Radiologic Technology Program

Mt. San Antonio College
Health Careers Resource Center
http://www.mtsac.edu/radiologic/
**Program Overview**

The course of study in Radiologic Technology offered at Mt. SAC and its affiliated hospitals will prepare students to be competent and professional entry-level radiographers able to meet the needs of the healthcare community. Program courses are designed to prepare students with skills in patient care, positioning, operating x-ray equipment, image quality assessment, technical factors, and professionally interacting with the general public, ancillary workers, and physicians. Students will also learn the nature of radiation, the principles of electricity, the structure of x-ray machines, the operation of a clinical x-ray department, and much more.

**Accreditation**

Mt. San Antonio College is accredited by the Western Association of Schools and Colleges and the State Department of Education. The Radiologic Technology Program is recognized by the California Department of Public Health and is accredited by:

*The Joint Review Committee on Education in Radiologic Technology (JRCERT)*

20 North Wacker Drive, Suite 2850
Chicago, IL 60606-3182
312-704-5300

The program adheres to standards established by the JRCERT. Individuals interested in reviewing those standards and program compliance can visit: [www.jrcert.org](http://www.jrcert.org)
MT. SAC APPLICATION PROCESS

Before applying to Radiologic Technology (RT) Program students must complete the following steps:

➢ **STEP 1 – Apply to Mt. SAC**

  - Complete and submit a [Mt. SAC Admission Application online](http://www.mtsac.edu/admissions).
  - Students transferring from other colleges must have their official transcript sent to Mt. SAC’s Admissions and Records Office.

➢ **STEP 2 – Get Assessed**

  - Applicants must take Mt.SAC’s placement tests, unless successful completion of English, Math, and Reading classes (with at least a grade of “C” or “Pass”) at an accredited college/university can be proven in form of official transcripts.
  - Make an appointment for the required placement test(s) in English, Math, and Reading
    - Online: [http://www.mtsac.edu/assessment](http://www.mtsac.edu/assessment)
    - By phone: (909) 274-4265, or
    - In person: At the Assessment Center (located in bldg. 9B - Student Services Center – first floor)

➢ **STEP 3 – Get Counseling**

  - Complete mandatory college orientation online at [http://www.mtsac.edu/counseling/](http://www.mtsac.edu/counseling/) or in person by calling counseling department at (909) 274-4380.
  - Make an appointment with counseling
    - Online: [http://www.mtsac.edu/counseling](http://www.mtsac.edu/counseling)
    - By phone: (909) 274-4380, or
    - In person: At the Counseling Department (located in bldg. 9B, 2nd floor)
  - Applicants must meet with a Counselor or an Advisor to review Associate in Science (or “AS”) degree requirements including: general education course-selection, science pre-requisites, and core-classes for the RT Program.
    - Counselor/Advisor will provide an Educational Plan (MAP) to the student.
    - Note: All of the following **pre-requisites** courses must be completed with a minimum grade of “C” in each course before admittance into the program (see counseling for more information):
      - ANAT 10A Introductory Human Anatomy or ANAT 35 Human Anatomy
      - ANAT 10B Introductory Human Physiology or ANAT 36 Human Physiology
      - PHYS 1 Physics
      - MEDI 90 Medical Terminology
  - Applicants must seek variances (or equivalencies) for courses completed at other institutions or repeat the course at Mt. SAC. The course of consideration must be an equivalent course to the course listed (or more advanced lower division course). Transcripts and course outlines/description must be reviewed by the Department Chair of the appropriate department for approval.
RADIOLOGIC TECHNOLOGY PROGRAM APPLICATION PROCESS

After completing the Mt. SAC application process, students may apply to the Radiologic Technology (RT) program by completing the following steps:

➢ **STEP 1 – Apply to RT Program**

- Complete and submit a [Mt. SAC RT Program Application Online](#). All applications are dated upon receipt.
- Applicants must be a high school graduate or equivalent. Please provide copy of diploma with application as proof of high school completion.
- Applicant must possess a valid Social Security Card. This is a licensed profession, and a valid Social Security Number is required to obtain state certification and to complete the background check process.
- Upon receipt of the student’s application, a file will be started and will be added to the waitlist in the order of the application’s date.

