

COURSE PREFIX/NO:	RAD 136
COURSE TITLE:	RADIOGRAPHIC PROCEDURES II
Credit Hours:	3.0
Lecture:	2.0
Lab:	3.0

[Distance Learning Attendance/VA Statement](#)
[Textbook Information](#)

COURSE DESCRIPTION

This course is a study of radiographic procedures for visualization of the structures of the body.

COURSE COMPETENCIES

Upon successful completion of this course, the student should be able to complete the following associated with urinary procedures, digestive procedures (fluoro), skull procedures, and contrast media and reactions:

Module I: Urinary Procedures

- Name and identify generally and radiographically structures associated with the urinary system.
- Demonstrate proper procedural considerations and execution for urinary procedures.
- Critique radiographs for radiographic quality and accuracy.
- Recognize evident radiographic pathology demonstrated.
- Determine appropriate patient history questions prior to urinary procedures.
- Discuss methods of contrast administration for urographic procedures.
- Differentiate descending, ascending, and direct administration examinations of the urinary system.
- Define normal lab values for renal function testing.
- Discuss male and female urographic procedures.

Module II: Contrast Media

- Describe the basic principles and functions of contrast media.
- Determine the routes of contrast administration.
- Define the principle of homeostasis and contrast media's effect on it.
- Compare radiopaque contrast media and radiolucent contrast media.
- Discuss the pharmacology of barium compounds and iodine compounds.
- Describe the correct administration and usage of various contrast agents.
- List and describe the principles of venipuncture.
- Define pharmacology and its divisions.
- Define drug names by trade, chemical, and generic terms.
- Define drug solubility, viscosity, and osmolality, and toxicity as it relates to radiographic contrast media.
- Differentiate Ionic from Non-Ionic contrast media.

- Define Monomer vs. Dimer.
- Discuss anatomically differentiated contrast media and its uses.
- Identify proper treatments to contrast reactions

Module III: Ribs and Sternum

- Identify anatomic structures of the thorax
- Demonstrate proper positioning methods for rib and thoracic anatomical structures

Module IV: Fluoroscopic Examinations

- Define and differentiate patient history analysis for variety of fluoroscopic examinations.
- Discuss patient preparations related to various fluoroscopic examinations.
- Determine correct scheduling and sequencing considerations of contrast-enhanced examinations.
- Define terms associated with cholecystography examinations.
- List procedural process for varying types of cholecystography, Upper Gastrointestinal exam, Barium Enema examination, and intra-operative fluoroscopic gastric and biliary procedures.
- Identify special considerations for ostomy patients receiving gastric examinations.

Module V: Cranial Anatomy

- Identify cranial anatomical structures including bony anatomy as well as cranial sutures.
- Differentiate cranial categories related to anatomic structures.
- List structures of the external, middle, and internal ear.
- Identify cranial foramina.

Module VI: Cranial Positioning—Skull, Sinus, and Mastoid Positioning

- Identify cranial positioning baselines.
- Define positional methods for Skull Radiography.
- Define positional methods for Sinus Radiography.
- Define positional methods for Mastoid Radiography.
- Execute positioning for unit topics in lab.
- Evaluate and critique radiographs for accuracy and error identification.

Module VII: Facial Bone Anatomy

- Identify facial bone structures

Module VIII: Facial Bone Positioning—Facial Bones, Nasal Bones, Orbits and Mandible

- Discuss projections utilized in Facial Bone radiography.
- Define procedural methods for Facial Bones radiography.
- Define procedural methods for Nasal Bone radiography
- Define procedural methods for Orbital and Mandibular radiography.
- Execute positioning for unit topics in lab.
- Evaluate and critique radiographs related to unit topic for accuracy and error identification.

- Discuss methods of optical foreign body localization.
- Define Dacrocystography.

Module IX: Cross-sectional Anatomy

- Identify structures of the Cranium and Brain.
- Identify anatomy of the Thoracic cavity.
- Identify anatomy of the Abdominal Cavity.

MINIMAL STANDARDS

PERFORMANCE OBJECTIVES: Following classroom instruction and demonstration, the student will be able to complete the above competencies with the program-required minimum of 80% accuracy or above by documentation of each module test score unless otherwise specified.

COURSE REQUIREMENTS

All students are responsible for attaining competencies through the completion of the following course requirements:

- Attending class and lab activities (See *YTC Catalog and Handbook* for attendance policy)
- Reading all assigned materials as listed in syllabus
- Participating in all class activities and tests as scheduled and as listed in syllabus
- Completing all course assignments on time
- Completion of assigned CAI units

ACADEMIC INTEGRITY

The policies stated in the *YTC Catalog and Handbook* and *Radiologic Technology Student Manual* will be enforced. Any student violating the policy will be subject to academic discipline as stated.

ATTENDANCE POLICY

The attendance policy stated in the *YTC Catalog and Handbook* and *Radiologic Technology Student Manual* will be enforced.

GRADING PROCEDURES

Unit tests will be given as outlined in the syllabus addendum. There are approximately 7 unit tests and a final exam. Cranial units have three quizzes averaged together as an additional test grade. Any pop quizzes may be unannounced and will be averaged together at the end of the semester to be given the weight of one unit test. Pop quizzes may not be made up. A minimum grade of 80% is required on all unit tests. Any student making a grade lower than 80% on a unit test and has less than an A average at semester's end will be required to take a comprehensive final exam at the end of the semester. The student must also repeat the test until a grade of 80% or higher is achieved prior to attempting clinical competencies from that module. Per program policy, the original grade stands for course average calculation. The repeat score is only to qualify for performance of clinical competency. However, if any student makes a grade lower than 80% on one test and still maintains an A average at the end of the semester, the student will take the comprehensive final exam but be exempt if the exam score lowers their average. Any student who maintains an 80% or higher on all unit tests will also fall into this exemption policy. Any student that requires more than one make-up test will be required to take a comprehensive final exam. The final exam will count 1/3 of the final grade. As with all RAD courses, the grading scale is as follows:

GRADE	SCORE
A	93 - 100
B	86 - 92
C	80 - 85
D	70 - 79
F	Below 70

See the *Radiologic Technology Student Manual* for additional information.

ENTRY-LEVEL SKILLS

A student entering this course must be enrolled in the second semester of the Radiologic Technology Program.

PREREQUISITES

RAD 102, BIO 210, BIO 211, RAD 101, RAD 152, RAD 105, RAD 110, RAD 130, RAD 165

CO-REQUISITES

RAD 115, RAD 175