

RADIOGRAPHY (RTC)

Division: Nursing and Health Sciences Division

RTC 100 Radiologic Technology I (2 Credits)

This course provides detailed information on the theory of X-ray techniques and its practical application in radiography. Seminars are conducted in the classroom/laboratory on radiographic image evaluation. Students learn to critique or differentiate between radiographs of diagnostic quality and non-diagnostic quality.

Co-requisites: RTC 101, RTC 103 and RTC 108

RTC 101 Radiologic Positioning Prin I (4 Credits)

This course provides instruction, with related terminology, in radiographic positioning of lower and upper extremities, chests, and abdomens. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiography lab. Critiques of radiographic images are conducted in the classroom/laboratory.

Co-requisites: RTC 100, RTC 103 and RTC 108

RTC 103 Patient Care and Ethics (2 Credits)

This course acquaints students with nursing procedures and techniques used in the general care of the patient. Emphasis is on the role of the technologist in various nursing situations. Students are also instructed in the ethical principles and the responsibilities entailed by becoming a member of a paramedical profession.

Co-requisites: RTC 100, RTC 101 and RTC 108

RTC 104 Radiation Protection (2 Credits)

This course develops students' knowledge of safety standards in operating radiation equipment. Students learn the principles of radiation protection and practical skills to ensure maximum safety for both patients and the equipment operator. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiography lab. Critiques of radiographic images are conducted in the classroom/laboratory.

Pre-requisites: RTC 100 with a minimum grade of C and RTC 101 with a minimum grade of C and RTC 103 with a minimum grade of C and RTC 108 with a minimum grade of C

RTC 105 Radiologic Technology II (2 Credits)

Students gain, through problem solving and completing experiments, a thorough working knowledge of manipulating exposure factors. Students also learn the principles for constructing technique charts for all situations and all kilovoltage ranges. Critiques of radiographic images are conducted in the classroom/laboratory.

Pre-requisites: RTC 100 with a minimum grade of C

RTC 106 Radiologic Positioning Prin II (4 Credits)

This course is a continuation of RTC 101. Instruction is provided in radiographic positioning of the vertebral column, pelvic girdles, and bones of the thorax. Students are taught radiographic procedures using contrast media. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiography lab. Critiques of radiographic images are conducted in the classroom/laboratory.

Pre-requisites: RTC 101 with a minimum grade of C

RTC 107 Contrast Media (2 Credits)

Students are further acquainted with procedures in radiography involving the use of contrast media. Detailed information is provided on the equipment and media used, and on the reactions and contradictions to these media. Critiques of radiographic images are conducted in the classroom/laboratory.

Pre-requisites: RTC 101 with a minimum grade of C

RTC 108 Clinical Radiography I (1 Credit)

Students are assigned to clinical affiliations for a 15-week period, two days each week, to perform routine examinations under the supervision of a registered radiologic technologist. Critiques of radiographic images are conducted at the clinical site.

Co-requisites: RTC 100, RTC 101 and RTC 103

RTC 109 Radiologic Pos Principles III (2 Credits)

This course provides precise and detailed information, with related terminology, on the various positions of the skull including routine positions and projections with regard to facial bones, paranasal sinuses, and mastoid. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiography lab. Critiques of radiographic images are conducted in the classroom/laboratory.

Pre-requisites: RTC 104 with a minimum grade of C and RTC 105 with a minimum grade of C and RTC 106 with a minimum grade of C and RTC 107 with a minimum grade of C and RTC 111 with a minimum grade of C

RTC 110 Radiologic ADV Posit Prin IV (1 Credit)

Students gain, through problem solving and completion of experiments, a thorough working knowledge of special and troublesome procedures. This course is for students who have practiced the basic views and are aware of positioning limitations. Students learn alternate positioning skills to image various anatomical structures in the emergency room environment. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiography lab. Critiques of radiographic images are conducted in the classroom/laboratory.

Pre-requisites: RTC 105 with a minimum grade of C and RTC 106 with a minimum grade of C

RTC 111 Clinical Radiography II (1 Credit)

Students are assigned to clinical affiliations for approximately fifteen week period, two days each week, to perform routine examinations under the supervision of a registered radiologic technologist. Critiques of radiographic images are conducted at the clinical site.