➢ **STEP 2 – Complete Required Courses**

Refer to your Educational Plan (MAP) provided by your Counselor/Advisor in Step 3 of the Mt. SAC Application Process. These courses include:

- ANAT 10A Introductory Human Anatomy or ANAT 35 Human Anatomy
- ANAT 10B Introductory Human Physiology or ANAT 36 Human Physiology
- PHYS 1 Physics
- MEDI 90 Medical Terminology
- General Education Courses

➢ **STEP 3 – Respond to General Interest Letter by November 30**

- Applicants on the waitlist will receive a letter in November of every year inquiring if the applicant is still interested in the program.
- Interested applicants shall respond as instructed and by the due date specified in the letter to be considered for admission into the program for the following summer intersession.
  - Failure to respond by the due date will result in the application being discarded and the applicant will need to reapply to the program.
- Applicants who are no longer interested, and who wish to be removed from the waitlist, shall notify the department by email at techandhealth@mtsac.edu.
To gain admission to the Radiologic Technology (RT) program, all applicants must complete the following steps:

**STEP 1 – Obtain RT Program Prerequisite Checklist from Counselor or an Advisor**
- Applicants must obtain a completed and signed RT Program Prerequisite checklist from a Mt. SAC Counselor (or an Advisor). Counselor/Advisor must verify completion of all “AS” (Associate in Science) degree requirements including general education and science prerequisites for the RT program. This will be due by February 1.
  - Applicants must obtain an updated checklist on an annual basis unless all AS degree and program prerequisites have been verified on a previously submitted checklist.
- **To obtain the checklist, make an appointment with counseling**
  - Online: [http://www.mtsac.edu/counseling](http://www.mtsac.edu/counseling)
  - By phone: (909) 274-4380, or
  - In person: At the Counseling Department (located in bldg 9B, 2nd floor)

**STEP 2 – Submit RT Program Prerequisite Checklist by February 1**
- Submit the checklist to the Health Careers Resource Center via email at techandhealth@mtsac.edu or in person to the Health Careers Resource Center, Bldg. 67B/ Rm. 250.
- Applicants failing to submit the approved/signed checklist by a Counselor/Advisor **WILL NOT** be considered for admission.

**STEP 3 – Selection**
- Selection of applicants is based upon the completion of admission’s requirements and the date of application. Only completed application packets including the signed checklist will be considered for admission.
- Applicant must be 18 years of age to be eligible for selection
- 36 applicants will be selected for provisional admission

**STEP 4 – Respond to Provisional Admission Letter**
- In early Spring, a provisional admission letter will be sent via mail to the selected applicants
- Applicants shall respond as instructed and by the due date specified in the letter with their “decision” to accept or decline admission. At that point, applicants accepting admission shall be provisionally admitted into the program beginning in the Summer intersession.
  - Students can defer admission up to 2 times.
- The provisional admission letter will include an invitation to a **mandatory RT Program orientation** scheduled during the Spring Semester.

**STEP 5 – Admission**
- Once mandatory attendance to RT orientation is met, the applicant is eligible to move from “provisional” to “admitted” status.
- The applicant will receive a letter of formal admittance into the RT Program from the Health Careers Resource Center.
Program Mission

The mission of the radiologic technology program is to prepare competent and professional entry-level radiographers able to meet the needs of the healthcare community.

Program Goals

1. Student/Graduate will be clinically competent.
2. Student/Graduate will communicate effectively.
3. Student/Graduate will develop critical thinking skills.
4. Student/Graduate will model professionalism.
5. Graduate will meet the employment demands of the medical community.

Program Effectiveness Data (average for last 5 years)

- Percentage of students who complete the program = 73%, 2012-2016
- Percentage of graduates passing ARRT Certification Exam, first attempt = 88%, 2012-2016
- Percentage of graduates employed 1 year after program completion = 87%, 2011-2015

The JRCERT posts program effectiveness data (annual program completion rate, five-year average credentialing examination pass rate, & five-year average job placement rate) at www.jrcert.org.

Employment Outlook

Employment of Radiologic Technologists is projected to grow 9% from 2014 to 2024, faster than the average for all occupations. As the population grows and ages, there will be an increasing demand for diagnostic imaging. With age comes increased incidence of illness and injury, which often requires diagnostic imaging for diagnosis. In addition to diagnosis, diagnostic imaging is used to monitor the progress of disease treatment. With the increasing success of medical technologies in treating disease, diagnostic imaging will increasingly be needed to monitor progress of treatment.

