

# R T 51A: FUNDAMENTALS OF RADIOLOGIC TECHNOLOGY I

## Foothill College Course Outline of Record

Heading	Value
<b>Units:</b>	4
<b>Hours:</b>	4 lecture per week (48 total per quarter)
<b>Prerequisite:</b>	R T 50.
<b>Degree &amp; Credit Status:</b>	Degree-Applicable Credit Course
<b>Foothill GE:</b>	Non-GE
<b>Transferable:</b>	CSU
<b>Grade Type:</b>	Letter Grade Only
<b>Repeatability:</b>	Not Repeatable

## Student Learning Outcomes

- Assess proper patient positioning of the chest, abdomen, upper and lower extremities, in order to apply positioning skills in the clinical setting resulting in a diagnostic image.
- Evaluate radiographs for anatomical structures in order to assess for proper positioning which will aid in the diagnosis of disease.

## Description

Medical and radiographic terms. Basic positioning and anatomy, related to chest, abdomen, upper and lower extremities. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

## Course Objectives

The student will be able to:

- Define medical terminology, related to radiographic positioning and procedures.
- List and identify the anatomy of the chest, abdomen, and upper and lower extremity.
- Describe the positioning used to visualize anatomic structures of the chest, abdomen, and upper and lower extremity.
- Evaluate radiographic images and explain rationale for each projection/procedure.

## Course Content

- Medical terminology
  - General radiographic terms
  - Body planes, sections, and lines
  - Body surfaces and parts
  - Radiographic projections
  - Body positions
  - Special projection terms
  - Relationship terms
  - Terms related to movements
  - Misused positioning terms
- Anatomy
  - Chest
  - Abdomen
  - Upper extremities
  - Lower extremities

- Positioning
  - Chest
  - Abdomen
  - Upper extremities
  - Lower extremities
- Image evaluation
  - Anatomic structures shown
  - Positioning and patient instructions
  - Collimation and central ray
  - Technical and exposure criteria
  - Image markers and identifiers
  - Artifacts
  - Related pathology

## Lab Content

Not applicable.

## Special Facilities and/or Equipment

- Multimedia classroom
- Anatomical phantoms and models
- Illuminators (viewboxes)
- Positioning aids
- 3-D virtual anatomy applications
- Access to the digital image teaching file
- Computer access for online Canvas component

## Method(s) of Evaluation

Methods of evaluation may include, but are not limited to:

- Quizzes, midterms, and a comprehensive final examination, for content, terminology and knowledge of subject matter.
- Evaluation of written image analysis, for content, form, and application of critique methodology.

## Method(s) of Instruction

Methods of instruction may include, but are not limited to: lecture, discussion, cooperative learning exercises, and demonstration.

## Representative Text(s) and Other Materials

Bontranger, Kenneth L. *Textbook of Radiographic Positioning and Related Anatomy*. 9th ed. St. Louis, MO: C.V. Mosby Company, 2018.

Bontranger, Kenneth L. *Workbook and Laboratory Manual Radiographic Positioning and Related Anatomy*. 9th ed. St. Louis, MO: C.V. Mosby Company, 2018. ISBN: 9780323399661

## Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

- Weekly reading assignments from text, one chapter per week, and syllabus, for integration into clinical practice.
- Weekly written image analysis assignments. Students will evaluate assigned images using a prescribed methodology in order to apply critical thinking skills to material provided in lecture.

**Discipline(s)**

Radiological Technology