Pre-requisites: RTC 108 with a minimum grade of C

RTC 112 Clinical Radiography III (1 Credit)

Students are assigned to clinical affiliations for approximately seven weeks, three days each week, to perform routine examinations under the supervision of a registered radiologic technologist. Critiques of radiographic images are conducted at the clinical site.

Pre-requisites: RTC 111 with a minimum grade of C

RTC 200 Medical Surgical Disease (2 Credits)

This course deals with application of X-ray technology on seriously ill or injured patients to produce informative radiographs. Students learn about anatomical changes resulting from disease and/or injury and how to take radiographs that are most informative for diagnosis and treatment. Critiques of radiographic images are conducted at the classroom and clinical sites.

Pre-requisites: RTC 202 with a minimum grade of C

RTC 201 Radiation Biology (2 Credits)

This course provides basic information on the effects of radiation therapy and radioisotopes on biological systems. It is geared toward students whose training is primarily in the field of diagnostic X-ray technology. Critiques of radiographic images are conducted in the classroom/laboratory, focusing on the effects of radiation as related to radiation biology and health physics

Pre-requisites: RTC 202 with a minimum grade of C

RTC 202 Clinical Radiography IV (1 Credit)

Students are assigned to clinical affiliations for approximately six weeks, four days per week, to perform all radiographic procedures under the supervision of a registered radiologic technologist. Critiques of radiographic images are conducted at the clinical sites.

Pre-requisites: RTC 112 with a minimum grade of C

RTC 203 Special Procedures (3 Credits)

Students learn about the specialized and highly technical procedures in radiography, such as computed tomography (CT), magnetic resonance imaging (MRI), and angiography, and the general indications for each examination. Students will be introduced to Radiation Oncology, Nuclear Medicine, and Bone Densitometry. Quality control methods are also covered. Selected radiographs supplement anatomical review of the systems to be examined, prior to radiographic procedures. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiography lab. Critiques of radiographic images are conducted in the classroom/laboratory.

Pre-requisites: RTC 205 with a minimum grade of C

RTC 204 Pediatric/Geriatric Radiography (1 Credit)

Pediatrics and geriatrics are specialized fields. It is important that the technologist follows definite procedural methods with young and elderly patients. Advantages include saving time, film, and energy, as well as minimizing the amount of radiation on the patient. This course provides detailed instruction in radiographic positioning, procedures, and equipment for pediatric and geriatric patients. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiography lab. Critiques of radiographic images are conducted.

Pre-requisites: RTC 202 with a minimum grade of C and RTC 205 with a minimum grade of C

RTC 205 Clinical Radiography V (2 Credits)

Students are assigned to clinical affiliations for approximately fifteen weeks, three days per week, to assist in pediatric and geriatric procedures in addition to all other radiographic procedures under the supervision of a registered radiologic technologist. Critiques of radiographic images are conducted at the clinical site.

Pre-requisites: RTC 202 with a minimum grade of C

RTC 206 Clinical Radiography VI (2 Credits)

Students are assigned to clinical affiliations for approximately fifteen weeks, three days per week, for mastery of radiologic technology skills. Students perform all radiographic procedures including assisting in O.R. and special procedures under the supervision of a registered technologist. Critiques of radiographic images are conducted at the clinical sites.

Pre-requisites: RTC 205 with a minimum grade of C

RTC 207 Clinical Radiography VII (1 Credit)

Students are assigned to clinical affiliations for approximately seven weeks, four days per week. In addition to diagnostic radiography participation, students will rotate through CT, MRI, NM, Special Procedures, and Bone Densitometry departments under the supervision of a registered technologist where they will observe these modalities. Critiques of radiographic images are conducted. Successful completion of a comprehensive examination is required.

Pre-requisites: RTC 206 with a minimum grade of C

RTC 208 Comprehensive Radiography Rev. (2 Credits)**RTC 210 Radiography Seminar (2 Credits)**

This is a seminar course where students integrate all radiography concepts. The focus is on analysis and application of current professional trends and issues in addition to application of sound scientific formulas and the importance of minimizing patient dose of ionizing radiation. The role as a member of the profession is explored and operationalized. Computer assisted test taking skills in all areas of radiography practice will be included. Students enrolled in the ECC Radiography Program must pass this course with a grade of "C" or better.