

RADIOLOGIC TECHNOLOGY (RAD)

RAD 1A Clinical Experience 1A

4.5 Units (Degree Applicable, CSU)
(May be taken for Pass/No Pass only)
Lab: 256

Prerequisite: *ANAT 10A and ANAT 10B and RAD 50 and RAD 91*
Corequisite: *RAD 61A and RAD 61B and RAD 61C*

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on upper and lower limbs, shoulder girdle, pelvis, chest, and abdomen. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 1B Clinical Experience 1B

2.5 Units (Degree Applicable, CSU)
(May be taken for Pass/No Pass only)
Lab: 150

Prerequisite: *RAD 1A*

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on upper and lower limbs, shoulder girdle, pelvis, chest, and abdomen. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 2A Clinical Experience 2A

4.5 Units (Degree Applicable, CSU)
(May be taken for Pass/No Pass only)
Lab: 256

Prerequisite: *RAD 1B*

Corequisite: *RAD 62A and RAD 62B and RAD 62C*

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 2B Clinical Experience 2B

2.5 Units (Degree Applicable, CSU)
(May be taken for Pass/No Pass only)
Lab: 144

Prerequisite: *RAD 2A*

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 3A Clinical Experience 3A

7 Units (Degree Applicable, CSU)
(May be taken for Pass/No Pass only)
Lab: 384

Prerequisite: *RAD 2B*

Corequisite: *RAD 63*

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 3B Clinical Experience 3B

2.5 Units (Degree Applicable, CSU)
(May be taken for Pass/No Pass only)
Lab: 150

Prerequisite: *RAD 3A*

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 3C Clinical Experience 3C

7 Units (Degree Applicable, CSU)
(May be taken for Pass/No Pass only)
Lab: 384

Prerequisite: *RAD 3B*

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 4 Clinical Experience 4

4 Units (Degree Applicable, CSU)
(May be taken for Pass/No Pass only)
Lab: 240
Prerequisite: RAD 3C

Clinical experience in the radiology department of affiliated hospitals under the supervision of a licensed radiologic technologist. Emphasis on chest, thorax, upper and lower extremity, head, spine, pelvis, abdomen, fluoroscopic studies, mobile C-arm studies, mobile radiographic studies, pediatric studies, and geriatric studies. Health physical, background check, drug test, and cardiopulmonary resuscitation (CPR) certification is required. Intended for students enrolled in Radiologic Technology Program. Designed to meet The Joint Review Committee on Education in Radiologic Technology (JRCERT) accreditation standards.

RAD 7A Computed Tomography Clinical Experience 7A

2 Units (Degree Applicable)
(May be taken for Pass/No Pass only)
Corequisite: RAD 70

Computed Tomography (CT) clinical experience in the radiology department of affiliated clinical sites under the supervision of a registered Radiologic Technologist, supervisor, or physician. Emphasis on Computed Tomography procedures of the head, neck, spine, musculoskeletal, chest, abdomen, pelvis, and special procedures. Image display, post processing, and quality assurance is included. Intended for students enrolled in Computed Tomography Certificate Program. Health physical, background check, drug test, and CPR certification is required. Prior to enrolling in this course, student must possess a valid California Certified Radiologic Technologist (CRT) license and be certified and registered by the American Registry of Radiologic Technologists (ARRT) in one of the following supporting disciplines: Radiologic Technology, Nuclear Medicine or Nuclear Medicine Technology Certification Board (NMTCB) certification, or Radiation Therapy.

