

# Radiologic Technology

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Radiologic Technology courses are only open to those students who:

- Have been accepted in the Associate Degree Radiologic Technology program, or
- Have graduated from the Radiologic Technology program, or
- Have been accepted and are actively enrolled in a Radiologic Technology Program at another institution, or
- Possess certification as a Radiologic Technologist
- If you have been blocked from enrolling in a RADT course, and you believe you have met one of the enrollment conditions listed above, please call Rafael Rivera, Program Coordinator at 650.306.3283

## RADT 400 ORIENTATION TO RADIOLOGIC TECHNOLOGY

This course is an orientation to radiologic technology including organization of medical practice, the socioeconomic, ethical, political and legal aspects of healthcare with special emphasis on radiology. Included will be an introduction to radiation protection and the provisions of the California Administrative Code, Title XVII, Radiation Control Regulations. *Letter Grade Only. Degree Credit.*

**Units:** 2

**Hours/semester:** 32-36 Lecture; 64-72 Homework

**Prerequisites:** ENGL 100 or ENGL 105

**Transfer Credit:** CSU

## RADT 408 PERSPECTIVES IN RADIOLOGY

Designed for students who have been accepted to the radiologic technology program, this course provides an introduction to hospital policies including codes of conduct, radiation protection, ethics, medical asepsis, patient care, and confidentiality. *Letter Grade Only. Degree Credit.*

**Units:** 1.5

**Hours/semester:** 24-27 Lecture; 48-54 Homework

**Prerequisites:** Acceptance to the Radiologic Technology Program.

**Transfer Credit:** CSU

## RADT 410 RADIOGRAPHIC POSITIONING

Students learn concepts and terminology in radiographic positioning, anatomy and selected pathology of the chest, abdomen, pelvis, upper and lower extremities. Laboratory

experience with ionizing and non-ionizing equipment is included. *Letter Grade Only. Degree Credit.*

**Units:** 4

**Hours/semester:** 48-54 Lecture; 48-54 Lab; 96-108 Homework

**Prerequisites:** Acceptance in the Radiologic Technology Program.

**Transfer Credit:** CSU

## RADT 415 RADIATION PROTECTION AND BIOLOGY

A study of the effects and methods of measurements of radiation in the human body. Discussion of historic and current concepts in governmental regulations and protection requirement. This course provides the student with background to understand the methods for protecting patients and medical personnel from unnecessary radiation exposure. *Letter Grade Only. Degree Credit.*

**Units:** 3

**Hours/semester:** 48-54 Lecture; 96-108 Homework

**Prerequisites:** PHYS 405

**Transfer Credit:** CSU

## RADT 418 CLINICAL EDUCATION I

Designed for the beginning radiologic technology student assigned to a clinical education facility. It consists of orientation to clerical, image processing, patient transportation, supplies and equipment, and radiographic equipment operation. Students observe, assist and perform radiographic examinations appropriate to the student's level of education following accepted radiation protection standards. *Letter Grade Only. Degree Credit.*

**Units:** 4.5

**Hours/semester:** 224-243 Field Experience

**Prerequisites:** Acceptance into the Radiologic Technology Program.

**Corequisites:** Concurrent enrollment in RADT 410.

**Transfer Credit:** CSU

## RADT 420 RADIOGRAPHIC POSITIONING II

Positioning the human body for radiographic purposes with emphasis on the vertebral column, bony thorax, bony cranium, genitourinary and gastrointestinal systems and mobile radiography. Patient care and pathological conditions appropriate to procedures and proper equipment manipulation and operation are also covered. Students perform related projects in the affiliated clinical



education sites to which they are assigned. *Letter Grade Only. Degree Credit.*

**Units:** 4

**Hours/semester:** 48-54 Lecture; 48-54 Lab; 96-108 Homework

**Prerequisites:** RADT 410

**Corequisites:** Concurrent enrollment in RADT 428

**Recommended:** Eligibility for ENGL 110.

**Transfer Credit:** CSU

### RADT 428 CLINICAL EDUCATION II

Second semester clinical education course for the radiologic technology student. Based on skills mastered and maintained in RADT 418, the student continues to build knowledge and clinical application of radiographic positioning and related anatomy. Students assist and perform radiographic examinations appropriate to the student's level of knowledge following accepted radiation protection standards. *Letter Grade Only. Degree Credit.*

