisory of Micro22	Spring	Lecture Lab	TTh TTh	9:45 to 11:10 11:30-2:40	16 weeks
HT 14	Advanced Histotechniques	HT 12	Fall	Lecture Lab	MW MW	9:45 to 11:10 11:30-2:40	16 weeks
HT 16	Histochemistry/ Immunohistochemistry	HT 10, HT 12	Spring	Lecture Lab	MW W	9:45 to 11:10 11:30-2:40	16 weeks
HT 17	Work Experience in Histotechnology	HT 12	F, W, S, S		Varies	Varies	6 or 16 weeks

Clinical Work Experience in Histotechnology

Clinical work experience provides students with actual on-the-job clinical experience in an approved clinical setting in a histology laboratory. Clinical experience is available after completion of the second semester and successful completion of Beginning Histotechniques (HT 12) with a "C" or better. It is available during fall, winter, spring and summer sessions. Students must complete four units of clinical experience for graduation. Each unit of clinical experience requires 60 hours of on-the-job experience. Students are encouraged to complete a combination of HT 17 to get experience in at least two or three different histology settings.

Clinical Assignment

The Educational Coordinator will assign students to a clinical affiliate. Factors considered in assigning students will include:

1. Geographic distance between the student's home and the various clinical sites.
2. Availability of the clinical site to accept students.*
3. Student preference.

*In the event that there are not enough clinical sites for all students, preference will be given to students closest to fulfilling the HT AS Degree requirements.

Selecting Clinical Work Experience Sites

Various sites are available for students at various times and days. Students are responsible for finding transportation to and from the clinical sites. Although there are various schedules available, each site has times and days that they will accept students. If a student cannot find a suitable site he/she may need to adjust his/her schedule. Students are expected to be flexible with the times and days of work experience. Students may be assigned clinical experiences during evenings, nights, and/or weekends. In certain instances there are limitations imposed by clinical affiliates. Adjustments may need to be made with clinical experience assignments. Students must be prepared to accept an assignment to any facility being utilized by the program. Students must have a physical examination completed prior to beginning work experience. Students are responsible for any fees associated with the physical. Students are also responsible for transportation expenses to and from the work site.

Medical Examinations, Background Checks and Drug Testing

All students enrolling in Clinical Work Experience are required to have a medical examination, drug screen and background check. These are at the student's expense. There are also sites that require a mandatory orientation that may be held on days other than the days the student will be completing work experience. There are also sites that require fingerprinting and additional background checks. If any facility refuses to allow the student to participate in the clinical work experience as a result of these findings, the student may not be allowed to progress in the program.

Student Service Work

Students perform service work only under the direction of the clinical site instructor during scheduled practicum hours agreed to by the student and instructor prior to the beginning of each semester. Service work by students outside the scheduled clinical hours is not permitted. Students are assigned during regularly scheduled shifts and may not be paid for their work.

Students are placed only in clinical settings where activities such as phlebotomy are not part of the histology laboratory operations and where current staffing levels are adequate to insure that students will not be used to replace trained technicians.

Dress Code Policy for Clinical Affiliates

Students are required to adhere to dress codes in place at clinical affiliates. Jeans are not allowed at most sites. For safety reasons closed-toes shoes must be worn, long hair should be tied and dangling jewelry should not be worn. Lab coats are required.

Current Clinical Experience Affiliates*

Advanced Skincare (15)	Providence St. Joseph Med Ctr (34)
Children's' Hospital LA (29)	Sakura Finetek (40)
Cedars-Sinai Medical Center (36)	UCI Medical Center (21)
City of Hope Medical Center (19)	UCLA Medical Center (40)
Long Beach VA Medical Center (34)	USC Keck School of Medicine (23)
Pomona Valley Hospital (7)	

***Numbers in parenthesis indicate mileage from Mt. SAC**

Work sites are subject to change and to availability on a semester to semester basis.

