

## Definition

The radiologic technologist (radiographer) is a member of the health care team who works directly with patients and other practitioners performing diagnostic imaging procedures. Radiographers may work in a variety of health care settings including hospitals, imaging centers and physician offices.

Antelope Valley College is accredited by the Accrediting Commission of Community and Junior Colleges of the Western Association of Schools and Colleges. The Radiologic Technology program is approved by the State of California Department of Public Health, Radiologic Health Branch, P.O. Box 997414, MS 0500, Sacramento, CA 95899, (916) 558-1784, [www.cdph.ca.gov](http://www.cdph.ca.gov); and accredited by the Joint Review Committee on Education in Radiologic Technology, 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, (312) 704-5300, e-mail: [mail@jrcert.org](mailto:mail@jrcert.org).

## Staff

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## Program Description

The Antelope Valley College Radiologic Technology program provides concurrent didactic and clinical education. The program length is 24 months. Students should expect to attend class/clinic/laboratory 4 to 5 days per week up to 40 hours per week and therefore should be able to make a full time commitment. Courses are scheduled in the fall, intersession, spring and summer sessions. Weekend and/or evening hours may be required. The clinical education sites affiliated with the program are located in Lancaster, Palmdale and Ridgecrest, California. Students may be assigned to any clinical education site during the length of the program.

The course of study leads to an Associate in Science Degree in Radiologic Technology.

Students must receive a grade of "C" or better in all required

core courses and the specific courses listed as program electives in order to qualify for the degree.

## Program Mission

The mission of the Antelope Valley College Radiologic Technology program is to serve the community by providing an educational setting for the development of knowledge, skills and professional behaviors essential for a foundation and career advancement in radiologic technology sciences.

## Program Goals

### Goal: Students will be clinically component.

#### Student Learning Outcomes:

Students will apply positioning skills.

Students will select technical factors.

Students will utilize radiation protection.

### Goal: Students will demonstrate communication skills.

#### Student Learning Outcomes:

Students will demonstrate written communication skills.

Students will demonstrate oral communication skills

### Goal: Students will develop critical thinking skills.

#### Student Learning Outcomes:

Students will adapt standard procedures for non-routine patients.

Students will critique images to determine diagnostic quality.

### Goal: Students will model professionalism.

#### Student Learning Outcomes:

Students will demonstrate work ethics.

Students will summarize the value of life-long learning.

## Certification Eligibility

Completion of an educational program in radiologic technology does not guarantee that a certificate to practice diagnostic imaging will be granted by the Radiologic Health Branch or the American Registry of Radiologic Technologists (ARRT).

The ARRT requires review of criminal proceedings, sanctions by a state or federal regulatory body or certification board and/or honor code violations. This review may be conducted prior to or during the program. For more information contact the ARRT at: (651) 687-0048 or visit [www.arrt.org/handbooklinks](http://www.arrt.org/handbooklinks).

## Career Options

Radiologic Technologist

## Certificate Program

Certificate not applicable.

## Associate Degree

### Radiologic Technology

#### Prerequisites

Students who are applying to enroll in the radiologic technology program must meet the following prerequisites:

1. Freedom from communicable disease as verified by a licensed physician or certified nurse practitioner. Other health

conditions that could impair a student’s ability to perform the essential functions of a radiologic technology student will be examined on a case-by-case basis. Final acceptance into the program will depend on the results of the physical examination.

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|---|-------|
| 2. Completion of:                         | units |
| BIOL 201, Gen. Human Anatomy              | 4     |
| BIOL 202, Gen. Human Physiology           | 4     |
| ENGL 101/ENGL 101SL, Academic Composition | 3     |
- NOTE:** The three prerequisite courses must be completed with a grade of “C” or better and grades must be posted on the official college transcript when the “Verification of Prerequisites” packet is submitted.

**Enrollment Procedures for all Students**

All items in the process must be submitted together.