**Units:** 6.5

**Hours/semester:** 320-351 Field Experience

**Prerequisites:** RADT 418

**Corequisites:** Concurrent enrollment in, RADT 420

**Transfer Credit:** CSU

### RADT 430 PRINCIPLES OF RADIOGRAPHIC IMAGE PRODUCTION

This course covers the application of the theoretical physics of x-ray production, as well as the practical job of producing quality radiographs with the least possible dose to the patient. Included in this course is a thorough exploration of the major and minor technical factors, including mAs, kVp, distance, and filtration. In addition, there is an analysis of image quality, and methods for correcting improperly exposed radiographs. *Letter Grade Only. Degree Credit.*

**Units:** 3.5

**Hours/semester:** 48-54 Lecture; 24-27 Lab; 96-108 Homework

**Prerequisites:** PHYS 405

**Transfer Credit:** CSU

### RADT 435 IMAGING EQUIPMENT AND QUALITY CONTROL

This course provides the student with an introduction to the various types of equipment and tests required to organize and implement a program of quality control in diagnostic imaging. It includes topics such as: radiation

output measurements, filtration, linearity, reproducibility, automatic exposure control (AEC) analysis, alignment, kilovolt peak (kVp) and milliampere-seconds (mAs) and accuracy. *Letter Grade Only. Degree Credit.*

**Units:** 1.5

**Hours/semester:** 16-18 Lecture; 24-27 Lab; 32-36 Homework

**Prerequisites:** RADT 430 or licensed radiologic technologist

**Transfer Credit:** CSU

### RADT 438 CLINICAL EDUCATION III

Designed for the third semester radiologic technology student. It is the third segment of the first rotation. Based on skills mastered and maintained in RADT 428, the student continues to build knowledge and clinical application of radiographic positioning and related anatomy. Students assist and perform radiographic examinations appropriate to the student's level of knowledge following accepted radiation protection standards. *Letter Grade Only. Degree Credit.*

**Units:** 4.5

**Hours/semester:** 224-243 Field Experience

**Prerequisites:** RADT 428

**Transfer Credit:** CSU

### RADT 440 ADVANCED IMAGING MODALITIES & SPECIALIZED PROCEDURES

Students apply basic technical and positioning knowledge to specialize procedures. Appropriate pathology encountered in special procedures is discussed. Principles of CT, MRI, U/S, nuclear medicine, mammography, interventional radiography, mobile and surgical radiography, pediatrics, geriatrics, PET, and radiation oncology are also introduced. *Letter Grade Only. Degree Credit.*

**Units:** 4

**Hours/semester:** 64-72 Lecture; 128-144 Homework

**Prerequisites:** RADT 415, RADT 420 and RADT 430 or certification as a Radiologic Technologist.

**Transfer Credit:** CSU

### RADT 441 SECTIONAL ANATOMY

The course provides an introduction to the basic principles of sectional anatomy as related to imaging modalities such as Computerized Tomography (CT) and Magnetic Resonance Imaging (MRI). This information is required for Radiologic Technology students. *Letter Grade Only. Degree Credit.*

**Units:** 1.5

**Hours/semester:** 24-27 Lecture; 48-54 Homework



**Transfer Credit:** CSU

### **RADT 442 RADIOGRAPHIC PATHOLOGY**

Disease processes commonly encountered by the radiographer are presented in this course. Students will study radiographic computerized tomography (CT) and magnetic resonance imaging (MRI) scans of skeletal, neurologic, gastrointestinal, respiratory, circulatory and reproductive systems. *Letter Grade Only. Degree Credit.*

**Units:** 1.5

**Hours/semester:** 24-27 Lecture; 48-54 Homework

**Prerequisites:** BIOL 260 and RADT 441

**Transfer Credit:** CSU

### **RADT 448 CLINICAL EDUCATION IV**

Designed for the fourth semester radiologic technology student. Students continue to build the skills obtained in previous clinical education experiences. *Letter Grade Only. Degree Credit.*

