

RAD**RAD 101 Radiography I 4.0
UNITS**

Content is designed to provide an overview of the general principles of patient care, ethics and medico-legal standards. Principles of mathematical formulas, prime factors and electromagnetic energy are introduced. Equipment operation introduces the use of grids, screens, darkroom and digital imaging processing, and all components involved in image production. The foundation of radiation protection and safety standards in radiographic imaging is emphasized. The history of radiography, career opportunities and human diversity and its relationship in the health care system are covered. Learning the basics of medical terminology for use in the health care environment is given.

**RAD 104 Radiographic
Imaging I/Lab 3.0
UNITS**

In this first course, anatomy and positioning terminology and their procedure protocols for chest, abdomen, and upper extremity are presented. Demonstration of applicable factors and radiation protection methods are learned in order to achieve quality radiographs while providing compassionate and optimum patient care. Clinical lab experience will complement didactic instruction. Pre/Co-requisite: RAD 101

**RAD 102 Radiography II 4.0
UNITS**

This course builds upon the foundation of image production identifying the prime components of radiographic image quality and its control. Image processing for screen -film versus digital imaging along with radiographic accessories for routine diagnostic radiography are analyzed. Radiation protection and biology discuss radiation interaction with atoms and cellular structures. Patient care methodologies are continued emphasizing imaging techniques for mobile, OR and trauma patients including age specific routines. Quality management will include theory and application of basic quality control tests of radiographic equipment. Pre/Co-requisites: RAD 101; RAD 104; 105

**RAD 105 Radiographic
Imaging II/Lab 3.0
UNITS**

In this second course of imaging series, anatomy and positioning terminology and their procedure protocols for lower extremity, shoulder and pelvic girdles, ribs and sternum as well as pediatric and geriatric methodologies are learned. Patient care protocols are always emphasized. Clinical lab experience will complement

didactic instruction. Pre/Co-requisites: RAD 101; 102; 104

**RAD 103 Radiography III 3.0
UNITS**

Biological Aspects of Radiation, personnel protection and minimizing patient exposure are studied in depth. Patient Care introduces the relationship of pharmacology to contrast media studies along with learning venipuncture technique and patient assessment skills. Advanced modalities and special studies will prepare students for senior year clinical rotations. Pre/Co-requisites: RAD 101; 102; 104; 105; 106

**RAD 106 Radiographic
Imaging III/Lab 1.0
UNIT**

In this third course of imaging series, anatomy and positioning terminology and their procedure protocols for the entire spinal column are presented. Patient care protocols are always emphasized. Clinical lab experience will compliment didactic instruction. Pre/Co-requisites: RAD 101; 102; 103

**RAD 204 Radiography IV 4.0
UNITS**

This course is a continuation of RAD-101, -102, and -103. Discussion centers on advanced principles of digital radiography along with an introduction to digital peripheral equipment. Lecture topics include the use of digital equipment for routine fluoroscopy imaging, quality management including continuous quality improvement, and quality assurance. Radiographic Pathology introduces the concepts of diseases and etiology related to radiographic imaging. Students create an oral presentation demonstrating their understanding of image production, equipment, evaluation, and pathology. Pre/Co-requisites: RAD 101; 102; 103; 104; 105;106; 207

**RAD 207 Radiographic
Imaging IV/Lab 3.0
UNITS**

In this last course of imaging series, anatomy and positioning terminology and their procedure protocols for contrast studies, skull, and advanced studies such as Myelography, Arthrography and ERCP are learned. Patient care protocols are always emphasized. Clinical lab experience will complement didactic experience. Pre/Co-requisites: RAD 101; 102; 103; 104; 105; 106 ; 204

**RAD 205 Radiography V 4.0
UNITS**

This course is a review of content covered in RAD- 101, -102, -103, -104, -105, -106, -204, and -207. This course covers in detail the content covered in previous courses

such as digital radiography, construction of circuit tubes, comparison of atomic interactions, and the effect on exposure when as low as reasonably achievable and principles of exposure incorporating technical factor conversions for the control panel. Students gain an understanding of the relationship of patient body habitus and patient dosage. The course also reviews content previously covered in Radiographic Imaging courses. Students begin studying for their certification exams through the Online American Registry of Radiologic Technologists (ARRT) review programs. Pre: RAD 101; 102; 103; 104; 106; 204; 207

**RAD 208 Radiography VI 1.0
UNIT**

A general comprehensive review of all learned material prepares the student for the upcoming ARRT national registry examination. Content Specifications, test taking preparation, and continuing education opportunities will be discussed. Students will be required to pass mock simulated registry exams and comprehensive tests by the required 80% grade in order to pass this final course in order to graduate.