

R T 53: ORIENTATION TO RADIOLOGIC TECHNOLOGY

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2024
Units:	4
Hours:	150 laboratory per quarter (150 total per quarter) This is a 7 week clinical laboratory course.
Corequisite:	R T 50.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

Student Learning Outcomes

- Demonstrate proper equipment manipulation, patient positioning, and anatomic image evaluation for the abdomen procedure in the clinical setting.
- On a performance competency skills test the student will demonstrate proper medical asepsis techniques and perform safe patient transport in the radiology department.

Description

Orientation to radiation sciences, with emphasis on clinical participation. 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:

1. Identify radiology department policies and procedures.
2. Explain and perform radiation protective measures to self and patient.
3. Manipulate and identify basic x-ray equipment and accessory items.
4. Explain workflow for radiographic image production.
5. Perform and explain patient transfer techniques.
6. Execute basic vital sign assessment.
7. Perform positioning for routine chest and abdomen procedures.
8. Describe and demonstrate infection control techniques.

Course Content

1. Orientation to Radiology Department
 - a. Hospital/department tour
 - b. Introduction to staff
 - c. Review policies and procedures
 - d. Patient processing
 - i. Registration
 - ii. Waiting/dressing rooms
 - iii. Confidentiality of patient information

2. Radiation protection
 - a. Closing doors
 - b. Gonadal shields when appropriate
 - c. Aprons and gloves
 - d. Department protocols
 - e. Verifying pregnancy when appropriate
3. Equipment manipulation
 - a. Tube locks
 - b. Table movements
 - c. Control panel
 - d. Bucky
4. Introduction to image production workflow
 - a. Image receptors sizes
 - b. Setting control panel
 - c. Setting up room equipment
 - d. Positioning patient
 - e. Provide breathing instructions
 - f. Expose by rotoring then fully depressing the exposure button
 - g. Evaluate image for anatomical structures
 - i. KUB anatomy
 - ii. Chest anatomy
 - h. Evaluate image for technical quality
 - i. mAs and kV for KUB and chest
 - ii. Exposure index/deviation index assessment
 - i. Image manipulation
 - j. Image orientation
 - k. Annotation
5. Proper way to transfer patients from wheelchairs and gurneys
 - a. Body mechanics
 - b. Locks
 - c. Patient safety
 - d. Lifting methods
6. Vital signs
 - a. Blood pressure
 - b. Pulse
 - c. Respirations
7. Chest and abdomen positioning
 - a. Communication of exam instructions to the patient
 - i. Verbal instructions
 - ii. Non-verbal demonstration
 - b. Central ray application
 - c. Positioning landmarks
 - d. Image receptor placement
 - e. Markers
 - f. Collimation
8. Infection control and universal precautions
 - a. Medical asepsis
 - b. Surgical asepsis
 - c. Environmental asepsis
 - i. Linens
 - ii. Handwashing
 - iii. Chemical disinfectants
 - iv. Department policies

Lab Content

1. Radiologic technology clinical practice
 - a. Radiation protection
 - b. Equipment operation
 - c. Image production
 - d. Image evaluation
 - e. Radiographic procedures
 - f. Technical factor selection
 - g. Patient care in a clinical setting

Special Facilities and/or Equipment

Clinical sites.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Routine chest exam competency
Clinical evaluation orientation assessment tool

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Demonstration
Discussion

Representative Text(s) and Other Materials

Foothill College (RT Program). [Clinical Education Manual - Orientation](#). 2023.

Foothill College (RT Program). [Student Handbook](#). 2023.

Foothill College (RT Program). [Student Clinical Competency Handbook](#). 2023.

The above texts are updated each year, and the current edition will be used.

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

1. Reading assignments: required reading from [Clinical Education Manual](#)

Discipline(s)

Radiological Technology