Clinical Experience Evaluation

Students will be evaluated on their work ethic and competencies. A Pass/No-Pass is received for clinical experience. No-credit is equivalent to a "D" or "F" grade. No units are awarded and units are not counted in determining grade point average. No-credit grades will be considered in probation and dismissal procedures.

It is important to remember that this is an opportunity for you to interview potential employers just as it is an opportunity for employers to interview you. If a student is asked to leave a clinical affiliate site due to negligence or behavior problems the student may not be eligible for further clinical experience.

Clinical Grievance Policy

Should a conflict occur in a clinical affiliate the following steps should be followed:

1. All conflicts or complaints should be discussed with the Clinical Coordinator. The discussion should be primarily of a verbal nature and no formal complaint form is required.
2. If the conflict cannot be resolved with the Clinical Coordinator, the student or Clinical Coordinator may contact the Educational Coordinator. The Educational Coordinator will act as a neutral mediator to resolve the conflict. These discussions should be primarily of a verbal nature and no formal complaint form is required.
3. If the Educational Coordinator cannot achieve resolution, any party may contact the Program Director. A formal student complaint form will be completed. The Program Director will resolve the conflict through the use of the College's student grievance policy. Written documentation of this process will be included in the student's practicum file.
4. The student academic grievance policy will remain in effect throughout the practicum experience.

College Requirements

Students are subject to all of the rules and regulations of the college. Please refer to the College Catalog, New Student Orientation Handbook, Student Discipline Policy, and Schedule of Classes for specific policies and procedures.

Program Requirements

In order to progress in the program, a grade of "C" or better must be maintained in all academic classes and a "credit" in clinical work experience classes.

Variances

All coursework taken at another college, in or outside the United States, requires that a variance form be completed if that coursework is to be used for credit by the college for this program. It is the responsibility of the student to request a variance from the program education coordinator. After completion, the form will be submitted to the division office for approval by the Dean. Once approved, the variance will be forwarded to the admissions office for grade verification and recording.

Education Plan Requirements

An education plan is required for students enrolled in the Introduction to Histotechnology (HT 1) course. The education plan can be completed in consultation with an advisor or the Education Coordinator. The Education Coordinator will review the education plan. A grade will be issued for turning in an education plan as a component of the HT 1 course.

Attendance

Students are expected to attend class regularly. Each policy for attendance is found in the course syllabi.

Students are expected to arrive on time for scheduled hours at clinical work affiliate sites. If a student is going to be absent or if arrival will be delayed he/she must notify the supervisor at the clinical work affiliate. Your attendance is considered in the work experience evaluation.

Method of Evaluation

Grades are issued at the completion of each semester. Any student enrolled as of the first day of the fifth week in a full semester course shall receive a grade on his/her permanent record. Grades are issued as follows:

Evaluative Symbol	Definition	Grade Point Value
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Passing less than satisfactory	1
F	Failing	0
P	Pass	
NP	No Pass	

Refer to the Schedule of Classes for a complete explanation.

Student Injury Policy

Any injuries sustained on campus or at clinical affiliate sites are to be reported to a faculty member immediately. The faculty member will complete the required documentation and advise the student regarding treatment based on district policy. Faculty and student will complete necessary forms as indicated.

Health Policy

Clinical affiliates and NAACLS require that students have proof of a current physical exam (medical examination) on file and must be up to date with all required immunizations. In preparation for clinical work experience students will have a complete physical exam processed and on file in the Educational Coordinator's office. Students are responsible for the cost of the physical examination. Please refer to the Medical and Physical forms.

Child Care

Childcare for infants and young children (up to age 5) may be available on campus for a fee on a space available basis. Contact the Child Development Center at (909) 274-4632 or 274-4920.

Tuition/Fees

Fees are subject to change. See the course schedule for current fees.

Enrollment Fee: \$46/unit Required of all student residents of California except those who qualify for the Board of Governors' Fee Waiver (BOGW), a state financial aid program.

Nonresident Tuition: \$241/unit + \$46/unit enrollment fee (\$287 total). Required of all students who have not established residence in California for a period of one year prior to the day before classes begin.