RAD 7B Computed Tomography Clinical Experience 7B

7 Units (Degree Applicable)
(May be taken for Pass/No Pass only)
Prerequisite: RAD 7A and RAD 70
Corequisite: RAD 71 and RAD 72

Continued Computed Tomography (CT) clinical experience in the radiology department of affiliated clinical sites under the supervision of a registered Radiologic Technologist, supervisor or physician. Emphasis on Computed Tomography procedures of the head, neck, spine, musculoskeletal, chest, abdomen, pelvis, and special procedures. Image display, post processing and quality assurance is included. Intended for students enrolled in Computed Tomography Certificate Program. Health physical, background check, drug test, and CPR certification is required. Prior to enrolling in this course, student must possess a valid California Certified Radiologic Technologist (CRT) license and be certified and registered by the American Registry of Radiologic Technologists (ARRT) in one of the following supporting disciplines: Radiologic Technology, Nuclear Medicine or Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy.

RAD 30 Radiographic Pathology

1.5 Units (Degree Applicable)
Lecture: 27
Corequisite: RAD 3A

Concepts related to disease and etiological considerations with emphasis on radiographic appearance of disease and impact on exposure factor selection.

RAD 31 Fluoroscopy and Radiobiology

4 Units (Degree Applicable)
Lecture: 72
Prerequisite: RAD 62A
Corequisite: RAD 3C

Radiobiology, radiation physics, exposure reduction, fluoroscopy equipment and operation, image evaluation, quality control, and patient considerations. Intended for students enrolled in Radiologic Technology Program.

RAD 32 Digital Imaging in Radiology

2 Units (Degree Applicable)
Lecture: 36
Prerequisite: RAD 61A

Digital image acquisition and display in radiology. Content imparts an understanding of the components, principles, and operation of digital imaging systems found in diagnostic radiology. Factors impacting image acquisition, display, archiving, and retrieval are discussed. Principles of digital system quality assurance and maintenance are presented. Intended for students enrolled in Radiologic Technology program.

RAD 40 Mammography Principles and Procedures

3 Units (Degree Applicable)
Lecture: 54
Corequisite: RAD 3C

Advanced course designed to provide students with the necessary skills to become California state certified in Mammographic Radiologic Technology and meet the Mammography Quality Standards Act guidelines. Includes coursework in breast anatomy/physiology, patient care, mammography procedures, positioning, compression, interventional procedures, imaging of patients with breast implants, pathology, image evaluation, instrumentation, technique, physics, and quality assurance/quality control. Enrollment limited to current Radiologic Technology program students.

RAD 50 Introduction to Radiologic Science and Health Care

3 Units (Degree Applicable, CSU)
Lecture: 54

Foundations of radiography and the practitioner's role in the healthcare delivery system. Principles, practices and policies of healthcare organizations are examined and discussed in addition to the professional responsibilities of the radiographer. Includes radiation safety and a foundation in ethics and law related to the practice of medical imaging. Intended for students enrolled in Radiologic Technology Program.

RAD 61A Theory of Radiologic Technology

4 Units (Degree Applicable, CSU)
Lecture: 72
Prerequisite: RAD 50 and PHYS 1
Corequisite: RAD 1A and RAD 61B and RAD 61C

Structure of the atom, radiation, radiographic equipment, exposure factor formulation, technique charts, and radiation protection. Intended for students enrolled in Radiologic Technology Program.

RAD 61B Radiographic Procedures I**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: ANAT 10A and ANAT 10B and MEDI 90 and RAD 50 and RAD 91**Corequisite:** RAD 1A and RAD 61A and RAD 61C

Knowledge base necessary to perform standard imaging procedures and special studies. Consideration is given to the evaluation of optimal images. Focus on anatomy and positioning of the upper and lower limbs, chest, and abdomen. Intended for students enrolled in Radiologic Technology Program.

RAD 61C Radiographic Procedures I Laboratory**1.5 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 27

Prerequisite: RAD 50 and RAD 91 and ANAT 10A and ANAT 10B and MEDI 90**Corequisite:** RAD 1A and RAD 61A and RAD 61B

Practical application of standard imaging procedures and special studies. Consideration is given to the evaluation of optimal images. Focus on anatomy and positioning of the upper and lower limbs, chest, and abdomen. Intended for students enrolled in Radiologic Technology Program.