Although hospitals will remain the principal employer of radiologic technologists, a number of new jobs will be found in offices of physicians and diagnostic imaging centers. As technology advances many imaging modalities are becoming less expensive and more feasible to have in a physician’s office.

With additional training, opportunities exist in various modalities, such as magnetic resonance imaging (MRI), computerized tomography (CT), sonography, radiation therapy, and angiography, as well as medical sales, management, and education.
RADIOLOGIC TECHNOLOGY PROGRAM

Career Brief

RADIOLOGIC TECHNOLOGIST – CAREER BRIEF

Use radiation to make images of internal parts of a patient’s body.

Use radiation to provide treatment for disease. Review physician’s instructions.

Prepare patient for examination (physical assistance, verbal instructions, reassurance).

Position patients for imaging with the X-Ray machine.

May administer drugs necessary to make organs visible.

Set/operate controls. May operate computerized head or body scanners.

Outlook

Employment of Radiologic Technologists is projected to grow 9% from 2014 to 2024, faster than the average for all occupations. As the population grows older, there will be an increase in medical conditions that require imaging as a tool for making diagnoses. Technologists with multiple certifications will have the best job prospects.

(Bureau of Labor Statistics, Occupational Outlook 2014)

Pay

Depends on employer, location, and shift
On-call, after hours, overtime, increases pay
California hourly mean wage $36.57
National hourly mean wage $27.94
California mean full-time income – $81,276 (source ASRT Wage and Salary Survey 2016)

Preparation Required

This is a licensed occupation. Completion of the 2-year, full-time A.S. degree program at Mt. SAC is required to qualify students to take the state licensing exam and national registry exam.

Typical Employers

Hospitals
Outpatient clinics
Federal, state, and local government health agencies

Characteristics Required

- Effective English communication skills (speaking, reading, and writing)
- Must have physical stamina to be standing for long periods and lift/assist disabled patients.
- Able to catch on quickly.
- Work quickly and accurately with hands.
- Visualize three-dimensional objects and their relationships in space (such as organs in the body).
- See important details in radiographic images.
- Careful/cautious with details.
- Ability to perform complex imaging procedures using technologically advanced equipment.
Other Resources

American Society of Radiologic Technology
15000 Central Ave. SE
Albuquerque, NM 87123

California Society of Radiologic Technology
PO Box 14502
Torrance, CA 90503

American Registry of Radiologic Technology
1255 Northland Drive
St. Paul, MN 55120-1165

Cost

There is an enrollment fee of forty-six dollars ($46) per unit* plus material fees, health service fees, college service fees, and parking fees. Nonresident students are also required to pay nonresident tuition fees. Please consult the current college catalog for further information. The expense of enrollment, annual physical examinations, parking, uniforms, textbooks and related accessories, (i.e. transportation to school and to and from the clinical facilities) are to be arranged by the student. Scholarships or loan funds are available; please contact Financial Aid for further information.

Student Expenses

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment Fees</td>
<td>$46 per unit</td>
</tr>
<tr>
<td>Student Activities Fee</td>
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</tr>
<tr>
<td>Health Services Fee</td>
<td>$19 per semester</td>
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<tr>
<td>Parking Fee</td>
<td>$50 per semester</td>
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<tr>
<td>Background Check</td>
<td>Approximately $42</td>
</tr>
<tr>
<td>Drug Screening</td>
<td>Approximately $20</td>
</tr>
<tr>
<td>Film Markers</td>
<td>Approximately $12 each</td>
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<tr>
<td>Uniforms</td>
<td>Approximately $20 to $40 each</td>
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<tr>
<td>Physical examination</td>
<td>Approximately $115 for first year; $50 following semesters</td>
</tr>
<tr>
<td>Textbooks</td>
<td>Approximately $400 for first semester; $160 following semesters</td>
</tr>
<tr>
<td>Licensing Fees</td>
<td>Approximately $550</td>
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<tr>
<td>CPR course</td>
<td>$65 (renewal $45)</td>
</tr>
<tr>
<td>Transportation</td>
<td>Must have own transportation</td>
</tr>
<tr>
<td>Meals</td>
<td>Not provided by the hospitals or the college</td>
</tr>
</tbody>
</table>

* Tuition and fees are subject to change each year
Clinical Requirements

Physical Examinations
A physical examination must be submitted to the Health Careers Resource Center by the beginning of the first fall semester and yearly thereafter. Physical examination forms are provided upon acceptance and are also available in the Health Careers Resource Center in Bldg. 67B/Rm. 250.

