RADIOLOGIC TECHNOLOGY (RADT)

RADT 142 C Radiologic Electronics **4 Units**
Term hours: 72 lecture. This is a course for students preparing for radiologic technology and medical sonography programs. Basic knowledge of scientific units, the structure of matter, electromagnetic radiation and sound energy, electromagnetism, the imaging system and tube, x-ray production and interaction with matter will be discussed. (CSU)

RADT 145 C Medical Imaging Terminology **3 Units**
Term hours: 54 lecture. Introduction to the origin and derivation of medical language with focus on building terms, spelling, abbreviations, and pronunciations. Medical imaging terminology of the following body systems includes; musculoskeletal, neurological, cardiovascular, circulatory, respiratory, genitourinary, and endocrine. Terminology relating to neoplastic disorders and diagnostic imaging are discussed. Diagnostic imaging studies are analyzed and correlated with associated terminology. (CSU)

RADT 146 C Introduction to Radiography **4 Units**
Term hours: 72 lecture. This course prepares the student for the radiography program. Material covered in this course include x-ray tube construction and production, radiographic quality and techniques, digital imaging, grid utilization, beam limitation, radiation protection, and quality assurance. (CSU)

RADT 147 C Medical Imaging Pathology **3 Units**
Prerequisite(s): RADT 145 C or HS 145 C, and BIOL 210 C or BIOL 231 C
Term Hours: 54 lecture. This course is an introduction to the study of disease as it relates to diagnostic medical imaging. It includes the causes, signs, symptoms and diagnostic image presentation of common human diseases. The course acquaints the student with various pathologic conditions and their impact on imaging procedures. (CSU)

RADT 148 C Radiology Imaging Techniques (formerly Radiologic Technology) **4 Units**
Prerequisite(s): Admission to Radiologic Technology Program
Term hours: 54 lecture and 54 laboratory. This course offers a study of the principles of radiographic technique, factors influencing radiographic quality, beam restricting devices and grid utilization. Also included are the physics and principles of digital imaging along with artifacts and quality control. Lab includes experiments with technical factors for improved image quality and written image analysis. $50 materials fee payable at registration. (CSU)

RADT 150 C Radiographic Positioning I (formerly Radiologic Positioning) **5 Units**
Prerequisite(s): Admission to the Radiologic Technology Program
Term hours: 72 lecture and 54 laboratory. This course offers positioning methods for the upper and lower extremities, pelvis, respiratory system, bony thorax, and abdomen along with practical applications of image evaluation and radiation protection. $50.00 Material Fee - PAYABLE AT REGISTRATION.(CSU)

RADT 153 C Radiography Patient Care **3 Units**
Term hours: 54 lecture. This course is a lecture/demonstration class to teach vital signs, medical emergencies, imaging procedures, aseptic techniques, drug administration, ethics, communication, body mechanics and infection control used by radiology personnel in working with patients. Students will be required to obtain cardiopulmonary resuscitation (CPR) certification from the American Heart Association. (CSU)

RADT 162 C Radiology Special Procedures **3 Units**
Prerequisite(s): Satisfactory completion of first semester in the Radiologic Technology Program
Corequisite(s): RADT 251 C and RADT 247 C, with a grade of C or better
Completion or concurrent enrollment in HS 147 C and RADT 148 C and RADT 150 C and RADT 153 C, with a grade of C or better. Term hours: 45 lecture and 27 laboratory. This course provides the student with the theory and practice of basic techniques of venipuncture and the administration of contrast media. Emphasis will be placed on the types of contrast agents used for the various radiographic procedures. The student will perform both simulated and live venipuncture for contrast media injection. Basic Pharmacology will be discussed. Special imaging modalities such as: Digital Angiography; Computerized Tomography; Magnetic Resonance Imaging; Medical Sonography; Nuclear Medicine; and Radiation Therapy will be surveyed. $22 materials fee payable at registration. (CSU)

RADT 196 C Selected Topics I **1 Unit**
Prerequisite(s): RADT 148 C and RADT 153 C with a grade of C or better
Corequisite(s): RADT 254 C with a grade of C or better
Term hours: 18 lecture. This course is a comprehensive categorical review of radiologic technology to support the student in the clinical internship phase. Topics include patient care, image quality, and radiographic techniques. Case studies will be discussed. (CSU)

RADT 197 C Selected Topics II **1 Unit**
Prerequisite(s): RADT 196 C and RADT 254 C with a grade of C or better
Corequisite(s): RADT 255 C Term hours: 18 lecture
Comprehensive review of radiologic technology to support the student in the clinical internship phase. Topics include of routine and fluoroscopic positioning, special imaging procedures, radiation protection, and radiobiology. Case studies will be discussed. (CSU)

RADT 198 C Selected Topics III **1 Unit**
Prerequisite(s): RADT 255 C and RADT 197 C with grades of C or better
Corequisite(s): RADT 256 C with a grade of C or better
Term hours: 18 lecture. This course is a comprehensive review of radiologic technology to support the student in the clinical internship phase. Topics include of quality control and assurance, radiation physics, and medical law and ethics. Case studies will be discussed. (CSU)

