

## Course Number and Title: RAD 230 Radiographic Procedures III

**Campus Location:**

Georgetown, Wilmington

**Effective Date:**

2021-51

**Prerequisite:**

RAD 131

**Co-Requisites:**

none

**Course Credits and Hours:**

3.00 credits

2.00 lecture hours/week

2.00 lab hours/week

**Course Description:**

This course provides the student with the knowledge and skill necessary to perform standard radiographic procedures of the cranium. Procedural considerations for arthrography, myelography, hysterosalpingography, mammography, and pediatric radiography are discussed. An introduction to cross-sectional anatomy and advanced imaging/therapeutic modalities are presented along with a review of pharmacology. Energized laboratory experience supports the lecture portion of this course where applicable.

**Required Text(s):**

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

**Additional Materials:**

Radiologic Technology Student Handbook Separate instructor handouts and assignments

**Schedule Type:**

Classroom Course

**Disclaimer:**

In order to achieve the maximum benefit from this course of instruction, the student is responsible for attending scheduled classes, completing all readings and instructor assignments, and actively participating in class discussion and activities. The instructor will announce the schedule for written tests.

**Core Course Performance Objectives (CCPOs):**

1. Describe the anatomy and essential projections for various examinations of the cranium. (CCC 1; PGC 1, 2)
2. Differentiate the various skull lines and landmarks. (CCC 1, 2; PGC 1, 3)
3. Evaluate radiographic images. (CCC 5; PGC 1, 4)
4. Explain the procedural considerations for advanced radiographic, fluoroscopic, and therapeutic modalities. (CCC 1, 2, 4; PGC 1, 3)
5. Simulate radiographic procedures through proper use of radiographic lab equipment.(CCC 2, 6; PGC 4)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

**Measurable Behavioral Objectives (MBOs):**

Upon completion of this course, the student will:

1. Describe the anatomy and essential projections for various examinations of the cranium.
  1. Describe projections of the skull to include AP axial (Towne), lateral, PA Axial (Caldwell), submentovertex, PA axial (Haas), horizontal beam lateral, and trauma AP axial (reverse Caldwell).
  2. Describe facial bones projections to include lateral, parietoacanthial (Waters), PA axial (Caldwell), modified Waters, and reverse Waters.
  3. Describe nasal bones projections to include parietoacanthial (Waters), lateral, and PA axial (Caldwell).
  4. Describe projections for orbits to include parietoacanthial (Waters), lateral, PA axial (Caldwell), and modified Waters.
  5. Describe projections for zygomatic arches to include submentovertex, parietoacanthial (Waters), AP axial (modified Towne), and oblique inferosuperior (tangential).
  6. Describe projections for the mandible to include axiolateral oblique, PA, AP axial (Towne), PA axial, modified Waters, and submentovertex.
  7. Describe projections for temporomandibular joints to include axiolateral oblique (modified Law), axiolateral (modified Schuller), and AP axial (Towne).
  8. Describe projections for paranasal sinuses to include lateral, PA axial (Caldwell), parietoacanthial (Waters), submentovertex, and open mouth parietoacanthial (Waters).
2. Differentiate the various skull lines and landmarks.
  1. Identify inner and outer canthus, infraorbital margin, gonion, nasion, acanthion, mental point, auricular point, and glabella on diagrams, phantoms, and radiographic images.
  2. Locate positioning lines for the skull to include glabellomeatal line, orbitomeatal line, infraorbitomeatal line, acanthiomeatal line, mentomeatal line, and interpupillary line.
3. Evaluate radiographic images.
  1. Identify anatomical structures on various projections.
  2. Identify anatomical structures on sectional images of the head, thorax, and abdomen.
  3. Determine proper versus improper part positioning and centering.
  4. Evaluate anatomy for size and shape distortion.
  5. Determine if rotation and/or tilt is present on images.
  6. Determine the use of appropriate collimation.
4. Explain the procedural considerations for advanced radiographic, fluoroscopic, and therapeutic modalities.
  1. Determine the appropriate patient and room preparation for various procedures.
  2. Identify proper technical factors, breathing instructions, radiation protections methods, and selection of image receptors.
  3. Determine modifications for body habitus and non-routine patients, with an emphasis on the pediatric patient.
  4. Explain the use of sterile technique and contrast media.
  5. Determine pharmacologic considerations for procedures.
5. Simulate radiographic procedures through proper use of radiographic lab equipment.
  1. Demonstrate proper patient positioning.
  2. Properly align x-ray tube/part/image receptor.
  3. Demonstrate effective means of radiation protection.
  4. Demonstrate use of x-ray table and/or upright bucky.
  5. Select appropriate technical factors on the control console.

**Evaluation Criteria/Policies:**

The grade will be determined using the Delaware Tech grading system:

90	-	100	=	A
80	-	89	=	B
70	-	79	=	C
0	-	69	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

**Final Course Grade:**

Calculated using the following weighted average

Evaluation Measure	Percentage of final grade
Exams (5)	50%
Research Paper/Presentation (10% each)	20%
Quizzes/Assignments (formative)	5%
Lab Competencies/Simulation: (rubric provided)	25%
TOTAL	100%

**Core Curriculum Competencies (CCCs are the competencies every graduate will develop):**

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

**Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):**

1. Demonstrate clinical competence by performing a full range of radiologic procedures on all patient populations.
2. Professionally utilize verbal, nonverbal and written communication in patient care intervention and professional relationships.
3. Demonstrate professional growth and development by practicing the profession's code of ethics and comply with the profession's scope of practice.
4. Demonstrate critical thinking and problem solving skills in the performance of radiographic procedures.

**Disabilities Support Statement:**

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.