RADT 63A Course Outline as of Fall 1981

CATALOG INFORMATION

Dept and Nbr: RADT 63A Title: RADIO PRINCIPLES
Full Title: Radiographic Principles
Last Reviewed: 9/25/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 157.50

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:
Photographic aspects of radiography, principles of radiographic exposure and formulation of x-ray techniques. Laboratory experience in the different areas of radiographic exposure and formulating technique charts will be provided. Basic quality control procedures will be introduced.

Prerequisites/Corequisites:
Admission to the Radiologic Technology Program or possession of licensure as a Radiologic Technologist; completion of RT 61A, Physics 61.

Recommended Preparation:
English 84 or 1A; Math 150A; Physics 61 & 62

Limits on Enrollment:

Schedule of Classes Information:
Description: Photographic aspects of radiography, principles of radiographic exposure & formulation of x-ray techniques. Principles of general physics & electricity. Mathematical calculations of patient radiation dosages & equipment operation. (Grade Only)
Prerequisites/Corequisites: Admission to the Radiologic Technology Program or possession of

licensure as a Radiologic Technologist; completion of RT 61A, Physics 61.
Recommended: English 84 or 1A; Math 150A; Physics 61 & 62
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 1981	Inactive:	
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
The students will:
1. Explain the chemistry of film development solutions.
2. Explain the basic mechanics of an automatic processor.
3. Demonstrate the ability to troubleshoot problems that occur in automatic film processing.
4. Explain the x-ray technique and list their correct usage.
5. Explain the application and use of radiographic accessories.
6. Obtain high quality radiographs through proper use of radiographic technique and radiographic accessories on campus and at clinical sites as evaluated in the competency handbook and assessment on clinical evaluations.
7. Demonstrate proper film handling in the campus darkroom.
8. Demonstrate quality assurance and quality control techniques in film processing and equipment operation.

Topics and Scope:

This course is designed to cover the basic principles underlying radiographic technique. The student will be studying film chemistry, radiographic accessories, radiographic techniques and principles of:
1. Radiographic Technique.
   A. Kilovoltage.
   B. Milliamperage.
   C. Time.
   D. Phototiming.
2. Radiographic Accessories.

A. Guide.
B. Cones.
D. Screens.
E. Shielding.

3. Radiographic Quality Control.
   A. Contrast.
   B. Density.
   C. Definition of detail.
   D. Processing
   E. Equipments.
   F. Darkroom.
4. Film Chemistry
   A. Film Types
   B. Sensitometry
   C..Construction of film .
5. Processing
   A. Chemistry of developing film
   B. Processor maintenance
   C. Processor troubleshooting
   D. Processor quality assurance

Assignment:

1. Five to seven chapter reading assignments and 8 to 12 handout assignments.
2. Complete 8 to 10 laboratory exercises in the laboratory.
3. Complete A-V modules in the CHEC building.
4. Weekly homework assignments.

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.

Written homework, Lab reports, WEEKLY WORKSHEETS & REPORTS	Writing 10 - 20%

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

Homework problems, Lab reports, Quizzes, 10 TO 12 REPORTS	Problem solving 20 - 30%

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

Class performances	Skill Demonstrations 10 - 20%

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

Multiple choice, True/false, THREE 50-QUESTION TESTS	Exams 40 - 50%

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

OTHER CLASSROOM ASSIGNMENTS	Other Category 10 - 20%

Representative Textbooks and Materials:
RADIOLOGIC SCIENCE FOR TECHNOLOGISTS by Steward Bushong, current edition