- Obtain the “Verification of Prerequisites” form for the radiologic technology program from the Health and Safety Sciences Division office during the designated enrollment period.
  - Submit one set of official college transcripts showing completion of the three prerequisite courses to the Health and Safety Sciences Division office with the program enrollment form. (Transcripts/AP scores results must be received in sealed, unopened envelopes.) Another set of transcripts should be sent to the transcript office. It is the student’s responsibility to contact the college(s) attended for official transcripts. The student should contact educational institutions early in the enrollment process.
- NOTE:** Foreign transcripts of college work must be evaluated for equivalency to United States education by an accredited credentials evaluation service. Subject and grade listing are required for college work. A list of credentials evaluation services is available from the Counseling Department.
- Submit an Education Planning and Evaluation Form provided by an AVC counselor. The counselor will evaluate progress toward graduation requirements and courses from other colleges for equivalency to AVC courses. Contact the Counseling Department for an appointment.
  - Students transferring science courses should consult with a counselor and the dean. Not all science courses are equivalent to those at AVC.

Submission of a “Verification of Prerequisites” packet does not guarantee acceptance into the program. Incomplete packets will not be considered.

**Selection Procedure**

1. “Verification of Prerequisite” packets are accepted during the enrollment period. A lottery will take place at the conclusion of the enrollment period. Students are advised of acceptance or non-acceptance by mail. **The student is responsible for informing the Health and Safety Sciences Division office of any change of address, email, and/or telephone number.**
2. A physical examination and drug screen will be required after conditional acceptance into the program. The purpose

of the examination is to ensure the absence of communicable disease and to ensure that the student is not adversely affected by physical and/or mental illness that may endanger the health and safety of a patient. Students will be required to submit evidence of the following immunizations: measles, mumps, rubella, chicken pox, Tdap (as an adult), annual seasonal flu vaccine, and hepatitis B. These immunizations are required by facilities where students will have clinical experiences. Antelope Valley College does not provide these immunizations.

3. Students are required to have background screening for felonies, misdemeanors, fraud and abuse, sexual crimes, and social security number verification. Information on how to obtain background screening will be sent to students with the acceptance letter.
4. Students are required to purchase personal liability insurance. Information about personal liability insurance will be sent to students with the acceptance letter.

It is recommended that students complete the general education requirements for the Associates in Sciences Degree in Radiologic Technology prior to program enrollment. Please refer to the degree requirements listed below.

<b>Required Prerequisite:</b> (11 units)	<b>units</b>
BIOL 201, General Human Anatomy (GE requirement Area A)	4
BIOL 202, General Human Physiology	4
ENGL 101/ENGL 101SL, Academic Composition (GE requirement Area D1)	3

Except in cases of a prerequisite requirement, it is not required to take courses in exactly this sequence; they are recommended in this order to facilitate success.

*Recommended Plan of Study*

<b>First Summer Semester</b>	<b>units</b>
RADT 101, Introduction to Radiologic Technology	2
RADT 102, Patient Care in Radiology	2
PSY 101, General Psychology (GE requirement Area B)	3
<b>Total</b>	<b>7</b>

<b>First Fall Semester</b>	<b>units</b>
RADT 103, Radiographic Positioning and Procedures I	10
RADT 104, Radiographic Principles I	3
MATH 102, Intermediate Algebra (GE requirement Area D2)	4
<b>Total</b>	<b>17</b>

<b>Intersession</b>	<b>units</b>
RADT 106, Radiographic Clinical Practicum IA	2
Course from GE requirement Area C	3
<b>Total</b>	<b>5</b>

<b>First Spring Semester</b>	<b>units</b>
COMM 103, Process of Communication (GE requirement Area E)	3
RADT 107, Radiographic Positioning and Procedures II	10
RADT 108, Advanced Principles of Exposure	3
RADT 109, Radiation Physics	3
<b>Total</b>	<b>19</b>