International Tuition: \$241/unit + \$46/unit enrollment fee (\$287 total). Required of international students attending Mt. SAC on an F-1 Visa. International students applying for an F-1 Visa must pay a \$50.00 application fee regardless of whether they register for classes.

Student Activities Fee: \$11/semester (Fall and Spring semesters only) Supports various programs and services on campus, including book grants, cultural programs, speakers, and discount tickets to amusement parks and movie theaters.

Student Representation Fee: \$0.50 (Fall and Spring semesters only)

Student Transportation Fee: \$8 (part-time students), \$9 (full-time students) . Collected in Fall and Spring semesters only.

Materials Fee: Varies. Fee is noted under the class listing at the end of the course description.

Parking Fee: \$50 per Fall and Spring semester (\$25 with BOGW). \$25 per Winter and Summer sessions. Student parking permits are required to use all student parking lots.

Student Health Fee:** \$19 per Fall and Spring semester. (\$14 with BOGW). \$16 per Summer and Winter session (\$12 with BOGW). The student health fee is required of all credit students, including part-time.

**Pursuant to Section 76355 of the Education Code, Mt. SAC has a process by which students may request to waive the health fee. To qualify for a waiver students must provide documentation of active membership in a religious organization that relies exclusively upon prayer for healing. Applications for waivers are available in the Bursar's Office or in the Student Health Center (67B) for the first week of the semester.

Financial Aid

Financial aid programs are available to eligible students to help meet the cost of attending college. Aid programs include grants, work-study opportunities, scholarships, and loans. Forms are available at the Financial Aid Office. For more information, contact extension 4450.

Scholarships

There are many scholarships available to Mt. SAC students and several additional scholarships for Histotechnology Students. These scholarships can be accessed through the Financial Aid Office. Forms can be obtained from the Financial Aid Office or from the Mt. Sac web site.

Graduation

Students completing all of the requirements for the A.S. Degree Histotechnician Program are eligible to participate in the commencement ceremonies of the College in June of each year. Students completing all of the requirements for the A.S. Degree midyear are also encouraged to participate in these ceremonies in the spring.

It is the individual student's responsibility to have an educational plan in place, to be cognizant of the requirements of the A.S. Degree, and to contact an educational advisor to verify acceptance of any previous course(s).

During the third semester of the program, each student is responsible for requesting a graduation check from Student Services. Graduating students must petition for graduation prior to the deadline indicated by Admissions and Records for that current semester.

As graduates of a NAACLS accredited program, students are eligible for national certification through the American Society for Clinical Pathology (ASCP). Students are encouraged to apply for HT ASCP certification. Graduation is not contingent upon ASCP certification.

Accreditation

The Mt. San Antonio Histotechnology program is accredited through the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). For more information on accreditation, please contact NAACLS at 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119, (773) 714-8880 or visit the NAACLS website at www.naacls.org

Certification

Eligible students will apply for certification through the American Society for Clinical Pathology (ASCP) Board of Certification (BOC). The ASCP Board of Certification Procedures for Examination and Certification booklet will be available from the Education Coordinator. For complete instructions contact the ASCP Board of Certification at 33 W. Monroe St., Suite 1600, Chicago, IL 60603, (312) 541-4999 or visit the ASCP website at www.ascp.org/bor.

Documentation Required for Certification

An official transcript from Mt. San Antonio College, bearing the embossed seal of the college, the signature of the Registrar and the date your degree was conferred must be submitted to the ASCP BOC. All degree requirements must be completed before you will be able to sit for the examination. The HT Program Director approves the

application. The student has a period of five years from completion of the program to sit the exam. After that period eligibility will be based on clinical laboratory experience.

Certification Application Fees

The application fee must be submitted with the application form. The current fee for the HT ASCP examination is \$215 for HT and \$240 for HTL. This fee is non-refundable.

The application is valid for a period of three (3) years.

