RAD - RADIOLOGIC TECHNOLOGY

RAD 101 - Exploration of Radiology **Units: 0.5-1**
This course is designed for those students who have an interest in becoming a radiological technologist. It is an introductory directed study course designed to give the student a greater knowledge of what a radiological technologist does and what career opportunities are open in this field. The goal of this course is to aid students in making a career choice that is right for them.
Term Offered: Spring and Fall

RAD 103 - Medical Ethics **Units: 1**
This course is an introduction to the medical profession, the patient and paramedical personnel, regarding professional ethics and medical-legal responsibilities. This course will also provide the student with respect for interpersonal relationships along with moral and ethical responsibilities to increase effective communication and empathy for the patient. One (1) hour of class time per week required.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Selection to the Radiological Technology Program and concurrent enrollment in all semester I courses.
Term Offered: Fall

RAD 110 - Fundamentals of Clinical Radiography I **Units: 2**
A planned clinical experience is provided which gives the student the opportunity to observe and apply theoretical principles while performing radiographic procedures under supervision of the clinical staff. Progression in the program is dependent on the student demonstrating clinical competence on a specified number of competency evaluations (the number to be identified in the syllabus).
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Selection to the Radiological Technology Program and concurrent enrollment in all semester I courses.
Term Offered: Fall

RAD 112 - Patient Care and Medical Terminology **Units: 2**
This course covers nursing procedures and practices relative to radiological technology with emphasis on patient handling, safety, comfort and communications as employed by the radiological technologist. Aseptic techniques and procedures used to maintain a sterile field are explained. Etymology of disease terms, nomenclature of surgical procedures and use of prefixes, suffixes, roots, combining forms and plurals of medical terms are covered. Two (2) hours of class time per week are required.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Selection to the Radiological Technology Program and concurrent enrollment in all semester I courses.
Term Offered: Fall

RAD 116 - Radiography I **Units: 3**
Radiological positioning, related anatomy, considerations for the various problems encountered during positioning and pediatric radiography are discussed. This course covers chest, abdomen, upper extremities to include shoulder girdle and lower extremities to include hip; the study and identification of anatomical structures on X-ray film. Radiation safety measures concerning both patient and technologist are covered. Five (5) hours of class time per week are required.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Selection to the Radiological Technology Program and concurrent enrollment in all semester I courses.
Term Offered: Fall

RAD 118 - Radiology Physics and Circuitry **Units: 3**
Course will establish a knowledge base of atomic structure and terminology, x-ray unit circuitry, radiation production, the nature and characteristics of radiation, and the photon interactions with matter.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Selection to the Radiological Technology Program and concurrent enrollment in all semester I courses.
Term Offered: Fall

RAD 124 - Radiographic Photography and Techniques **Units: 3**
Course will establish guidelines for manipulating radiographic techniques (kVp/mAs) to ensure patient safety and optimal image quality is obtained. Image quality factors that will be discussed in the course include contrast, spatial resolution, image receptor exposure, distortion, and post-processing functions. Five (5) hours of class time per week are required.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all semester I courses.
Term Offered: Spring

RAD 125 - Clinical Radiography I **Units: 2**
A planned clinical experience is provided which gives the student the opportunity to build upon previous clinical experience and apply theoretical principles while performing radiographic procedures under supervision of the clinical staff. Progression in the program is dependent on the student demonstrating clinical competence on a specified number of competency evaluations (the number to be identified in the syllabus) and demonstrating continued competence on examinations in which competence has already been demonstrated.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all semester I Radiological Technology Program and support courses.
Term Offered: Spring

RAD 126 - Radiography II **Units: 3**
Advanced radiographic positioning of vertebral column and skull, demonstration and practice of these more complicated radiographic positions; topographical anatomy, pediatric radiography and film critique are integrated into the specific studies. Five (5) hours of class time per week are required.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all semester I courses.
Term Offered: Spring

RAD 128 - Imaging Equipment **Units: 3**
This course will investigate the evolution of radiographic equipment and provide a knowledge base of routine equipment utilized in modern imaging departments.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all semester I courses.
Term Offered: Spring

RAD 220 - Clinical Radiography II **Units: 3**
A planned clinical experience is provided which gives the student the opportunity to improve and perfect clinical skills while applying theoretical principles to radiographic procedures being performed under supervision of the clinical staff. Progression in the program is dependent on the student demonstrating clinical competence on a specified number of competency evaluations (the number to be identified in the syllabus) and demonstrating continued competence on examinations in which competence has already been demonstrated.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all previous Radiological Technology Program courses.
Term Offered: SUMMER

RAD 230 - Clinical Radiography III **Units: 3**
A planned clinical experience is provided which gives the student the opportunity to incorporate the theory presented in RAD 236 and other pertinent courses and expand clinical skills while performing radiographic procedures under supervision of the clinical staff. Progression in the program is dependent on the student demonstrating clinical competence on a specified number of competency evaluations (the number to be identified in the syllabus) and demonstrating continued competence on examinations in which competence has already been demonstrated.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all previous Radiological Technology Program courses.
Term Offered: Fall

RAD 236 - Radiographic Contrast-Routine Exams **Units: 2**
A study of different types of contrast media and how each is used to delineate specific anatomic parts or organs; common radiographic procedures using contrast media; indications; contradictions; patient preparation, care and positions are explained. Two (2) hours of class time per week are required.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all previous Radiological Technology Program courses.
Term Offered: Fall

