

**RADT 66 Course Outline as of Fall 2000****CATALOG INFORMATION**

Dept and Nbr: RADT 66 Title: SPECIAL MODALITIES

Full Title: Special Modalities

Last Reviewed: 9/25/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	4.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	4.00	Lab Scheduled	3.00	17	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	6.00		Contact Total	105.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 210.00

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

Principles of radiographic special procedures and specialized imaging modalities. Principles of venipuncture, fluoroscopy and its related equipment, CT, Mammography, and MRI.  
Demonstration and laboratory of venipuncture.

**Prerequisites/Corequisites:**

Admission to the Radiologic Technology Program or possession of licensure as a radiologic technologist.

**Recommended Preparation:****Limits on Enrollment:****Schedule of Classes Information:**

Description: Principles of radiologic special procedures & specialized modalities. Principles of venipuncture, fluoroscopy and its related equipment, CT, Mammography, and MRI.  
Demonstration and laboratory of venipuncture. (Grade Only)

Prerequisites/Corequisites: Admission to the Radiologic Technology Program or possession of licensure as a radiologic technologist.

Recommended:  
Limits on Enrollment:  
Transfer Credit: CSU;  
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective: Fall 1981	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**  
Certificate Applicable Course

## **COURSE CONTENT**

### **Outcomes and Objectives:**

The students will:

1. list steps of operation and all principles of a medical fluoroscopic imaging system;
2. describe the direct correlation between the patient radiation dose and medical fluoroscopic imaging system in the cath lab;
3. list all principles of radiation protection to self, patients, and other personnel in an angiographic suite;
4. list all sequential operations of all major radiographic equipment in a typical angiographic suite;
5. describe the anatomy and physiology of all viscera, vascular and lymphatic systems, lungs and heart and brain;
6. list all routine angiographic procedures;
6. complete film critique on radiographs of all common angiographic examinations;
7. perform a minimum of 5 venipunctures.

### **Topics and Scope:**

1. Principles and operation of fluoroscopic imaging system.
  - A. Television.
  - B. Vidicon, plumbicon, orthicon.
  - C. Image intensifier.
  - D. Video recorder.
  - E. Cine camera.
  - F. High resolution radiographic tube.
2. Relationship of radiation dose to the fluoroscopic imaging system.
  - A. Primary radiation.

- B. Secondary and scatter radiation.
- C. Skin dose.
- 3. Types of angiographic equipment, CT, and MRI.
  - A. Operational procedures.
  - B. Safety procedures.
- 4. Anatomy and physiology of:
  - A. Viscera.
  - B. Arterial system.
  - C. Venous system.
  - D. Lymphatic system.
  - E. Lungs and heart.
  - F. Brain.
- 5. Heart catheterization and angiography
- 6. Venipuncture performance

### Assignment:

- 1. Completion of a minimum of 5 venipunctures;
- 2. Completion of a minimum of 9 research papers.

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Research papers

Writing  
20 - 40%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None

Problem solving  
0 - 0%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Performance exams, A minimum of 5 venipunctures

Skill Demonstrations  
10 - 30%

**Exams:** All forms of formal testing, other than skill performance exams.

Multiple choice, Essay

Exams  
40 - 60%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

None

Other Category  
0 - 0%

### Representative Textbooks and Materials:

- Merrill's Atlas of Radiographic Positions and Radiologic Procedures, Ballinger, 8th edition, 1999.
- SRJC Course Syllabus, 2000.