<b>Second Summer</b>	<b>units</b>
RADT 201, Radiographic Clinical Practicum III	_5
<b>Total</b>	<b>5</b>
<b>Second Fall Semester</b>	<b>units</b>
RADT 202, Radiographic Pathology	11
RADT 203, Fluoroscopic Imaging & Radiation Protection	3
RADT 204, Principles and Applications of Cross-Sectional Anatomy in Imaging	2
RADT 210, Principles of Venipuncture for Radiology	_1
<b>Total</b>	<b>17</b>
<b>Second Intersession</b>	<b>units</b>
RADT 205, Radiographic Clinical Practicum IV	_2
<b>Total</b>	<b>2</b>
<b>Second Spring Semester</b>	<b>units</b>
RADT 207, Advanced Radiographic Procedures	11
RADT 208, Radiographic Certification Preparation	4
Course from GE requirement Area F	_3
<b>Total</b>	<b>18</b>
<b>Degree Total 101 Units</b>	

## Radiologic Technology Courses

### RADT 101 INTRODUCTION TO RADIOLOGIC TECHNOLOGY

2 units

36 hours total

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of BIOL 201, BIOL 202, and ENGL 101/ENGL 101SL with a grade of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 102.

This course includes orientation to the role of the radiologic technologist. The course includes medical use of radiation, ethics, history of radiology, hospital and department operations, and program policies and regulations. (CSU, AVC)

### RADT 102 PATIENT CARE IN RADIOLOGY

2 units

36 hours total

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of BIOL 201, BIOL 202, and ENGL 101/ENGL 101SL with a grade of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 101.

This course introduces basic concepts and skills that are essential for safe patient care in the field of radiography. (CSU, AVC)

### RADT 103 RADIOGRAPHIC POSITIONING AND PROCEDURES I

10 units

3 hours lecture weekly

21 hours clinic weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 101 and RADT 102 with a grade of "C" or better, and Eligibility for MATH 102.

**Corequisite:** Concurrent enrollment in RADT 104.

This course provides beginning theory, lab, and clinical practice in radiographic positioning and procedures of the respiratory system, bony thorax, lower and upper extremities and related joints, and abdominal cavity. Portable and trauma radiography are included. (CSU, AVC)

### RADT 104 RADIOGRAPHIC PRINCIPLES I

3 units

3 hours weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 101 and RADT 102 with a grade of "C" or better, and Eligibility for MATH 102.

**Corequisite:** Concurrent enrollment in RADT 103.

This course introduces principles of x-ray image creation, basic radiation protection, exposure factors, beam restriction, and radiation absorption. Accessory supplies and equipment, grids,

#### ADVANCED PLACEMENT/TRANSFER STUDENTS:

The program does not offer Advanced Placement. Students who wish to have general education courses reviewed for transfer from another accredited college or university should contact the Counseling Center in Students Services. Students who were previously admitted into the program and wish to return should contact the program director or Dean of the division in writing at least 3 months prior to the start of the semester of desired re-admission. Admission of returning students is based on program capacity.

#### Transfer

Not a transfer major. Some courses may be transferrable to baccalaureate programs in radiologic technology or as general electives. Students who are interested in transfer options should meet with a counselor or consult the Transfer Center.

#### Prerequisite Completion

If a course is listed as a prerequisite for another course, that prerequisite course must be completed with a satisfactory grade in order to enroll in the next course. According to Title 5, Section 55200(d), a satisfactory grade is a grade of "A," "B," "C" or "P". Classes in which the Pass/No Pass option is available are indicated with an asterisk (\*) before the course title. See "Pass/No Pass Option" in the catalog for full explanation.

image receptors, image processing, sensitometry, and digital radiography are also covered. Photographic and geometric factors that contribute to quality and detail will be discussed. (CSU, AVC)

### **RADT 106 RADIOGRAPHIC CLINICAL PRACTICUM IA**

2 units

6 hours weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 103, and RADT 104 with a grade of "C" or better, and Eligibility for MATH 102.

This course provides supervised practice in clinical settings to improve skills in basic radiographic procedures. (CSU, AVC)

### **RADT 107 RADIOGRAPHIC POSITIONING AND PROCEDURES II**

10 units

3 hours lecture weekly

21 hours clinic weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 106 with a grade of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 108 and RADT 109.

This course provides theory, laboratory, and clinical practice in positioning for the cranium, facial bones, sinuses, vertebral column and contrast procedures for the gastrointestinal and genitourinary tracts. (CSU, AVC)

### **RADT 108 ADVANCED PRINCIPLES OF EXPOSURE**

3 units

3 hours weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 106 with a grade of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 107 and RADT 109.

