

R T 70A: ADVANCED CLINICAL EXPERIENCE: INTERVENTIONAL RADIOGRAPHY

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2021
Units:	13
Hours:	40 laboratory per week (480 total per quarter) This is a clinical laboratory course.
Prerequisite:	Current ARRT and CRT certification as a Radiologic Technologist; R T 62B and 62C.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade (Request for Pass/No Pass)
Repeatability:	Not Repeatable

Student Learning Outcomes

- Demonstrate proper equipment manipulation and assist in the performance of gastrointestinal and genitourinary procedures, applying appropriate patient care and radiation protection principles in the clinical setting.
- Critique and distinguish relevant fluoroscopic anatomy and pathology related to gastrointestinal and genitourinary procedures.

Description

Designed as a practicum in an interventional radiology department. Practical experience is implemented to expose the student to the principles of angiography with emphasis on mastery of the knowledge, insight, and skills required to perform angiographic procedures, with emphasis on the history of angiography, central venous access procedures, genitourinary and gastrointestinal nonvascular procedures and peripheral procedures.

Course Objectives

The student will be able to:

1. demonstrate understanding of radiation protection for the patient, personnel, and self.
2. exhibit knowledge in the proper use of the angiography equipment.
3. adhere to standards of attendance, punctuality and dependability.
4. conduct self in a professional manner.
5. apply theory to practice by exhibiting ongoing, satisfactory job performance skills.
6. select appropriate equipment, devices and patient positioning as outlined by the department protocols.

7. demonstrate knowledge and application of various patient care techniques.
8. differentiate anatomy and pathophysiology as it relates to various diagnostic, interventional, and nonvascular procedures.
9. prepare a case study based on literature search and clinical experience.

Course Content

1. Radiation protection
 - a. Patients
 - b. Personnel
2. Angiography equipment
 - a. Fluoroscopy
 - b. Digital angiography
 - c. Automatic injectors
3. Punctuality and dependability
 - a. Clinic time reporting
 - b. Absenteeism
 - c. Communicating whereabouts appropriately
4. Professional conduct
 - a. Taking initiative
 - b. Communicating effectively
 - c. Conducting oneself in a professional manner
5. Job performance
 - a. Effective procedural participation
 - b. Planning and organizing work efficiently
 - c. Being alert and interested in procedures
 - d. Reading and understanding requisitions
 - e. Communicating effectively
6. Procedures
 - a. Patient positioning
 - b. Tray set-up
 - c. Guidewires
 - d. Catheters
 - e. Sheaths
 - f. Needles
 - g. Vessel access
7. Patient care
 - a. Patient communication
 - b. Patient assessment and monitoring
 - c. Contrast administration
 - d. Asepsis and sterile technique
 - e. Patient discharge/post-procedure instructions
 - f. Emergency care
8. Diagnostic, interventional and nonvascular procedures
 - a. History of angiography
 - b. Central venous access
 - i. Non-tunneled/PICC line
 - ii. Tunneled/port
 - c. Genitourinary and gastrointestinal nonvascular procedures
 - i. Nephrostomy
 - ii. Ureteral dilation and/or stents
 - iii. Percutaneous stone extraction
 - iv. Percutaneous transhepatic cholangiogram

- v. Internal/external biliary drainage
- vi. Cholecystostomy
- vii. Gastrostomy or gastrojejunostomy
- viii. Catheter/drain exchange
- d. Peripheral procedures
 - i. Upper extremity arteriography
 - ii. Lower extremity arteriography
 - iii. Extremity venography
 - iv. Hemodialysis graft/fistula study
 - v. Embolization
 - vi. Thrombolysis/thrombectomy
 - vii. Angioplasty
 - viii. Stent placement
 - ix. Atherectomy
- e. Miscellaneous procedures
 - i. Biopsy
 - ii. Percutaneous drainage
 - iii. Tunneled drainage (thoracic and abdominal)
 - iv. Foreign body retrieval
 - v. Percutaneous radiofrequency ablation (RFA)
- f. Procedure based anatomy identification
- 9. Research for poster presentation
 - a. Topic selection
 - b. Poster development

Lab Content

- 1. Radiologic Technology clinical practice
 - a. Radiation protection
 - b. Equipment operation
 - c. Image production
 - d. Image evaluation
 - e. Vascular-interventional procedures
 - f. Patient care in a clinical setting

Special Facilities and/or Equipment

Clinical setting: interventional radiology procedures equipment.

Method(s) of Evaluation

Presentation poster project: case study research
Clinical performance evaluation

Method(s) of Instruction

Discussion
Demonstration
Clinical practice

Representative Text(s) and Other Materials

Kessel, D., and I. Robertson. Interventional Radiology: A Survival Guide, 4th ed., 2017.

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

- 1. Reading assignments as required by the Interventional Radiology department.
- 2. Development of a case study presentation.

Discipline(s)

Radiological Technology