CPR- Health Care Provider Card
Students must have a current CPR - Health Care Provider or Professional Rescuer card. Levels of CPR cards required for the program are as follows:

American Heart Association: BLS Healthcare Provider, valid 2 years

Background Checks – Applicants with a Criminal Or Disciplinary History
All students will be required to complete a background check prior to participating in the clinical education portion of the program. The background check must be completed through a program approved company. Students will be given information on how to complete the background check process upon acceptance to the program. The background checks will then be reviewed by the student’s clinical affiliate. Upon review, if a student’s background check summary is deemed unacceptable by a clinical affiliate, the student may not be able to continue in the program due to the inability of the student to participate in the program’s clinical component. The program is not obligated to pursue placement for the student at an alternate clinical affiliate.

Any applicant with a criminal or disciplinary history should complete the Ethics Review Pre-Application offered by the American Registry of Radiologic Technologists (ARRT) for $100 (price subject to change) before applying to the program or anytime as needed. This is the process for an early ethics review of offenses that would otherwise need to be reported on your Application for Certification after completion of the program. More information on this process may be found at: www.arrt.org, click on the Educators and Students tab, then click on the Ethics Review Pre-Application link. The program strongly recommends that students self-report criminal or disciplinary history prior to program admission or anytime as needed and complete the ARRT’s pre-application. This process can help avoid delays or denial in clinical placement, and denial of licensure.

Social Security Number
All students are required to have a valid social security number to obtain state certification and to complete the background check process.

Drug Screening
All students must pass a drug test prior to participating in clinical courses and annually thereafter. Drug testing is offered at the Student Health Center at Mt. SAC. Students will be given instruction on procedures upon acceptance and are responsible for the cost of the drug test.

College Assistance
Student Support Services
The college provides Student Support Services and Programs to students in support of student learning. Students and the public can access the services through the Student Support Services Website or by visiting the appropriate student service building on campus. A Student Services Phone Directory & Locations is available online.
Student Support Services at Mt. SAC helps students learn about financial aid opportunities, and various counseling, assessment, and assistance programs, including disabled student services. The Student Support Services Website includes more than 20 departments specifically aimed at helping students succeed in college.

Financial Aid
Students who need financial aid may contact the Financial Aid Office at (909) 274-4450.

Learning Assistance
Students who need learning assistance may contact the Learning Assistance Center at (909) 274-4300 or (909) 274-5666. Additional courses that may assist students in developing more effective study skills include COUN 2, STDY 80 and STDY 85A.

English as a Second Language (ESL)
Students must be able to clearly speak and understand English prior to being accepted into the Radiologic Technology Program. For assistance, please contact the ESL Office at (909) 274-4736.

Students with Disabilities
Persons with disabilities who require special accommodations are requested to call Mt. SAC’s Disabled Student Programs & Services at (909) 274-4290 for assistance.

Additional Information

Vacation Periods
Students will have break periods between all semesters and intersessions. No other vacation periods are scheduled.

Outside Work
Outside work is not recommended due to the long hours required. Work schedules must not adversely affect the student’s ability to meet posted class schedules, nor should the extent of the working hours interfere with the student’s release time, thereby jeopardizing his/her successful academic completion of the individual courses.

Students may only perform duties as student radiographers during regularly assigned clinical course hours. Students may never be used in lieu of staff radiographers or outside of regularly scheduled class times.

Transportation
Each student is responsible for providing his/her own transportation to school and to clinical facilities.

Curriculum/A.S. Degree Requirements
Mt. San Antonio College offers a curriculum in Medical Radiologic Technology. The program is coordinated with local clinical facilities. The curriculum is 26 months in length. Classes are held on campus in a state-of-the-art laboratory classroom and in various affiliated clinical sites.
RADIOLOGIC TECHNOLOGY PROGRAM

Curriculum/A.S. Degree Requirements (continued)

To remain in the program, students must maintain a “C” or better grade and/or “P” (passing) in all courses.

