

RADIOGRAPHIC SCIENCE (RS)

Courses

RS-201 MEDICAL TERMINOLOGY FOR RADIOGRAPHERS 1 Credit

This course serves as an introduction to Medical Terminology. The emphasis will be on the word-building process, medical abbreviations and symbols, as well as terminology used for specific radiologic procedures and diagnostic reports. Pre-requisites: Admission to the Associate of Science in Radiography program and/or permission of the instructor.

RS-220 PATIENT CARE IN RADIOGRAPHY 3 Credits

Addresses principles and practices of patient care in the radiographic setting. Standards of patient care for the radiographer as a member of the health care interdisciplinary team in the hospital and clinic setting will be presented, with a focus on medical ethics and legal issues pertaining to the radiography setting. Students will demonstrate contrast media administration, patient preparation for radiographic examinations and safety awareness. Pre-requisite: Admission to the Associate of Science in Radiography program and/or permission of the instructor.

RS-221 RADIOGRAPHIC METHODS I 3 Credits

Core positioning practices in radiography. Simulated X-ray exams will be performed on upper and lower extremities, chest and abdomen. Phantom anatomical models may be imaged. Image critique and anatomical landmark review will be performed on each positioning protocol. Pre-requisite: Admission to the Associate of Science in Radiography program and/or permission of the instructor.

RS-222 RADIOGRAPHIC METHODS II 3 Credits

This course explores the anatomy and positioning of the spinal cord, cranium and review of all projections covered in RS 221. Simulated X-ray exams will be performed. Phantom anatomical models may be imaged. Image critique and anatomical landmark review will be performed on each positioning protocol. Pre-requisite: Admission to the Associate of Science in Radiography program and/or permission of the instructor.

RS-240 QUALITY ASSURANCE AND TECHNICAL IMAGING 3 Credits

Overview of radiographic technique, x-ray concepts, machinery, grids, digital and computed radiography, film screen combinations, and technical imaging parameters. Quality Assurance provides a working knowledge of radiographic quality control, as it relates to an overall quality assurance program. Test instruments, measurement, and evaluation of quality control criteria will be discussed. Film analysis relating to the quality control program includes evaluation of film density, contrast, collimation, positioning, artifacts, structures shown, and film identification. Pre-requisite: Admission to the Associate of Science in Radiography program and/or permission of the instructor.

RS-242 CR/DR APPLICATIONS 1 Credit

Review the history of digital image acquisition as well as an introduction of Radiology Information Systems and their role in hospital information systems (HIS) and exploration of the importance of digital image communication in medicine (DICOM) in a radiology department. Pre-requisite: Admission to the Radiographic Science program.

RS-255 RADIOGRAPHIC PATHOLOGY 3 Credits

Basic principles of pathology and radiographic appearance of specific diseases. Selecting proper modalities related to disease processes, technical factors, and determination for retaking radiographs that might be acceptable under different circumstances. Pre-requisite: Admission to the Associate of Science in Radiography program and/or permission of the instructor.

RS-258 SPECIAL PROCEDURES I 2 Credits

This lab-based course focuses on the principles and practices of special procedures most commonly performed in our regional hospitals. Mobile radiography and trauma imaging will be discussed. Special emphasis will be placed on fundamentals of assisting the Radiologist during fluoroscopic examinations. Pre-requisite: Admission to Radiographic Science program.

RS-261 APPLIED RADIOGRAPHY I 8 Credits

Core positioning practices in radiography demonstrated in the clinical environment. Students begin to obtain radiographic examination competencies required for American Registry of Radiologic Technologists (ARRT) certification eligibility. Pre-requisite: Admission to the Associate of Science in Radiography program and/or permission of the instructor.

RS-288 SIMULATION, SAFETY AND REVIEW I 1 Credit

Integrates basic skill performance through simulation and review of routine examination processes. Simulation activities include utilization of mobile x-ray units, positioning and examination in real life scenarios. Student skills in critical thinking are developed through application, observation and evaluation. Must be admitted into the Associate of Science Radiographic Science Program.

RS-289 SIMULATION, SAFETY AND REVIEW II 1 Credit

Continuation of RS-289. Integrates basic skill performance through simulation and review of routine examination processes. Simulation activities include utilization of mobile x-ray units, positioning and examination in real life scenarios. Student skills in critical thinking are developed through application, observation and evaluation. Must be admitted into the Associate of Science Radiographic Science Program.

RS-330 RADIOBIOLOGY 3 Credits

Review of cell structure and function, ionizing radiation induced cell damage, history of radiation disease research, and subsequent development of radiation protection guidelines. Pre-requisite: Admission to the Associate of Science in Radiography program and/or permission of the instructor.