RAD 62A Theory of Radiologic Technology**4 Units** (Degree Applicable, CSU)

Lecture: 72

Prerequisite: RAD 61A and RAD 1B**Corequisite:** RAD 2A and RAD 62B and RAD 62C

Areas of X-ray production and interaction with matter, principles of imaging, imaging equipment, radiation protection. Introduction to digital radiography to include picture archiving and communication system (PACS). Intended for students enrolled in Radiologic Technology Program.

RAD 62B Radiographic Procedures II**3 Units** (Degree Applicable, CSU)

Lecture: 54

Prerequisite: RAD 61A and RAD 61B and RAD 61C**Corequisite:** RAD 2A and RAD 62A and RAD 62C

Knowledge base necessary to perform standard imaging procedures and special studies. Consideration is given to the evaluation of optimal images. Focus on anatomy and positioning of the vertebral column, bony thorax, cranium, special studies, gastrointestinal and genitourinary system. Intended for students enrolled in Radiologic Technology Program.

RAD 62C Radiographic Procedures II Laboratory**1.5 Units** (Degree Applicable, CSU)

Lecture: 18 Lab: 27

Prerequisite: RAD 61A and RAD 61B and RAD 61C**Corequisite:** RAD 2A and RAD 62A and RAD 62B

Practical application of standard imaging procedures and special studies. Consideration is given to the evaluation of optimal images. Focus on anatomy and positioning of the vertebral column, bony thorax, cranium, gastrointestinal (GI) system and genitourinary (GU) system. Intended for students enrolled in Radiologic Technology Program.

RAD 63 Theory of Radiologic Technology**1 Unit** (Degree Applicable, CSU)

Lecture: 18

Corequisite: RAD 3A

Special imaging studies, advanced imaging modalities, and basic principles of computed tomography. Intended for students enrolled in Radiologic Technology Program.

RAD 64 Theory of Radiologic Technology**4 Units** (Degree Applicable, CSU)

Lecture: 72

Corequisite: RAD 3C

Analytical review of the radiologic technology core curriculum. Serves as preparation for state certification and national registry exams. Intended for students enrolled in Radiologic Technology Program.

RAD 70 Computed Tomography Sectional Anatomy and Pathology**2 Units** (Degree Applicable)

Lecture: 36

Corequisite: RAD 7A

Detailed study of gross anatomical structures will be conducted systematically for location, relationship to other structures, function, and common pathologic conditions. Anatomical structures are located and identified in axial (transverse), sagittal, coronal, and orthogonal (oblique) planes with a focus on the characteristic appearance of each anatomical structure and pathology as it appears on Computed Tomography (CT) images.

RAD 71 Computed Tomography Procedures and Patient Care**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: RAD 70**Corequisite:** RAD 72 and RAD 7B

Procedures for Computed Tomography (CT) imaging of adults and pediatric patients. Procedures include, but are not limited to, indications for procedure, patient care and safety, positioning, contrast media usage, patient assessment, scout image, selectable scan parameters, and archiving of the images. CT procedures will be taught for differentiation of specific structures, patient symptomology, and pathology. CT images studied will be reviewed for quality, anatomy, and pathology.

RAD 72 Computed Tomography Physics and Instrumentation**3 Units** (Degree Applicable)

Lecture: 54

Prerequisite: RAD 70**Corequisite:** RAD 71

Physical principles and instrumentation involved in Computed Tomography (CT). Physics topics covered include x-radiation in forming the CT image, CT beam attenuation, linear attenuation coefficients, tissue characteristics, and Hounsfield numbers application. CT system and operations, the CT process, image quality, and radiation protection practices for the CT patient will be covered.

RAD 91 Patient Care in Radiologic Sciences

3 Units (Degree Applicable, CSU)

Lecture: 45 Lab: 27

Concepts of optimal patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures are described, pharmacology, venipuncture, as well as infection control procedures using standard precautions. The role of the radiographer in patient education is identified. Intended for students enrolled in Radiologic Technology Program.