RAD 238 - Radiation Safety and Protection **Units: 2**
Accent on radiation health and safety; definitions and significance of various terms employed in radiation protection; biological effects of radiation; methods and instruments used in monitoring: national and state requirements regarding diagnostic radiation are discussed in detail. Two (2) hours of class time per week are required.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all previous Radiological Technology Program courses.
Term Offered: Fall

RAD 242 - Radiography Quality Management **Units: 1**
A study of health care communications, customer service, quality improvement, team building, health care systems, accreditation issues and present and future health care trends as each relates to the Radiology department's quality assurance programs.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all previous program courses (second year, second semester program student) or ARRT certified radiographer.
Term Offered: Spring

RAD 244 - Diagnostic and Therapeutic Radiation **Units: 2**
A survey of medical and surgical diseases employing special radiographic procedures with an introduction to the therapeutic uses of radiation, radium and isotopes; overview of medical pathology selected on the basis of relevance to radiological exams. Two (2) hours of class time per week are required.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all previous Radiological Technology Program courses.
Term Offered: Fall

RAD 245 - Clinical Radiography IV **Units: 3**
A planned clinical experience is provided which gives the student increased responsibility to function more independently under direct and/or indirect supervision while performing radiographic procedures. Progression in the program is dependent on the student demonstrating clinical competence on a specified number of competency evaluations (the number to be identified in the syllabus) and demonstrating continued competence on examinations in which competence has already been demonstrated.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all previous Radiological Technology Program courses.
Term Offered: Spring

RAD 247 - Radiography Quality Control **Units: 1**
A study of quality control methods are examined and discussed pertaining to the equipment and usage within a radiography department.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Successful completion of all previous program courses (second year, second semester program student) or ARRT certified radiographer.
Term Offered: Fall

RAD 259 - Seminar in Radiography **Units: 2**
A general review and integration of all aspects of medical radiological technology is obtained through the use of simulated registry examination and the use of computer review programs. Preparation for the national A.R.R.T. examination. Two (2) hours of class time per week are required.
Transferability: May not transfer towards an NSHE bachelor's degree
Enrollment Requirements: Prerequisite: Current successful completion of all previous Radiological Technology Program courses or instructor approval.
Term Offered: Spring

RAD 310 - Advanced Communication **Units: 3**
Radiologic science professionals need to effectively relate and communicate with patients and other health care professionals. This course focuses on expanding the knowledge base and skills necessary for interpersonal, internal, external and written communications. Human diversity and respect is emphasized.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 312 - Radiologic Technology Advanced Patient Care **Units: 3**
Advanced skills are essential elements of providing high-quality patient care. This course focuses on patient education, assessment, communication, pre-procedural and post-procedural care and proper charting and documentation. Technologists' responsibilities and intervention in cases of critical patient need are also discussed.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 314 - Health Care Delivery, Ethics and Medical Law **Units: 3**
It is important for the radiologic technologist to understand health care delivery, ethics and law. This course content includes legal issues that affect the employee and employer directly regarding ethical behavior and scope of practice. Ethical and legal compliance helps to ensure patients receive adequate patient-centered care, and that the institution is not liable for acts which might lead to litigation.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 320 - Health Care Informatics **Units: 3**
Health care informatics is an important part of the medical environment; therefore, health care providers must have an understanding of how computers are used in health care delivery. This content is designed to provide an exploration of information technology as it applies to healthcare and healthcare organizations. An overview of how information is captured, converted, stored and ultimately used within the healthcare system is provided.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 322 - Leadership and Team Building **Units: 3**
Leadership and teambuilding are vital components of all healthcare organizations. To promote an effective team, the radiologic technologist must be able to lead and exercise the ability to function within an interdisciplinary team.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 324 - Educational Principles for Technologists **Units: 3**
The course is designed to impart an understanding of strategies and techniques for developing skills as an effective facilitator of learning in the clinical setting.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 335 - Forensic Radiology **Units: 3**
This course is an introduction to Forensic Radiology. Forensic Radiology is a dedicated area of medical imaging using radiography and additional modalities to assist physicians with issues related to the law.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 410 - Advanced Quality Management **Units: 3**
Quality management (QM) is important to ensure the proper functioning of equipment and compliance with government and accreditation standards. Technologists should have an understanding of the activities and their role in the QM process. This content is designed to expand the QM skills of the technologist and the application of QM principles in an imaging department.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 412 - Diversity and Cultural Competence **Units: 3**
Health care providers work in an increasingly diverse and complex global community. Health care providers must interact respectfully with individuals from a variety of backgrounds, who may hold different beliefs and values. Issues of diversity affect radiologic technologists' interactions with individuals such as patients and the health care team. Leaders in health care must promote and enforce cultural competence within the facility to ensure patients receive the most appropriate, individually- specific care.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 414 - Health Care Compliance and Accreditation **Units: 3**
Health care Compliance and Accreditation is important because of the integral role the radiologic technologist has within the healthcare team. It is essential for the radiologic technologist to provide all members of the team with a thorough patient record to ensure quality patient care and facility management.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 416 - Artificial Intelligence in Radiology **Units: 3**
Artificial Intelligence is extending into the world of radiology and clinical practice. This course content explores AI advances and impacts to radiography and the healthcare profession.
Enrollment Requirements: Admission to the BAS radiologic technology program.

RAD 430 - Research Methods and Information Literacy **Units: 3**
The attitude of life-long learning enables the radiologic technologist to stay in step with the current healthcare environment and be prepared to help foster the future and increase awareness of the profession in the global community. This content is geared to increase and disseminate intellectual inquiry, information literacy and the use of scholarly research methods.
Enrollment Requirements: Admission to the BAS radiologic technology program.