



**Course Prefix/Number/Title:** DMS 221L Abdominal Sonography I Lab (Aug.2025)

**Number of Credits:** 1 semester credit

**Course Description:**

This course is a hands-on sonographic scanning lab that focuses on the knowledge, skills and techniques for acquisition of anatomy and sonographic protocols and image optimization of the upper abdominopelvic cavity. Demonstrated scanning protocols will include imaging of the aorta, celiac trunk, superior mesenteric and iliac arteries, kidneys, bladder as visualized by sonography. Color and spectral Doppler applications will also be applied to the appropriate anatomy. This course is integrated with DMS 221, the didactic study of the anatomy, physiology, pathology and pathophysiology of the organs of the abdominopelvic cavity, aorta, IVC, celiac trunk, SMA, peritoneum and diaphragm as visualized by sonography.

**Pre-/Co-requisites:** DMS 221

**Course Objectives:**

1. Describe scanning techniques and protocols used in abdominal scanning.
2. Identify abdominal sectional anatomy in transverse and longitudinal planes.
3. Explain terminology used to describe the results of normal ultrasound examinations.
4. Define the criteria for an adequate diagnostic abdominal ultrasound examination.
5. Describe renal function tests and their relevance to disease.
6. List sonographic features for aortic and renal pathology discussed in course.
7. Describe the normal sonographic pattern of the aorta, bladder, and kidneys.
8. Describe abnormal sonographic patterns of the aorta, bladder, and kidneys discussed in this course.

**Instructor:** Keshia Gathman, Amy Hofmann

**Office:** 5<sup>th</sup> Floor Medical Arts Clinic, Trinity Health

**Office Hours:** M-Th 3-5pm and by appointment

**Phone:** 701-857-5620

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**Lecture/Lab Schedule:** 9:00 –3:00 pm MW September 22 to November 3 in MAC Skywalk Rm A

**Textbook(s):** Diagnostic Sonography, Hagen-Ansert, 9th Edition; Workbook Diagnostic Sonography, Hagen-Ansert, 9th Edition. Trinity Health Clinical Education Handbook

**Course Requirements:**

Grading is based on completion of assignments, quizzes and test.

|             |     |
|-------------|-----|
| Assignments | 15% |
| Quizzes     | 15% |
| Test        | 70% |

Consistent with class attendance policy, the student is responsible for attending every class and for the material presented. If a student will not be attending a class, he/she must notify the Instructor/Program Director prior to absence to plan for makeup time and activities.

#### Grading Criteria

- A = 94-100% of the total points
- B = 87 - 93% of the total points
- C = 80 - 86% of the total points
- F = <79% of the total points

### **Tentative Course Outline:**

| <b>Date</b> | <b>Topic/Scanning</b>            | <b>Assignment/Quiz/Tests</b>                                                 |
|-------------|----------------------------------|------------------------------------------------------------------------------|
| 9/22        | Aorta PPT Lecture                |                                                                              |
| 9/24        | Scan Aorta                       | <b>Assignment 1</b> Due - Aorta                                              |
| 9/29        | Scan Aorta – sterile gown&gloves |                                                                              |
| 10/1        | Scan Aorta                       |                                                                              |
| 10/6        | Scan Aorta                       | <b>Assignment 2</b> Due - Aorta Model                                        |
| 10/8        | Scan Aorta                       | <b>Quiz 1</b> Aorta Protocol                                                 |
| 10/13       | Renal PPT Lecture                | <b>Assignment 3</b> Due – Aorta Protocol Images PPT                          |
| 10/15       | Scan Renals                      |                                                                              |
| 10/20       | Scan Renals                      | <b>Assignment 4</b> Due – Urinary and Vascular System                        |
| 10/22       | Scan Renal Protocol              |                                                                              |
| 10/27       | Scan Renal Protocol              | <b>Quiz 2</b> Renal Protocol                                                 |
| 10/29       | Renal <b>Lab Assessment</b>      | <b>Lab Assessment</b><br><b>Assignment 5</b> Due – Renal Protocol Images PPT |
| 11/3        | ABD I Final Test                 | <b>Final Test</b>                                                            |

#### **CTE Competency/Department Learning Outcome(s):**

CTE Competency #1: Employ industry-specific skills in preparation for workplace readiness

Learning Outcome #1 – Students will demonstrate knowledge of effective technical scanning factors for normal anatomy and equipment settings SLO 1.1

Learning Outcome #2 – Students will demonstrate ability to critically evaluate acquired images for diagnostic quality. SLO 1.2

**Relationship to Campus Focus:** This course addresses a DMS Program theme by developing the knowledge and psychomotor scanning skill sets necessary to perform abdominal sonography utilizing the protocols and techniques that are currently used in sonographic imaging.

#### **Classroom Policies**

1. Cell phones and related devices are monitored in the classroom at all times. It is recommended that you do not bring your cell phone or other electronic devices into the classroom or, at the very least, get instructor permission to use approved devices as classroom learning resources.
2. Food and beverages are permitted in accordance with classroom policy.
3. Be respectful of other students, instructors, and guests.

#### **Student Email Policy**

The Dakota College at Bottineau campus community is increasingly dependent upon electronic communication among faculty, staff and students. A student's campus-assigned e-mail address will be the only one recognized by the campus for official mailings. The liability for missing or not acting upon

important information conveyed via email because of a failure to access a campus-assigned e-mail address rests with the student. Additionally, student must provide Trinity Health DMS faculty with a personal email address for communication while in the program.

### **Academic Integrity**

According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred. Additionally, dishonesty in the classroom or laboratory and with assignments, quizzes and exams is a serious offense and is subject to disciplinary action by the DMS Program Director. For more information, refer to the Trinity Health DMS Program Handbook policies.

### **Disabilities and Special Needs**

Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor, DMS Program Director and Disability Support Services.

### **Title IX:**

Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.

### **AI Student Policy:**

Unless otherwise indicated in the course syllabus, or in individual instructions for course assignments, or in the absence of the express consent of the course instructor, students are not allowed to utilize generative AI to help produce any of their academic work. Any violation of this policy will be considered an act of academic dishonesty as outlined within the Dakota College Code of Student Life.

## **RESPONSIBILITIES**

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| Students | <ul style="list-style-type: none"><li>• Responsible to follow the syllabus and assignment instructions regarding use of generative AI for all academic work.</li><li>• Obtain permission of the instructor prior to the use of generative AI that is outside of the syllabus or assignment instructions. Provide appropriate rationale for how the use of generative AI will enhance the learning experience for the assignment.</li><li>• In instances where generative AI is permissible, appropriately cite the generative AI program used and indicate where in the assignment it was used, in a brief submission statement.</li></ul> |
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| Faculty | <ul style="list-style-type: none"><li>• Determine if the use of generative AI could enhance student learning in any assignment or project.</li><li>• Clearly indicate in all course syllabi if generative AI is allowable for any academic work.</li><li>• If allowable, give specific parameters for how and when generative AI may be used.</li><li>• If a violation of generative AI for the individual course/syllabus is suspected, discuss the concern with the student. If violation is still suspected, inform the appropriate semester coordinator/program director.</li></ul> |
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