RS-355 REGISTRY REVIEW 2 Credits

This course reviews the primary aspects of the current American Registry of Radiologic Technologists (ARRT) radiography exam to include: radiation protection, equipment operation/maintenance, image production/evaluation, radiographic procedures and patient care. Upon successful completion of this course, students will be prepared for taking the ARRT Radiography (R) exam.

RS-358 SPECIAL PROCEDURES II 1 Credit

This hybrid course focuses on the principles and practices of special procedures and advanced imaging modalities. Topics include: the history and development of computed tomography (CT), and introduction to diagnostic ultrasound (US), bone densitometry, mammography, MRI, radiation therapy, and nuclear medicine. Pre-requisite: RS-258.

RS-359 INTRODUCTION TO COMPUTED TOMOGRAPHY 1 Credit

Introduction of Computed Tomography (CT) instrumentation to include system operation and components, acquisition methods, parameter selection, image processing and display, image quality, artifact recognition, and quality. Must be admitted into the Associate of Science Radiographic Science Program or permission from the instructor.

RS-362 APPLIED RADIOGRAPHY II 10 Credits

Core positioning in radiography demonstrated in the clinical environment. Continuation of RS 261 to include all needed competency exams required by ARRT. Pre-requisite: Admission to the Associate of Science in Radiography program and/or permission of the instructor.

RS-363 APPLIED RADIOGRAPHY III 10 Credits

Core positioning practices in radiography demonstrated in the clinical environment. Continuation of 362 to include all needed competency exams by the ARRT. Pre-requisite: Admission to the Associate of Science in Radiography program and/or permission of the instructor.

RS-390 DIRECTED STUDY: RADIOGRAPHIC SCIENCE 1-3 Credits**RS-392 SPECIAL TOPIC: RADIOGRAPHIC SCIENCE 1-12 Credits****RS-405 SECTIONAL IMAGING 3 Credits**

This online course provides an overview of axial, coronal and sagittal imaging of the human body as demonstrated via diagnostic imaging procedures. Must be admitted into the LCSC Bachelor of Science in Radiographic Science Computed Tomography Program, current ARRT certification, or permission of the instructor.

RS-410 CT PATHOLOGY 3 Credits

This online course will explore the basic principles of pathology and computed tomography (CT) of specific disease processes. Selection of proper imaging protocols related to pathology will also be examined. Pre-requisite: Admission into the LCSC Bachelor of Science in Radiographic Science Computed Tomography Program, current ARRT certification, or permission of the instructor.

RS-420 CT PHYSICS/INSTRUMENTATION 3 Credits

This online course examines Computed Tomography (CT) physics and instrumentation to include system operation and components, image processing and display, image quality, artifact recognition, and quality. Pre-requisite: Admission into the LCSC Bachelor of Science in Radiographic Science Computed Tomography Program, current ARRT certification, or permission of the instructor.

RS-460 PHARMACOLOGY FOR IMAGING PROFESSIONALS 2 Credits

This course explores the principles of the pharmaceuticals needed to perform today's medical imaging processes along with the indications and contraindications of each; the role the imaging professional plays; the optional routes to administer the products; the Pharmacokinetics coverage that describes how drugs are absorbed, metabolized, distributed, and eliminated; and lastly the emergency procedures in response to adverse reactions to contrast media. Pre-requisite: Admittance into the Associate of Science Radiographic Science program and Junior standing or permission from the instructor.

RS-480 CT INTERNSHIP 13 Credits

Build on knowledge and skills obtained from professional experience and class work and apply these concepts to the performance of clinical procedures in the imaging environment. Each internship will adhere to ARRT (CT) clinical requirements and the needs of each student. Objectives will be determined through collaboration of the LCSC radiography faculty, the student, the site preceptor and in accordance with ARRT (CT) clinical requirements. Pre-requisite: Admission into the LCSC Bachelor of Science in Radiographic Science Computed Tomography Program, current ARRT certification, or permission of the instructor. Program approved clinical site rotation secured prior to beginning of semester.

RS-499 SENIOR CAPSTONE: IMAGING ETHICS 3 Credits

This course explores professional ethics that must be maintained and adhered to in a diagnostic imaging department. Familiarity of professional and personal codes of ethics and understanding will be discovered through online discussion, case studies, and group work. This course prepares individuals to motivate health care professionals to function and operate their specific tasks at their best abilities and improve efficiency in health care facilities. Pre-requisite: Admittance into the Associate of Science Radiographic Science program and Junior standing or permission from the instructor.