In addition to the required Radiologic Technology courses the student must complete the general education courses required for completion of the Associate in Science Degree. Requirements are listed in the current Mt. SAC catalog.

Upon satisfactory completion of the Associate in Science Degree in Radiologic Technology program, the graduate is eligible to apply for the registry examination through the American Registry of Radiologic Technologists and the California Certification of Radiologic Technology. Graduates may transfer to a state college or university offering a baccalaureate program in Radiologic Technology.

Required Skills & 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:

- Transport, move, lift, or transfer patients from a wheelchair or gurney to an x-ray table or to a patient bed.

- Lift arms above the head to move the x-ray tube assembly.

- Move, adjust, and manipulate portable and fluoroscopic equipment according to established procedures and standards of speed and accuracy while conducting radiographic examinations.

- Maneuver well enough to physically protect himself or herself from injury caused by patients exhibiting aggressive behaviors.

- Physically place patients in the proper positions for the examination according to established procedures and standards of speed and accuracy.

- 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.

- Function adequately under stressful situations related to technical and procedural standards of patient care situations.

- Hear well enough to respond to directions or calls for help from individuals remote from the location of the student.

- Speak and write English well enough to explain and direct procedural information to patients, to accurately complete required documentation, and to communicate with physicians, technical staff, and faculty.
## Curriculum Sequence & Schedule (26 months total)

### Pre-requisite courses required prior to program admission
- **ANAT10A Introductory Human Anatomy**: 4 units, Variable hours, Variable Professor
- **ANAT10B Introductory Human Physiology**: 4 units, Variable hours, Variable Professor
- **MED190 Medical Terminology**: 3 units, Variable hours, Variable Professor
- **PHYST Physics**: 4 units, Variable hours, Variable Professor

### First Year Approximate Tuition Cost $1656

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<tr>
<th>Year/Semester</th>
<th>Course</th>
<th>Units</th>
<th>Hours</th>
<th>Professor</th>
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<tr>
<td>1/Summer</td>
<td>RAD91 Patient Care in Radiologic Sciences</td>
<td>3</td>
<td>M/W 7am-12:10pm</td>
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<td></td>
<td>RAD50 Introduction to Radiologic Science and Healthcare</td>
<td>3</td>
<td>T/Th 9:30am-1:45pm</td>
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<td>1/Fall</td>
<td>RAD61A Theory of Radiologic Technology</td>
<td>4</td>
<td>T/Th 9:55am-12:00pm</td>
<td>Engisch</td>
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<td>RAD61B Radiographic Procedures I</td>
<td>3</td>
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<td>RAD61C Radiographic Procedures I Laboratory</td>
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<td>M or W 8:25am-10:30am or 12:00pm-2:05pm</td>
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<tr>
<td></td>
<td>RAD61A Clinical Experience 1A</td>
<td>5</td>
<td>T/Th 1:00pm-5:00pm &amp; F 8:00am-4:30pm</td>
<td>Engisch, McLaughlin, Neel</td>
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<td>RAD1B Clinical Experience 1B</td>
<td>3</td>
<td>M-F 7:30am-12:30pm</td>
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<td>1/Spring</td>
<td>RAD62A Theory of Radiologic Technology</td>
<td>4</td>
<td>T/Th 1:00pm-3:05pm</td>
<td>Engisch</td>
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<td>RAD62B Radiographic Procedures II</td>
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<td></td>
<td>RAD62A Clinical Experience 2A</td>
<td>5</td>
<td>T/Th 8:00am-12:00pm &amp; F 8:00am-4:30pm</td>
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### Second Year Approximate Tuition Cost $1932

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<td>RAD2B Clinical Experience 2B</td>
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<td>M/W/F 8:00am-4:30pm</td>
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<tr>
<td>2/Fall</td>
<td>RAD30 Radiographic Pathology</td>
<td>1.5</td>
<td>F (8weeks) 8:55am-12:05pm</td>
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<td>RAD63 Theory of Radiologic Technology</td>
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<td>RAD3A Clinical Experience 3A</td>
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<td>2/Spring</td>
<td>RAD31 Fluoroscopy and Radiobiology</td>
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<td>F 9:30am-2:00pm</td>
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**Total w/ pre-reqs 25 courses** 93
**w/o pre-reqs 21 courses** 77