RADT 247 C Radiographic Positioning II **5 Units**
Prerequisite(s): Satisfactory completion of first semester Radiologic Technology Program
Corequisite(s): RADT 162 C and RADT 251 C, with a grade of C or better
Completion of or concurrent enrollment in RADT 148 C, RADT 150 C, RADT 153 C and HS 147 C, with a grade of C or better. Term hours: 72 lecture and 54 laboratory. This course offers positioning methods for the skull, urinary system, vertebral column, and digestive system. Trauma positioning and surgical/mobile techniques are discussed along with image evaluation and radiation protection for all procedures. $33 materials fee payable at registration. (CSU)

RADT 251 C Radiology Externship **7 Units**
Prerequisite(s): RADT 148 C and RADT 150 C, with a grade of C or better, and satisfactory completion of the first (Fall) semester in the Radiologic Technology Program
Corequisite(s): RADT 247 C with a grade of C or better
Term hours: 36 lecture and 288 hours in supervised training in an approved clinical affiliate. This course provides an introduction to specialized imaging exams to include fluoroscopy, hysterosalpingography, pediatrics, orthoroentgenography, mammography, arthrography, and myelography. The clinical externship will provide training in an approved clinical affiliate. (CSU)

RADT 252 C Radiobiology **1.5 Units**

Prerequisite(s): RADT 146 C and BIOL 231 C or BIOL 210 C and HS 145 C, with a grade of C or better

Term hours: 27 lecture. This course is designed to provide the principles of radiation interaction with cells, tissues, and the body as a whole. Factors affecting biological responses are presented, including early and late effects of radiation exposure. The principles of radiation protection along with the responsibilities of the radiographer for patients, personnel, and the public are included.(CSU)

RADT 253 C Radiation Laws and Ethics **1.5 Units**

Prerequisite(s): RADT 153 C with a grade of C or better

Term hours: 27 lecture. This course is an introduction to legal terminology, concepts, and principles for radiographers will be presented. Topics include misconduct, malpractice, legal and professional standards and the scope of practice. The importance of proper documentation and informed consent is emphasized. The student will examine a variety of ethical issues and dilemmas found in clinical practice. (CSU)

RADT 254 C Clinical Internship I **6.5 Units**

Prerequisite(s): RADT 162 C, RADT 247 C, RADT 251 C, RADT 252 C and RADT 253 C with a grade of C or better

Corequisite(s): RADT 196 C with a grade of C or better

Term hours: 400 laboratory. This course begins the internship phase of the Radiologic Technology Program. Students are assigned to selected clinical education centers which provide supervised clinical training in the Department of Radiology in affiliated hospitals. Internship of approximately 40 hours per week are subject to rearrangement by hospital/facility. Clinical experiences are designed to provide assessment of competent performance of radiologic imaging exams of the chest, abdomen and extremities. (CSU)

RADT 255 C Clinical Internship II **12 Units**

Prerequisite(s): RADT 254 C and RADT 196 C with grades of C or better

Term hours: 720 laboratory. This course continues the internship phase of the Radiologic Technology Program. Students are assigned to selected clinical education centers which provide supervised clinical training in the Department of Radiology in affiliated hospitals. Internship of approximately 40 hours per week are subject to rearrangement by hospital/facility. Clinical experiences are designed to provide assessment of competent performance of radiologic imaging of the spine, extremities, and digestive system. (CSU).

RADT 256 C Clinical Internship III **12 Units**

Prerequisite(s): RADT 197 C and RADT 255 C with grades of C or better

Corequisite(s): RADT 198 C

Term hours: 720 laboratory. This course is a continuation of the internship phase of the Radiologic Technology Program. Students are assigned to selected clinical education centers which provide supervised clinical training in the Department of Radiology in affiliated hospitals. Internship of approximately 40 hours per week are subject to rearrangement by hospital/facility. Clinical experiences shall be designed to provide patient care and assessment and competent performance of radiologic imaging exams including special procedures, surgical, trauma, and pediatric exams. (CSU)

RADT 262 C Cross-Sectional Imaging **1 Unit**

Term hours: 18 lecture. This course correlates knowledge and practice of diagnostic imaging with cross-sectional anatomy of the brain, skull, chest, thorax, spine, abdomen, and pelvis. Diagnostic imaging includes the ability to work with sonography, computerized tomography, and magnetic resonance imaging. A knowledge of medical terminology and anatomy is recommended. (CSU)

RADT 299 C Imaging Independent Study **0.5-2 Units**

Prerequisite(s): Approved Independent Learning Contract Term hours: 27-108 Laboratory hours

This course is designed for capable students enrolled in the Radiologic Technology Program or options of the program who wish to increase their knowledge and experience in applied areas. Students will participate in independent study on assigned areas under staff supervision. (CSU)