Examination Format

The Histotechnician Examination is an exam made up of 100 multiple-choice questions. The multiple-choice component uses computer adaptive testing (CAT). The CAT exam is held at NCS Pearson™ Professional Centers. Two hours and thirty minutes are allowed for the 100 questions.

Computer adaptive testing format is based upon the examinee's ability. Initially questions of moderated difficulty are given to the examinee. Each time an examinee answers a question the computer re-estimates the examinee's ability. Then, based upon that estimate, the computer selects questions to challenge the examinee. The advantage to this format is that examinees are not asked questions that are far beyond their ability. The scores are adjusted for level of difficulty. The BOC transforms the scores into scaled scores that can range from 100 to 999.

HT Examination Grading

A score of 400 is required for passing the CAT HT exam. At the completion of the exam applicants will know whether or not they have passed. Examination scores will be sent within 10 working days after completing the examination. Scores will also be released to the HT Program Director (unless instructed otherwise). An applicant must successfully complete the examination to receive HT ASCP certification.

Re-examination

Students are permitted to attempt the HT examination a total of five times. After five unsuccessful attempts a student is ineligible for further examination in the HT category under the same route.

Certification Maintenance Program

Certification is valid for 3 years. To maintain the certification individuals will be required to participate in the BOC Certification Maintenance Program.

The Certification Maintenance Program (CMP) requires 36 hours of documented continued competency every three years.

Information on the CMP is available at the ASCP website.

<http://www.ascp.org/Board-of-Certification/Certification-Maintenance-Program-CMP>

Mt. San Antonio College ASCP Examination Pass Rate Results*

	HT		HTL**	
	Pass Rate	%	Pass Rate	%
2003	5/8	63%		
2004	11/11	100%		
2005	6/7	86%		
2006	10/10	100%		
2007	7/7	100%	1/1	100%
2008	9/10	90%	3/3	100%
2009	15/16	94%	2/2	100%
2010	16/17	94%		
2011	10/11	91%	1/1	100%
2012	16/16	100%	1/1	100%
2013	16/17	94%		
2014	15/17	88%		
2015	11/13	85%	5/5	100%
Cumulative	146/160	91*	15/15	100%
Overall	161/175		92%	

*Results released to program director

** Students that have completed the Mt. San Antonio College Histotechnology program and have a baccalaureate degree with at least 30 semester hours of biology and chemistry are eligible to sit for the HTL (ASCP) exam.

Entry Level Skills:

Educational Background:

Medical Terminology
Scientific Method
Environmental Protection (chemical hygiene, biohazards)
Work Documentation

Technical Skills

Dexterity: handling chemical and biological agents; including weighing/measuring, temperature monitoring
Use of surgical instruments
Use of embedding centers
Use of microtomes
Staining techniques
Coverslipping techniques
Use of microscopes
Use of centrifuge
Use of pH meter
Use of automated equipment

Administrative/Clerical Skills

Maintain records containing accurate specimen information
Maintain records documenting instrumentation performance
Interpret procedure manuals
Maintain inventory and supplies
Uses basic computer applications for data entry and record keeping

Interpersonal Skills

Ability to work as a team member
Ability to communicate effectively
Ability to adapt to a changing work environment; effective organizational skills, priorities, resourcefulness
Ability to assess tasks, recognize limitations, request assistance when appropriate

Cognitive Learning Skills

Analyze and Evaluate tissue embedding
Analyze and Evaluate tissue sections
Analyze and Evaluate Staining Problems

Dismissal Policy

Students enrolled in the Associate of Science Histotechnician Degree are responsible for adhering to the policies and regulations established by the Board of Trustees (see College Catalog) and the Department of Biological Sciences.

Specific student behavior and conduct, which will result in disciplinary action, are described under item 609 Student Discipline Policy in the Administrative Regulations and Procedures of Mt. San Antonio Community College District. The College, in order to maintain standards of student conduct, commensurate with the academic and social level of higher education shall enforce proper student behavior in the classroom, campus grounds and in authorized activities related to the College. Upon recommendation of the President or designee, a student will be disciplined when his/her attitude, actions, or conduct are detrimental to the College. Disciplinary action will be taken in support of local, state, and federal laws. A professor can remove a student from his/her class for the day of the removal and the next class meeting. This student is then subject to suspension or expulsion from the College. Refer to the Student Standard of Conduct on suspension.

