MASTER COURSE OUTLINE

A. RADT 2265 Modality Exploration

B. COURSE DESCRIPTION:

This course introduces the student to the equipment, procedures, and technologies routinely used for specialized imaging procedures. Various recording media and techniques, as well as specialized imaging equipment are described. Characteristic appearance of anatomical structures is presented for the various imaging modalities. This course is part of the Radiography program which is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Prerequisite: RADT 1235, RADT1260, and RADT2283. **(2 Cr – 2 lect, 0 lab)**

C. *Core Theme: Critical Thinking

D. RIVERLAND INSTITUTIONAL LEARNING OUTCOMES:

This course addresses the following Riverland Institutional Learning Outcome(s):
☒ ILO 1: critical thinking *(Core Theme Goal 2)*
☐ ILO 2: awareness of the larger global community *(Core Theme Goal 7 or 8)*
☐ ILO 3: ethical, engaged citizenship *(Core Theme Goal 9 or Goal 10)*
☐ ILO 4: communication and collaboration *(Discipline Goal 1 and by any learning outcome(s) involving communication or collaboration)*

E. MAJOR CONTENT AREAS:

- Computed tomography (CT)
- Interventional radiology (IR)
- Positron emission tomography (PET)
- Magnetic resonance imaging (MRI)
- Bone densitometry
- Mammography
- Ultrasound
- Nuclear medicine
- Radiation therapy
- Cross sectional anatomy
- Basic principles of operation
- Image data appearance
- Radiation protection

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

GOAL TYPE	OBJECTIVES Students will be able to	OUTCOMES The student will successfully
*Critical Thinking	gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.	1. identify the differences between the imaging modalities included in the radiologic sciences.
CS	describe equipment and techniques in various imaging modalities.	1. demonstrate routine set-up for a computed tomography exam.
CS	recognize images from different imaging modalities.	1. identify basic anatomy on special modality images.
CS	describe the different radiation types used for all imaging modalities.	1. list what types of radiation are used in each imaging modality.

G. SPECIAL INFORMATION:

This course may require use of the Internet, the submission of electronically prepared documents and the use of a course management software program. Students who have a disability and need accommodations should contact Accessibility Services at the beginning of the semester. This information will be made available in alternative format, such as Braille, large print, or current media, upon request.

H. COURSE CODING INFORMATION:

Course Code X/Class Maximum 20; Letter Grade

Revision date: 05/07/13; 11/29/17; 10/01/24
AASC Approval date: 12/12/17; 11/15/22; 11/19/24; 04/16/26

*These five MnTC Goals have been identified as Riverland Community College Core Themes. Every course in the Riverland Community College curriculum shall meet outcomes from one of these themes.
**These five MnTC Goals have been identified as Riverland Community College Disciplines. Riverland's MnTC courses also shall meet outcomes from a Discipline Area.

NOTE: The Minnesota Transfer Curriculum "10 Goal Areas of Emphasis" are reflected in the five required discipline areas and five core themes noted in the Riverland Community College program of study guide and/or college catalog.

***Riverland Community College Core Themes**	**MnTC Goal Number**
Critical Thinking (CT)	**2**
Human Diversity (HD)	**7A, 7B, 7A/B**
Global Perspective (GP)	**8**
Ethical and Civic Responsibility (EC)	**9**
People and the Environment (PE)	**10**

**Riverland Community College Discipline Areas	MnTC Goal Number
Communication (CM)	**1**
Natural Sciences (NS)	**3**
Mathematics/Logical Reasoning (MA)	**4**
History and the Social & Behavioral Sciences (SS)	**5**
Humanities and Fine Arts (HU)	**6**