

**NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
DMS 211 - ABDOMINAL SONOGRAPHY (4 CR.)**

Course Description

Examines the clinical applications within the specialty of abdominal sonography including interpretation of normal and abnormal sonographic patterns, pathology, related clinical signs and symptoms, normal variants and clinical laboratory tests. Includes laboratory sessions on basic scanning techniques and protocols. Lecture 3 hours. Laboratory 3 hours. Total 5 hours per week.

General Course Purpose

The purpose of this course is to provide students with the basic knowledge, techniques and procedures for evaluating the abdominal organs with real-time 2-D and Doppler imaging. Students will develop the basic knowledge base to work from on how normal and abnormal abdominal anatomy and physiology appears with ultrasound. Students will be provided with scan lab demonstration and techniques that will allow them to apply what they learn in class to live scan models.

Course Prerequisites/Corequisites

The student must satisfactorily complete all previous sonography courses with a grade of "C" or better.

Course Objectives

Upon completing the course, the student will be able to:

- Demonstrate the ability to perform sonographic examinations of the abdomen according to protocol guidelines established by national professional organizations utilizing real-time equipment with transabdominal transducers, and Doppler display modes.
- Recognize and identify the sonographic appearance of normal anatomic structures, including anatomic variants and normal Doppler patterns.
- Recognize, identify, and appropriately document the abnormal sonographic and Doppler patterns of disease processes, pathology, and pathophysiology of the abdominal structures.
- Modify the scanning protocol based on the sonographic findings and the differential diagnosis.
- Discuss the patient history and physical examination, related imaging, laboratory, and functional testing procedures.
- Discuss clinical differential diagnosis.
- Discuss the role of ultrasound in patient management.
- Discuss sonographic and Doppler patterns in clinical diseases.
- Demonstrate knowledge and understanding of the role of the sonographer in performing interventional/invasive procedures.

Major Topics to be Included

1. Normal anatomy, physiology and pathophysiology of the following structures:
 - a. Liver
 - b. Biliary System
 - c. Pancreas
 - d. Spleen
 - e. Urinary System
 - f. Abdominal Vasculature

2. Sonographic and Doppler patterns in clinical diseases, including:
 - a. Iatrogenic
 - b. Degenerative
 - c. Inflammatory
 - d. Traumatic
 - e. Neoplastic
 - f. Infectious
 - g. Obstructive
 - h. Congenital
 - i. Metabolic
 - j. Immunologic

3. Role of the sonographer in performing interventional/invasive procedures.