

Cañada College
Official Course Outline

1. **COURSE ID:** RADT 458 **TITLE:** Clinical Education V
Units: 9.0 units **Hours/Semester:** 448.0-486.0 Field Experience hours; 448.0-486.0 Total Student Learning hours
Method of Grading: Letter Grade Only
Prerequisite: RADT 448

2. **COURSE DESIGNATION:**
Degree Credit
Transfer credit: CSU

3. **COURSE DESCRIPTIONS:**
Catalog Description:
This course is the second segment of the second year of Radiologic Technology clinical education. Students continue to build the skills obtained in the previous four clinical experiences and obtain skills in more complex procedures.

4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**
Upon successful completion of this course, a student will meet the following outcomes:
 1. Establish knowledge of anatomical structures on radiographic images.
 2. Practice radiation safety standards at all times.
 3. Execute diagnostic imaging examinations with a variety of equipment.
 4. Ensure a safe and comfortable environment while performing radiographic examinations on patients.

5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**
Upon successful completion of this course, a student will be able to:
 1. Safely operate radiographic, fluoroscopy, and image processing equipment.
 2. Complete ancillary competencies.
 3. Demonstrate general patient care and transportation.
 4. Consistently demonstrate radiation safety for patients and personnel.
 5. Practice radiographic positioning techniques on all general radiographic and contrast enhanced procedures.
 6. Identify appropriate technical factors for minimal anatomic variations.
 7. Identify required variations in technical factors when changing SID (source to image distance), or grids.
 8. Apply radiographic anatomy to imaging analysis.

9. Employ appropriate measures to ensure patient safety and comfort when performing radiographic examinations.
10. Apply patient privacy laws in all aspects of radiographic procedures and patient care.
11. Demonstrate radiographic exposures utilizing technical factors approved by a supervising technologist.
12. Recognize and respond appropriately to emergency situations should they arise.
13. Demonstrate the personal and professional qualities generally expected of certified Radiologic Technologists.

6. COURSE CONTENT:

Lab Content:

This course provides students with real-life experience in a clinical setting. Each clinical setting is different and students are exposed to a variety of radiologic exams depending on the clinic. The number of hours for the clinical experience, and thus units, correspond with the time needed for students to gain knowledge and skills in the clinical setting as they work towards being job ready.

1. Students are assigned to specific work area in which a variety of experiences are obtained.
2. Observe radiographic examinations for correct positioning, image receptor placement, and central beam alignment.
3. Perform with assistance radiographic examinations observing correct positioning, image receptor placement, and central beam alignment.
4. Perform a minimum of 22 radiographic examinations demonstrating correct positioning, technical factors selection, image receptor placement, and central beam alignment.
5. Describe and demonstrate radiation safety for patients and personnel.
6. Relate radiographic projections to demonstrate specific anatomy.
7. Identify required radiographic anatomy on images.
8. Demonstrate safe operation of radiographic equipment while performing various radiographic examinations.
9. Describe medical conditions that affect performance of various radiographic examinations.
10. Demonstrate comprehension of examination requisitions.
11. Assist and perform operating room and portable examination procedures.
12. Perform increasingly difficult procedures.

7. REPRESENTATIVE METHODS OF INSTRUCTION:

Typical methods of instruction may include:

1. Field Experience

8. REPRESENTATIVE ASSIGNMENTS

Representative assignments in this course may include, but are not limited to the following:

Writing Assignments:

1. Preparation of four written image analyses (4-5 pages in length) on pre-determined radiological examinations for oral case presentation. These exams must have been performed by the student, and include positioning, anatomy, technical factors, radiation dose and areas for improvement.
2. Complete 4 to 6 page research paper on two different imaging modalities.
3. Complete a 2-4 page research paper on a pathological process including cause, treatment and how manifested radiologically.
4. Describe a C-arm procedure including equipment set-up diagram and equipment manipulation, approximately 3 to 6 pages.

Reading Assignments:

5. Compare five textbook procedures approximately 6 to 10 pages per week to practical application in assigned clinical education setting.
6. Read 4 to 6 articles and 30 to 40 pages in textbooks on two different imaging modalities.

Other Outside Assignments:

- o None.

To be Arranged Assignments:

- o Not applicable.

9. REPRESENTATIVE METHODS OF EVALUATION

Representative methods of evaluation may include:

0. Class Performance
1. Oral Presentation
2. Papers
3. Research Projects
4. Simulation
5. a) Successful completion of 36 second year clinical competencies. b) Present 4 image analysis with a passing score. c) Participation in coaching session(s) with clinical coordinator on site. d) Minimum 2 personal and professional growth assessments completed by the clinical instructor. e) 2 clinical observations completed by the clinical

- coordinator. f) Clinical evaluation completed by the clinical coordinator.
- g) Completion of all hours and documents in clinical education manual.
- h) Complete and apply technical factors chart.

10. REPRESENTATIVE TEXT(S):

Possible textbooks include:

1. Frank, Eugene D., Bruce W. Long, and Barbara J. Smith. *MERRILL'S ATLAS OF RADIOGRAPHIC POSITIONS AND RADIOLOGIC PROCEDURES Vols. 1, 2 & 3*, 16th ed. St. Louis, Missouri: Mosby Elsevier, 2025
2. McQuillen Martensen, Kathleen. *RADIOGRAPHIC IMAGE ANALYSIS*, 6th ed. St. Louis, Missouri: Mosby Elsevier, 2024
3. Adler, Arlene M., and Richard R. Carlton. *INTRODUCTION TO RADIOLOGIC SCIENCES AND PATIENT CARE*, 8th ed. St. Louis, Missouri: Saunders Elsevier, 2023

Other:

1. Anatomy and physiology textbooks
2. Medical Terminology book
3. Required texts for RADT 400, 408, 410, 420, 415 and 430
4. Clinical Education Manual

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Course Originator: Lezlee Inman