**Units:** 9.5

**Hours/semester:** 464-513 Field Experience

**Prerequisites:** RADT 438

**Transfer Credit:** CSU

### **RADT 450 REGISTRY REVIEW**

This course is designed to prepare the student for board examination through comprehensive review of Radiologic Technology topics and preparatory testing. This course is required for the graduating Radiologic Technology student. *Letter Grade Only. Degree Credit.*

**Units:** 1.5

**Hours/semester:** 24-27 Lecture; 48-54 Homework

**Prerequisites:** RADT 435 and completion of, or concurrent enrollment in, RADT 458

### **RADT 458 CLINICAL EDUCATION V**

This course is the second segment of the second year of Radiologic Technology clinical education. Students continue to build the skills obtained in the previous four clinical experiences and obtain skills in more complex procedures. *Letter Grade Only. Degree Credit.*

**Units:** 9

**Hours/semester:** 448-486 Field Experience

**Prerequisites:** RADT 448

**Transfer Credit:** CSU

### **RADT 468 CLINICAL EDUCATION VI**

This final phase of clinical education allows the student to perform radiographic procedures on patients in affiliated hospitals with minimal or indirect assistance in preparation for entry into employment. The final four weeks of training are dedicated to a specialized area of radiography and require full-time attendance in the clinical setting. *Letter Grade Only. Degree Credit.*

**Units:** 4.5

**Hours/semester:** 232-243 Field Experience

**Prerequisites:** RADT 458

**Transfer Credit:** CSU

### **RADT 470 SPECIALIZED TECHNIQUES: MAMMOGRAPHY**

This course covers the curriculum mandated by the California Department of Public Health, Radiologic Health Branch, which includes: breast anatomy, physiology, instrumentation, technical factors, mammography positioning, pathology, risk factors, and detection techniques. It satisfies the requirements of California's qualifications for the mammography examination. *Letter Grade Only. Degree Credit.*

**Units:** 2

**Hours/semester:** 24-27 Lecture; 24-27 Lab; 48-54 Homework

**Prerequisites:** Enrollment in the Radiologic Technology program or certification as a Radiologic Technologist.

**Transfer Credit:** CSU

### **RADT 471 SPECIALIZED TECHNIQUES: FLUOROSCOPY**

This course covers fluoroscopic equipment, radiation protection, illumination, image evaluation, eye anatomy and physiology, patient and personnel dose reduction. Intended for second year students in the Radiologic Technology Program or licensed Radiographer. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 2.5

**Hours/semester:** 32-36 Lecture; 24-27 Lab; 64-72 Homework

**Prerequisites:** RADT 435, or California Radiologic Technology License.

**Transfer Credit:** CSU



### **RADT 474 VENIPUNCTURE FOR CONTRAST MEDIA ADMINISTRATION**

Students learn concepts and techniques of venipuncture used by radiologic technologists for the administration of contrast material, the pharmacology of dose units, and response to allergic reaction. Puncture techniques are practiced on a manikin and ten venipuncture are performed on a human being. This course meets the statutory requirements of California Health and Safety Codes. *Letter Grade Only. Degree Credit.*

**Units:** 1

**Hours/semester:** 8-9 Lecture; 24-27 Lab; 16-18 Homework

**Prerequisites:** California full certification as a radiologic technologist or enrollment as a second-year student in a two-year radiologic technology program. Current CPR and Basic Life Support for health care provider approved by the American Heart Association (AHA).

**Transfer Credit:** CSU

### **RADT 695 INDEPENDENT STUDY**

Designed for students who are interested in furthering their knowledge via self-paced, individualized instruction provided in selected areas or directed study to be arranged with instructor and approved by the division dean using the Independent Study Form. Varying modes of instruction can be used -- laboratory, research, skill development, etc. For each unit earned, students are required to devote three hours per week throughout the semester. Students may take only one Independent Study course within a given discipline. *Grade Option (Letter Grade or Pass/No Pass). Degree Credit.*

**Units:** 0.5 - 3

**Hours/semester:** 24-162 Lab

**Transfer Credit:** CSU

