

MEDICAL IMAGING SCIENCES

Radiologic Technology is a scientific art using (X-ray) radiation to provide images of bones, organs, soft tissue, and vessels that comprise the human body. A Radiologic Technologist or Radiographer is a healthcare professional. They apply their education and training in hospitals, clinics, imaging centers, and private medical offices. The Radiologic Technologist is an essential member of the Healthcare team working directly with the patient and physician(s), performing a wide variety of diagnostic radiographic procedures.

Our program prepares the student for an entry-level position with a curriculum covering patient care, safety, image production, and radiographic procedures. Upon successful completion of the program, the student will be eligible to take the certification examinations prepared by the American Registry of Radiologic Technologists (ARRT) and receive the State of California Department of Public Health (CDPH) certification.

The Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), in coordination with the California Department of Public Health, Radiologic Health Branch (CDPH-RHB).

Programs of Study

Associate Degrees

- Radiography, Associate of Science (AS) (<https://catalog.sbccc.edu/academic-departments/medical-imaging-sciences/radiography-as/>)

Credit Courses

Radiographic and Imaging Sciences (RT)

RT 100 Radiography and Health Care (2 Units)

Hours: 32 (36 lecture)

Introduction, overview and orientation for those interested in exploring diagnostic medical imaging or other health care careers. Completion of this course and departmental prerequisites satisfy the requirements for entry into the Radiography Associate Degree Program.

Transfer Information: CSU Transferable

RT 101 Introduction To Radiography (2.33 Units)

Prerequisites: RT 100 and BMS 107 and BMS 108.

Hours: 43.4 (43.4 lecture, 0 lab)

Introduction to basic radiographic imaging concepts, terminology, patient care and other entry level topics. Specific attention is given to the radiography program's policies and procedures, and the clinical workbook. This class is intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 102 Fundamentals of Radiographic Positioning and Procedures I (4 Units)

Prerequisites: RT 101 and HIT 135.

Hours: 108 (54 lecture, 54 lab)

Precise and detailed information on routine radiographic procedures of the chest, abdomen and appendicular skeleton. Portable and traumatic exams are also included. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 103 Fundamentals Of Radiographic Positioning And Procedures II (4 Units)

Prerequisites: RT 102.

Hours: 108 (54 lecture, 54 lab)

Basic principles of positioning of the axial skeleton, including vertebral column, skull, facial bones, and contrast procedures for the gastrointestinal and genito-urinal tract. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 109 Principles of Radiographic Exposure (3 Units)

Prerequisites: RT 101.

Hours: 54 (54 lecture)

Provides first-year radiography students with the basic principles of image production, exposure techniques, photographic and geometric factors, computed and direct digital radiography and radiation protection. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 111 Advanced Principles of Exposure (3 Units)

Prerequisites: RT 109.

Hours: 54 (54 lecture)

Principles of x-ray exposure are examined on image production in computed radiography, digital image systems, analog and digital fluoroscopic systems. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 119 Radiological Technology (3 Units)

Prerequisites: RT 109 and RT 102.

Hours: 54 (54 lecture)

Designed specifically for radiation physics. The primary focus is on the fundamental concepts of energy and measurement, atomic structure, molecules, electricity, magnetism, electromagnetism, x-ray tubes, production, emission and interactions. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 120 Patient Care in Radiography (3 Units)

Prerequisites: BMS 107 and BMS 108.

Hours: 54 (54 lecture)

Provides the student with the concepts and the role of an imaging professional in patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures as well as infection control protocols, and contrast media/medication administration. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 121 Venipuncture In Radiography (0.6 Units)

Limitations on Enrollment: Must be a Licensed Radiographer.

Hours: 11 (11 lecture)

Provides the student with concepts of venipuncture and contrast media/medication administration. The role of the radiographer in administration of contrast media, legal aspects of contrast media injection, anatomy and physiology related to I.V. injections are identified.

Transfer Information: CSU Transferable

RT 191 Radiographic Technology Clinical Practicum I (5 Units)

Prerequisites: RT 101.

Corequisites: RT 102.

Hours: 270 (270 lab)

Concurrent The first of four rotations at a recognized clinical affiliate. Students will commence their internship one week prior to the beginning of the school semester. Introduction to the clinical settings and exposure to departmental organization, patient flow, CR/DR and PACs, observation of techniques employed to perform radiographic procedures, and policies and procedures for clinical competency exams. The student performs radiographic procedures under the direct supervision of a licensed technologist.

Transfer Information: CSU Transferable

RT 191A Radiographic Technology Clinical Practicum 1A (2.1 Units)

Prerequisites: RT 191 and RT 109.

Hours: 113.4 (113.4 lab)

Designed to give each advanced student the opportunity to improve their clinical skills, as well as accumulate the required clinical hours as designated by the California Department of Health, Title 17. The total number of hours performed during the winter intersession is 112.

Transfer Information: CSU Transferable

RT 192 Radiographic Technology Clinical Practicum 2 (5 Units)

Prerequisites: RT 191.

Hours: 270 (270 lab)

Continuation at the first recognized clinical affiliate of four rotations. Students are assigned 16 hours per week, totaling 240 hours for the semester. During this supervised experience, the student observes and performs diagnostic radiographic procedures. The student must demonstrate competency in recently taught radiographic exam, as well as in the exams previously evaluated.

