



**Course Prefix/Number/Title:** DMS 223 Abdominal Ultrasound III

**Number of Credits:** 2 semester credits

**Course Description:** This course is the study of the anatomy, physiology, pathology and pathophysiology of superficial tissue to include the thyroid, parathyroid, scrotum, prostate, breast and ultrasound guided interventional techniques of these tissues. Sonography of transplanted organs will be discussed. Sonographic vascular imaging of related organs will be studied, including the application of Doppler imaging principles where appropriate. Associated Lab learning assignments and outcomes are specified in the DMS 223L, Abdominal Ultrasound Lab III syllabus.

**Pre-requisites:** DMS-222, DMS-222L

**Corequisites:** DMS-223L

**Course Objectives:**

The goal of this course which is integrated with DMS 223L, focuses on the knowledge, skills and techniques for acquisition of appropriate sonographic protocols and image optimization of the thyroid, scrotum, prostate, breast, and ultrasound guided interventional techniques. Color and spectral Doppler applications will also be applied to the appropriate anatomy.

Objectives:

1. Describe appropriate indications for the use of ultrasound in superficial tissue.
2. Describe scanning techniques and protocols used in superficial tissue scanning.
3. Identify superficial tissue sectional anatomy in transverse and longitudinal planes.
4. Describe the anatomy and relational landmarks of the associated anatomy
5. Explain and describe the results of normal/abnormal ultrasound examinations.
6. Define criteria for an adequate diagnostic ultrasound examination of related anatomy and pathology.
7. Define the criteria for adequate diagnostic imaging and Doppler evaluation of vascular structures of superficial tissue ultrasound examinations.
8. Describe laboratory and diagnostic testing and their relevance to superficial tissue pathology.
9. List the clinical signs and sonographic features for pathology discussed in course.
10. Describe ultrasound-guided interventional techniques and protocols.
11. Discuss the sonographic appearances and techniques applied in imaging transplanted organs.
12. List the clinical signs and sonographic features for pathology discussed in course.
13. Describe advantages of ultrasound-guided procedures.
14. List potential complications of ultrasound-guided interventional techniques.

**Instructor:** Amy Hofmann

**Office:** Suite 302 5<sup>th</sup> Ave Building, Trinity Health

**Office Hours:** 9 AM to 2 PM Tu, Th and by appointment

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**Lecture Schedule:** 10:30 – 2:00 pm, Th in Suite 301

**Lab Schedule:** 8:30 – 10:30 am, Th in Suite 301

**Textbook:** Diagnostic Sonography, Hagen-Ansert, 8<sup>th</sup> Edition

**Lab Manual:** 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 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 Lecture Outline:**

| <u>WEEK</u> | <u>TOPIC</u>                                     | <u>READING</u> |
|-------------|--|----------------|
| 1           | Thyroid and parathyroid A&P                      | Chpt 22        |
| 2           | Thyroid Pathology                                |                |
| 3           | Thyroid sonographic techniques                   |                |
| 4           | Scrotum  | Chpt 23        |
| 5           | Scrotal Pathology                                |                |
| 6           | Breast A&P                                       | Chpt 21        |
| 7           | Breast pathology                                 |                |
| 8           | Breast mammographic and sonographic imaging      |                |
| 9           | Ultrasound guided interventional techniques      | Chpt 18        |
| 10          | cont.  |                |
| 11          | Fine needle aspiration, ultrasound guided biopsy |                |
| 12          | cont.  |                |
| 13          | Sonography of transplant organs                  | Chpt 20        |
| 14          | cont.  |                |
| 15          | Review   |                |
| 16          | Testing  |                |

**CTE Competency/Department Learning Outcomes:**

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

Learning outcome #1 - Students will demonstrate critical thinking and problem-solving skills in the classroom and clinical setting. SLO 1.1

Learning outcome#2 - Students will demonstrate knowledge of normal superficial tissue anatomy and critically evaluate related sonographic images for diagnostic quality. SLO 1.2

**Relationship to Campus Theme:**

This course addresses a DMS Program theme by developing the knowledge and psychomotor scanning skill sets necessary to perform superficial tissue sonography, image guided invasive procedures and breast imaging, 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.