This course provides advanced analysis of the principles of radiologic technique and their applications in the clinical settings. Students learn to calculate changes in technical factors and their effects on image production and quality. (CSU, AVC)

### **RADT 109 RADIATION PHYSICS**

3 units

3 hours weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 106 and MATH 102 with a grade of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 107 and RADT 108.

This course is designed specifically for students enrolled in the radiologic technology program. It focuses on electromagnetic energy, radiation production, radiation interaction, and radiation characteristics. Factors contributing to the construction and proper operation of x-ray equipment and electronics will be emphasized. (CSU, AVC)

### **RADT 201 RADIOGRAPHIC CLINICAL PRACTICUM III**

5 units

15 hours weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 107, RADT 108 and RADT 109 with a grade of "C" or better.

Supervised clinical experiences are provided to perfect skills in a variety of radiographic procedures. Students will have opportunities to enhance basic skills, positioning techniques, patient care, and clinical operations. (CSU, AVC)

### **RADT 202 RADIOGRAPHIC PATHOLOGY**

11 units

3 hours lecture weekly

24 hours clinic weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 201 with a grade of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 203, RADT 204 and RADT 210.

This course provides an introduction to advanced pathological conditions. Normal radiographic anatomy is differentiated from pathologic conditions. Students participate in supervised clinical practice. (CSU, AVC)

### **RADT 203 FLUOROSCOPIC IMAGING AND RADIATION PROTECTION**

3 units

3 hours weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 201 with a grade of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 202, RADT 204 and RADT 210.

This course provides an introduction to the fluoroscopic imaging system and methods of reducing public and occupational doses of radiation. The course prepares students for national certification and the California Fluoroscopy Permit Exam. (CSU, AVC)

### **RADT 204 PRINCIPLES AND APPLICATIONS OF CROSS-SECTIONAL ANATOMY IN IMAGING**

2 units

2 hours weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 201 with a grade of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 202, RADT 203, and RADT 210.

This course includes cross-sectional anatomy and relationships of human organs to each other as the organs appear in the sagittal, coronal, and axial planes. Practical applications of cross-sectional anatomy in computerized tomography, magnetic resonance imaging, and ultrasound will be emphasized. (CSU, AVC)

### **RADT 205 RADIOGRAPHIC CLINICAL PRACTICUM IV**

2 units

6 hours weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 202, RADT 203, RADT 204 and RADT 210 with a grade of "C" or better.

This course provides supervised clinical practice in various clinical settings. Students will have opportunities to perfect positioning skills, image analysis and patient care techniques learned in previous theory courses. (CSU, AVC)

### **RADT 207 ADVANCED RADIOGRAPHIC PROCEDURES**

11 units

3 hours lecture weekly

24 hours total clinic

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 202, RADT 203, RADT 204 and RADT 210 with grades of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 208.

This course provides the advanced radiography student with a survey of advanced imaging and an introduction to other specializations in radiation sciences. An introduction to special invasive procedures is also included. (CSU, AVC)

### **RADT 208 RADIOGRAPHIC CERTIFICATION PREPARATION**

4 units

4 hours weekly

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 202, RADT 203, RADT 204 and RADT 210 with grades of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 207.

**Instructional materials fee** required for this course and must be paid at registration.

This course consists of a review of subjects that are critical for the American Registry of Radiologic Technologists (ARRT) examination and the California certification examination. (AVC)

### **RADT 210 PRINCIPLES OF VENIPUNCTURE FOR RADIOLOGY**

1 units

18 hours total

**Limitation on Enrollment:** Formal admission to Radiologic Technology Program.

**Prerequisite:** Completion of RADT 201 with a grade of "C" or better.

**Corequisite:** Concurrent enrollment in RADT 202, RADT 203 and RADT 204.

This course provides basic instruction and practice of venipuncture theory and methods for the administration of contrast agents. It meets California Health and Safety Code, Section 106985, pertaining to Certified Radiologic Technologists performing venipuncture. (AVC)