

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. RADT

COURSE NUMBER: 1130

NUMBER OF CREDITS: 3

Lecture: 2 Lab: 1 OJT: 0

Course Title:
Radiological Exposures I

Catalog Description:
Radiological Exposures I provides the student with the knowledge of factors that govern and influence image quality. The course emphasis is on image quality through the discussion of factors that affect density, contrast, recorded detail, and distortion. Complex mathematical problems reflect the effect of change in exposure factors and radiographic devices on image quality.

Prerequisites or Necessary Entry Skills/Knowledge:
RADT 1100 and MATH 1111

FULFILLS MN TRANSFER CURRICULUM AREA(S) (*Leave blank if not applicable*)

- ☐ Goal 1: Communication: By meeting the following competencies:
- ☐ Goal 2: Critical Thinking: By meeting the following competencies:
- ☐ Goal 3: Natural Sciences: By meeting the following competencies:
- ☐ Goal 4: Mathematics/Logical Reasoning: By meeting the following competencies:
- ☐ Goal 5: History and the Social and Behavioral Sciences: By meeting the following competencies:
- ☐ Goal 6: The Humanities and Fine Arts: By meeting the following competencies:
- ☐ Goal 7: Human Diversity: By meeting the following competencies:
- ☐ Goal 8: Global Perspective: By meeting the following competencies:
- ☐ Goal 9: Ethical and Civic Responsibility: By meeting the following competencies:
- ☐ Goal 10: People and the Environment: By meeting the following competencies:

Topics to be Covered
Basic Physics concepts
Radiographic equipment
Properties of X-ray
Exposure factors
Application of Radiographic calculations

Student Learning Outcome

Determine practical considerations in setting standards for acceptable image quality.

Analyze the relationships of factors that control and affect image exposure, contrast, detail, and distortion.

Assess radiographic density, contrast, detail, and distortion on radiographic images.

Recognize the types, functions and application of beam limiting devices and how they relate to image quality and patient exposure.

Recognize the types, functions, and limitations of grids.

Recognize the impact relationships of factors have on radiographic technique selection.

Identify a variety of image receptors.

Describe the benefits, limitations, and characteristics of a variety of image receptors.

Is this course part of a transfer pathway: Yes ☐ No ☒

***If yes, please list the competencies below**

Revised Date: 1/24/2022