HT Program Faculty

Virginia Pascoe, Director

Jennifer MacDonald, Educational Coordinator

Program Website

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

Notes:

Histotechnician Program Education Plan

Instructions:

- On the Education Plan form provided, map out the next two years at Mt. San Antonio College.
- Check off areas already completed in the right hand column. Use the pages for Graduation Requirements, found in the Class Schedule, for guidance.
 - Students completing an Associate in Science Degree or an Associate in Arts degree may follow the associate degree graduation requirements
 - Students completing an Associate in Arts degree with the intention of attending a CSU or UC campus may refer to the general education requirements
- After checking off classes already taken plot the remaining classes on your Education Plan.
- Refer to page 4 in this handbook for the course requirements for an AS degree in Histotechnician training.
- Remember that many classes have prerequisites. Refer to the Class Schedule or College Catalog for prerequisites.
- Refer to the course grid for the order of the histotechnology classes.
- For detailed course descriptions, refer to the Mt. SAC catalog.

Things to Consider:

- Associate in Science degree (vocational major) versus Associate in Arts degree (transfer to obtain baccalaureate degree).
- Classes already completed at Mt. San Antonio College.
- Classes completed at another college/university.
 - Variances will be required if the class is chemistry, microbiology, anatomy, or physiology.
 - Request a transcript evaluation from Admissions.
- Not every class is offered every semester.
 - HT 1, HT 2, HT 10, and HT 14 are only offered in the fall.
 - HT 12 and HT 16 are only offered in the spring.
- Be realistic about the number of units that you can accommodate each semester.
- Work experience (HT 17) cannot be taken until after HT 12 has been completed with a C or better.

Histotechnician Program Education Plan

Semester Fall 2016			Semester Winter 2017		
Course	Units	Area	Course	Units	Area
total			total		
Semester Spring 2017			Semester Summer 2017		
Course	Units	Area	Course	Units	Area
total			total		
Semester Fall 2017			Semester Winter 2018		
Course	Units	Area	Course	Units	Area
total			total		
Semester Spring 2018			Semester Summer 2018		
Course	Units	Area	Course	Units	Area
total			total		

- Education Requirements
- Reading Competency _____
- Area A (6 units) _____
- ENGL 1A (4) _____
- SPEECH (4) _____
- Area B (3 units) _____ *
- Area C (6 units) _____
- Arts (3) _____
- Humanities (3) _____
- Area D (6 units) _____
- hist/pol (3) _____
- elective (3) _____
- Area E (3 units) _____
- MATH 71 (5 units) _____
- (71A+71B or 71X)
- P.E. (1 activity) _____
- Core Classes
- HT 1 (1) _____
- HT 2 (3) _____
- HT 10 (3) _____
- HT 12 (5) _____
- HT 14 (5) _____
- HT 16 (4) _____
- HT 17 (4) _____
- *Chemistry _____
- *Microbiology _____
- *Anatomy _____
- *Physiology or Micro26 _____
- *meets area B

Semester Fall 2017			Semester Winter 2018		
Course	Units	Area	Course	Units	Area
total			total		
Semester Spring 2018			Semester Summer 2018		
Course	Units	Area	Course	Units	Area
total			total		
Semester Fall 2018			Semester Winter 2019		
Course	Units	Area	Course	Units	Area
total			total		
Semester Spring 2019			Semester Summer 2019		
Course	Units	Area	Course	Units	Area
total			total		

References

Mt. San Antonio College Schedule of Credit Classes

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

Mt. San Antonio College Catalog

<http://catalog.mtsac.edu/programs/histologic-technician-training-degree/>

American Society of Clinical Pathology, Board of Certification Procedures for Examination and Certification 2016

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