Transfer Information: CSU Transferable

RT 202 Advanced Radiographic Procedures (3 Units)

Prerequisites: RT 250.

Hours: 54 (54 lecture)

Provides the advanced radiography student with a survey of advanced imaging and an introduction to special invasive procedures in radiation sciences. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 203 Radiology Certification Preparation (4 Units)

Hours: 72 (72 lecture)

Review of those subjects deemed critical for the ARRT examination. The course consists of lectures, both by the instructor and guest, simulated registry examinations and a computer-assisted learning program. It is intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

RT 220 Radiation Biology Protection (3 Units)

Prerequisites: RT 103 and RT 111.

Hours: 54 (54 lecture)

Radiation protection for operator and patients complying with the State of California Administrative Code, Title 17. Biological effects, dose-effect relationships and long-term somatic and genetic effects of radiation exposure are discussed, in addition to fluoroscopic radiation safety regulations. Approved by the California Department of Public Health (CDPH) and prepares students for the California State Fluoroscopy Examination. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 230 Radiographic Pathology (3 Units)

Prerequisites: RT 103.

Hours: 54 (54 lecture)

Introduction to more advanced pathological conditions for second-year students. Differentiates normal radiographic anatomy from pathologic conditions. Encompasses both the anatomy and physiology of each pathologic condition. Students identify, evaluate and present common pathologic conditions throughout the course. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 250 Principles and Applications of Cross-Sectional Anatomy in Imaging (2 Units)

Prerequisites: BMS 107 and BMS 108.

Hours: 36 (36 lecture)

Provides an understanding of cross-sectional anatomy and knowledge of the relationships of human organs to each other as they appear in the sagittal, coronal and axial plane. The practical applications of cross-sectional with C.T., M.R.I. and ultrasound are emphasized. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 251 Principles of Mammography and Procedures (2 Units)

Prerequisites: RT 119 and BMS 107 and BMS 108.

Hours: 36 (36 lecture)

Technical and procedural aspects of mammography including breast anatomy, physiology, positioning, compression, quality assurance techniques, implant imaging and mass localization. Successful completion of this course entitles the student to a Certificate of Completion of a 40 hour course in mammography education. Prepares students and radiographers to pass the State of California and ARRT certification exam in mammography. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

Transfer Information: CSU Transferable

RT 290 Work Experience in Radiography (1-4 Units)

Limitations on Enrollment: Enrollment in a Radiology course, or current California Radiologic Technology license and at least one year's experience as a licensed Radiologic Technologist in a medical establishment within the preceding three years.

Hours: 216 (216 lab)

Consists of supervised on-the-job work experience for students whose radiology career objectives and course of study or employment complement each other. Students must accomplish specific course objectives. Class meetings are scheduled each semester. Course restricted to 3 repetitions

Transfer Information: CSU Transferable

RT 293 Radiographic Technology Clinical Practicum 3 (7 Units)

Prerequisites: RT 192.

Hours: 378 (378 lab)

The second of four rotations at a recognized clinical affiliate. Students are assigned 40 hours per week, totaling 360 hours for the 10-week semester. The rotation allows students an opportunity to enhance basic skills, positioning techniques, patient care and understanding of clinical operations. The student must demonstrate continued competency in those exams previously mastered and additional competencies throughout the semester.

Transfer Information: CSU Transferable

RT 294 Radiographic Technology Clinical Practicum 4 (8 Units)

Prerequisites: RT 293.

Hours: 432 (432 lab)

The third of four rotations at a recognized clinical affiliate. The course is designed to increase a students' technical and clinical proficiency in routine and advanced radiographic procedures under the supervision of the department radiographers, and clinical preceptor. The student must demonstrate competency of recently taught radiographic exams, plus continued competency of exams previously evaluated.

Transfer Information: CSU Transferable

RT 295 Radiographic Technology Clinical Practicum 5 (8.6 Units)

Prerequisites: RT 294.

Hours: 464.4 (464.4 lab)

The final rotation at a recognized clinical affiliate. Students are assigned 24 hours per week, totaling 344 hours for the semester. The course is designed to increase a students' technical and clinical proficiency in routine and advanced radiographic procedures under the supervision of the department radiographers, and clinical preceptor. The student must demonstrate competency of recently taught radiographic exams, plus continued competency of exams previously evaluated.

Transfer Information: CSU Transferable

RT 299 Independent Study In Radiography (1-4 Units)

Limitations on Enrollment: Completion of a minimum of 12 units at SBCC, with a 2.5 G.P.A., and a minimum of 6 units, with a 3.0 G.P.A. within the department One to three hours of work/conference time per week to be coordinated with number of enrolled units.

Course Advisories: RT 103.

Hours: 216 (216 lab)

Independent research in radiography under the guidance of a sponsoring faculty member. The project to be consistent with the ability and interest of the student and may be conducted in the laboratory and/or the field. Each unit of credit is equal to three hours of work. NOTE: Continuation in the clinical area on a full-time basis will take place after graduation. This is done in order to complete the 24-month program requirement and will terminate upon the student's anniversary date.

Transfer Information: CSU Transferable