MASTER COURSE OUTLINE

A. DMSG 1404 Diagnostic Medical Sonography I

B. COURSE DESCRIPTION:

Students will be exposed to different pathologies of the abdomen organs, blood vessels, thyroid, and neonatal head. This course will focus on ultrasound findings, scanning techniques, patient history, laboratory data, and other imaging modalities to help better understand how to interpret pathology. Emphasis will focus on descriptive and anatomical terminology, clinic data, grayscale imaging and Doppler characteristics as seen with various pathologies. Students will be determining what needs to be included on a sonographer worksheet.
(3 Cr – 3 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:

- Adrenal glands
- Retroperitoneal spaces
- Peritoneal spaces
- Non-cardiac chest
- Abdominal Vasculature
- Biliary Tree
- GI Tract
- Liver
- Musculoskeletal
- Neck
- Pancreas
- Spleen
- Urinary Tract

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

GOAL TYPE	OBJECTIVES Students will be able to	OUTCOMES The student will successfully
*Critical Thinking	gather 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. demonstrate knowledge of the pathologies of the abdomen organs, blood vessels, thyroid, and neonatal head.
CS	introduce scanning techniques used in sonography.	1. demonstrate basis scanning techniques used in sonography.
CS	review anatomical terminology used in sonography.	1. describe and identify anatomical structures. 2. use medical terms for the various body systems.
CS	introduce grayscale imaging and limitations of grayscale imaging.	1. define grayscale imaging. 2. discuss strategies used to optimize imaging.
CS	have introduction to a sonographer worksheet.	1. demonstrate use of a sonographer worksheet. 2. describe what is included in a sonographer worksheet.

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:
AASC Approval date: 11/18/25

*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**