RADIOGRAPHIC SCIENCE

Contact Information

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This competitive program is comprised of one year of preprofessional courses and two years of professional clinical theory and courses for the Associate of Science degree (AS). In one additional year you can earn a Bachelor's degree. The program prepares students for the national radiography certification examination offered by the American Registry of Radiologic Technologists (ARRT). The RS Program has affiliations with a number of clinical sites ranging from small clinics to large regional medical centers, allowing for diverse and rewarding hands-on clinical training in a professional environment. With the number of radiologic technologists in the US projected to increase by 9% through 2028, the field of radiologic technology is expected to grow faster than average for all occupations.

Majors offered

- Associate of Science Radiographic Science (ASRS)
- Bachelor of Arts/Science Radiographic Science (BA/BS RS)
- Bachelor of Arts/Science Computed Tomography

Accreditation

Lewis-Clark State is accredited by the Northwest Commission of Colleges and Universities (NWCCU), and the Radiographic Science degree program is accredited by the Joint Review Commission on Education in Radiologic Technology (JRCERT).

Student Outcomes

Graduates of the radiographic science program will:

1. Demonstrate clinical competency.
2. Demonstrate strong communication skills.
3. Demonstrate critical thinking.
4. Demonstrate professionalism and ethical judgment skills.

(Any changes will be reflected in the current NHS Student Handbook: at Student Resources - Nursing & Health Sciences Division | Lewis-Clark State (lcsc.edu) (https://www.lcsc.edu/nursing/nhs-student-resources/)

1. A minimum grade of 75% is required in each RS program course. Students receiving a grade below 75% are required to repeat the course and earn a 75% or better; courses may be repeated one time only. Admitted students who do not earn a minimum grade of 75% in each RS course are dismissed from the program and must apply for re-entry. Re-entry decisions are partially based on clinical and faculty resources.
2. Students must complete and pass an annual background check and maintain currency regarding health and CPR requirements. Current requirements and associated fees are posted to the NHS Division web page.
3. Students are required to demonstrate professionalism in all classroom and clinical settings.
4. Faculty reserve the right to make program modifications as necessary to meet current professional standards, accreditation criteria, and other policies.
5. All students are required to participate in college and program outcome testing and assessments.
6. Clinical practicum hours and locations vary. Students are responsible for their own transportation to clinical facilities and associated lodging/meal expenses.

Admission Requirements

NHS students must meet pre-program and annual health (eg. immunizations), and criminal background check requirements, as well as maintain CPR certification and personal health insurance throughout the program. Separate fees apply. Any student with a prior misdemeanor or felony charge or conviction should contact the appropriate licensing board and discuss with their program academic advisor before applying for entrance to any NHS Program. The NHS Background Check Policy is found in the NHS Student Handbook on the NHS web page. Clinical agencies may have additional requirements for background checks, drug testing, and/or health requirements.

TOEFL Scores for non-native English speakers: Applicants to any NHS program for whom English is not the first and native language are required to take the iBT (internet TOEFL) or the IELTS test within the two years prior to the date of application. A minimum score of 84 on the iBT test with a verbal sub-score of at least 26 or 6.5 on the iELTS with minimum sub-scores of at least 6 is required.

1. Completion of pre-program requirements at LC State or an accredited university or college.
2. Submission of completed application to the Nursing and Health Sciences Division. See the NHS website (www.lcsc.edu/nursing (http://www.lcsc.edu/nursing/)) for admission criteria (TOEFL, GPA, entrance test, prerequisite, and support coursework) and deadlines. A non-refundable fee must accompany the application. Admission is competitive, with a limited number of spaces each year.
3. Transfer students may be asked to submit course descriptions of prerequisite and support courses with their application to determine equivalency.
4. Applicable policies and information are located in the NHS Student Handbook on the NHS web page.

Advising

Academic advising is provided by Radiographic Science program faculty and NHS/HEC Program Advisors. Advising is required of all Health Studies students and those admitted to any RS program.

Special Policies

RS students incur costs for program application, entrance testing, radiation badges, textbooks, laboratory supplies, background check and tracking of health requirements, assessment testing, and liability insurance.

RS-201 MEDICAL TERMINOLOGY FOR RADIOGRAPHERS 1.00 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 3.00 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.

 Vaccination or verification of immunity may be required. Please call 208-792-2688 or email nhs@lcsc.edu if you have additional questions.

RS-221 RADIOGRAPHIC METHODS I 3.00 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 3.00 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 3.00 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 1.00 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 3.00 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 2.00 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 8.00 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 1.00 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 1.00 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 3.00 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 2.00 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 1.00 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 1.00 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 10.00 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.

 Vaccination or verification of immunity may be required. Please call 208-792-2688 or email nhs@lcsc.edu if you have additional questions.

RS-363 APPLIED RADIOGRAPHY III 10.00 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.

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RS-390 DIRECTED STUDY: RADIOGRAPHIC SCIENCE 1.00-3.00 Credits

RS-392 SPECIAL TOPIC: RADIOGRAPHIC SCIENCE 1.00-12.00 Credits

RS-405 SECTIONAL IMAGING 3.00 Credits
This online course provides an overview of axial, coronal and sagital 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 3.00 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 3.00 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 2.00 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 13.00 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.

 Vaccination or verification of immunity may be required. Please call 208-792-2688 or email nhs@lcsc.edu if you have additional questions.

RS-499 SENIOR CAPSTONE: IMAGING ETHICS 3.00 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.