

# COMPUTED TOMOGRAPHY (CERTIFICATE N0687)

**Technology and Health Division  
Certificate E0687**

The Computed Tomography (CT) program at Mt. SAC is a two semester certificate program open to Technologists who possess a valid California Certified Radiologic Technologist (CRT) license and are certified and registered by the American Registry of Radiologic Technologists (ARRT) in one of the following supporting disciplines: Radiologic Technology, Nuclear Medicine Technology Certification Board (or NMTCB), or Radiation Therapy. The program provides a complete educational experience for registered Radiologic Technologists (RT's) who wish to expand their skills into the study in the theory and practice of CT. Students will have the opportunity to learn and develop competence in patient care, communication skills, critical thinking, and technical skills that will prepare the student to become a competent entry level CT Technologist.

The program curriculum is designed to meet the CT educational and clinical training requirements set forth by the ARRT. The educational standards established by the American Society of Radiologic Technologists (ASRT) are also incorporated into the curriculum. Educational activities include lecture, discussions, group activities, and hands-on clinical training at a clinical site. The program includes:

- ARRT clinical experience requirements and content specifications
- ARRT 16 hour structured education requirement
- Course work in cross sectional anatomy, pathology, patient care and safety, CT procedures, equipment, image evaluation, instrumentation, technique, physics, quality assurance, and quality control.

Clinical training will be conducted at affiliated healthcare institutions and there is no guarantee the student will be placed close to home. Hours for clinical training are arranged with the clinical site (days and times will vary depending on the site). No arrangements for part time status are available.

Applicants will be required to complete a background check, physical, and provide proof of immunizations during the admissions process. Upon successful completion of the program, the student will receive a Certificate of Completion from Mt. San Antonio College. Technologist certified and registered by ARRT in the appropriate disciplines will be eligible to sit for the ARRT Computed Tomography certification examination.

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

## Required Courses

Course Prefix	Course Name	Units
RAD 7A	Computed Tomography Clinical Experience 7A	2
RAD 7B	Computed Tomography Clinical Experience 7B	7
RAD 70	Computed Tomography Sectional Anatomy and Pathology	2
RAD 71	Computed Tomography Procedures and Patient Care	3

RAD 72	Computed Tomography Physics and Instrumentation	3
<b>Total Units</b>		<b>17</b>

To remain in the program, students must maintain a grade of "C" or better in all courses.

Computed Tomography Website (<https://www.mtsac.edu/radiologic/computed-tomography/>)

## Admission Requirements

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

1. Be 18 years of age.
2. Possess a valid Social Security Card. This is a licensed profession, and a valid Social Security Number is required to obtain national licensure.
3. Possess a valid and current California Diagnostic Radiologic Technology Certificate. Certification must be maintained throughout the program.
4. Be Certified and Registered by the ARRT in one of the following supporting disciplines: Radiologic Technology, Nuclear Medicine Technology Certification Board (or NMTCB), or Radiation Therapy. Certification must be maintained throughout the program.
5. Possess current American Heart Association: Basic Life Support (BLS) for Healthcare Providers CPR certification.
6. Submit a CT Program application.
7. Complete a physical examination, including specific immunizations and drug testing. Drug testing procedures will be provided upon admission.
8. Complete a background check indicating a passing clearance. A valid Social Security number is required to complete this process. Information on background check procedures and clinical affiliate's review of results will be provided upon admission.
9. Complete site-specific clinical requirements if applicable.
10. Attend a mandatory program orientation.
11. Meet the following **Essential Functions for Success** in the Radiologic Technology Program:

### Physical Demands

- Perform prolonged, extensive, or considerable standing/walking, lifting positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift/carry 50 lbs. or more)
- Perform considerable reaching, stooping, bending, kneeling, and crouching
  - Respond rapidly to situations involving the health and safety of patients
  - Function adequately under stressful situations

### **Sensory Demands**

(May be corrected with adaptive devices)

- Color vision: ability to distinguish and identify colors
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
  - Near vision: ability to see clearly 20 inches or less
  - Hearing: able to recognize a full range of tones

### **Working Environment**

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

### **Additional Information**

1. Possessing California Venipuncture Certification is highly recommended.
2. Clinical training will be conducted at affiliated clinical sites and there is no guarantee the student will be placed close to home. Clinical training schedules are arranged with the clinical site. Day and hours vary depending on the site; thus, student availability must be flexible. Weekly training hours must be fulfilled to earn a passing grade for the course.

### **English Language Skills**

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

### **Selection Procedure**

Selection of students is lottery based. Applications are selected through a computerized, random process. Applicants who are not selected can reapply the following year.

The Department will make every effort to notify the applicant of admission no less than one month prior to program commencement.

### **Program Completion Requirements**

Students must complete all program-required coursework to earn a certificate of completion in Computed Tomography. This certificate will permit the student to apply for the CT registry exam through the American Registry of Radiologic Technologist.

### **Program Learning Outcomes**

*Upon successful completion of this program, a student will:*

- develop workforce readiness skills
- apply accurate positioning skills and provide appropriate patient care
- select optimal technical factors
- utilize appropriate radiation protection and ALARA principles
- demonstrate academic and technical competence as an entry-level CT Technologists
- communicate effectively with patients, clinical staff, and peers
- demonstrate effective written and verbal communication skills in didactic and clinical settings
- use critical thinking skills in both routine and non-routine clinical situations
- adapt standard procedures for non-routine patients
- analyze images to determine diagnostic quality and make modifications as needed
- exhibit professional work ethic, behavior, and attitude
- abide by the ASRT Code of Ethics
- use professional judgment when working with patients and others
- identify the advantage of belonging to professional organizations
- understand the need for continued professional development and growth
- participate in professional development activities
- pass the ARRT certification exam in CT
- secure employment as a CT Technologist within one year of program completion

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