

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. RADT

COURSE NUMBER: 1140

NUMBER OF CREDITS: 4

Lecture: 3 Lab: 1 OJT: 0

Course Title:
Radiological Exposures II

Catalog Description:
Radiological Exposure II implements radiological exposure compensations as well as the effects of each compensation on image quality and the knowledge and ability to process and evaluate radiographic images will be emphasized. Requirements will focus on digital imaging, digital imaging system components, imaging processing, image analysis, image acquisition, and the ability to identify and recognize diagnostic quality. The principle and operation of automatic exposure control is also presented. Advancement in examination difficulty and complexity of mathematical applications will be reflected.

Prerequisites or Necessary Entry Skills/Knowledge:
RADT1130

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 (General)

Digital Imaging, PACS, Imaging Processing, Image Analysis, Image Acquisition, and Technical Evaluation, Image Quality Factors, Beam Restriction

Student Learning Outcomes

Analyze radiographic quality as it relates to technical factors.
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Recognize the impact relationships of factors have on radiographic technique selection.

Critique radiographic images and perform corrective actions based on image quality.

Describe the characteristics of digital processing.

Determine the types, causes and effects of artifacts on a radiographic image
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Describe the concept and components of automatic exposure control (AEC).
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Describe all aspects of digital imaging.
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Describe components associated with picture archive communication systems (PACS), radiology information systems (RIS) and digital imaging and communications in medicine (DICOM).

Is this course part of a transfer pathway: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Revised Date: 03/28/2023