RADT 100 Course Outline as of Fall 2006

CATALOG INFORMATION

Dept and Nbr: RADT 100 Title: SURVEY MEDICAL IMAGING
Full Title: Survey of Medical Imaging
Last Reviewed: 2/10/2020

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	2.00	Lab Scheduled	0	8	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	2.00		Contact Total	35.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 105.00

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
A survey of careers and programs in Medical Imaging. The course also covers mathematical operations used in health care, radiation and its prot ection, code of ethics, licensing eligibility, and impacts of medical imag ing on general patient care and trauma care.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 1A or equivalent

Limits on Enrollment:

Schedule of Classes Information:
Description: A survey of careers and programs in Medical Imaging. The course also covers mathematical operations used in health care, radiation and its prot ection, code of ethics, licensing eligibility, and impacts of medical imag ing on general patient care and trauma care. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Eligibility for ENGL 1A or equivalent

Limits on Enrollment:
Transfer Credit:
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:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Outcomes and Objectives:
At the completion of this course, the student will be able to:
1. List and compare careers in medical imaging.
2. Compare and contrast the health science programs in higher education institutions.
3. Enumerate and put in practice mathematical operations used in health care.
4. List and compare the Systems International units as used in health care.
5. Explain the production of x-rays and their effects on matter.
6. List the radiation protection measures for self, patients, and other medical personnel.
7. Compare and contrast the elements of practical applications for radiation protection.
8. Compare and contrast career opportunities in medical imaging.
9. Compare and contrast elements of the ARRT (American Registry of Radiologic Technologists) code of ethics.
10. List the eligibility possibilities of an applicant with criminal background.
11. List the impacts of medical imaging on the general population.
12. List the impacts of medical imaging on the gerontologic population.
13. List the impacts of medical imaging on the pediatric population.
14. Compare patient care practices in a trauma environment.

Topics and Scope:

I. Measurement systems and their application in radiology and pharmacology problems, conversions within and

between systems:
A. Apothecary and review of basic math
B. English system of units
C. Medication dose calculation
D. Radiation dose calculation
E. System International units

II. X-Rays
A. Discovery
B. Production
C. Interactions with matter.

III. Radiation Protection
A. Patient
B. Self
C. Other personnel

IV. Overview of Careers in Medical Imaging
A. Radiography
B. Computerized tomography
C. Magnetic resonance imaging
D. Medical sonography
E. Nuclear medicine

V. Professional Licensing/Ethics:
A. ARRT (American Registry of Radiologic Technologists) code of ethics
B. Licensing eligibility
a. State requirements
b. Registry requirements
C. Background check

VI. Patient Care
A. Gerontology
B. Pediatrics
C. Trauma and death

Assignment:

1. Hospital department tours
2. A written report on the hospital tour
3. Five case studies on ethical behavior in medical imaging
4. Read a chapter every week
5. Complete 10 worksheets on radiologic unit calculations
6. Research and report on careers in medical imaging
7. A minimum of 5 quizzes
8. A midterm examination
9. A final examination

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, Report on department tours	Writing 15 - 30%

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.

None	Skill Demonstrations 0 - 0%

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

Multiple choice, True/false, Matching items, Completion, Case studies, quizzes, midterm, and final exams	Exams 60 - 70%

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

Worksheets	Other Category 10 - 15%

Representative Textbooks and Materials:
Radiologic Science for Technologists, Bushong, Stewart C., 2005. Mosby.
Introduction to Radiologic Technology, Gurley, LaVerne, 2005. Mosby.
Instructor prepared material.