

**Bergen Community College
Division of Health Professions
Diagnostic Medical Sonography Program**

DMS229 - Vascular Imaging Course Syllabus

Lecture - Tuesday – 5:00 - 5:50 PM

Lab – Tuesday – 6:00 - 8:30 PM

Course Description:

This course introduces the use of diagnostic imaging with the use of Doppler for examining the vasculature of the human body. In this class the student will learn about diseases that affect the circulatory system. The course provides a history of diagnosis and treatment of vascular conditions. In addition, the course gives the student an awareness of alternative diagnostic tools used in conjunction with ultrasound. The student will learn how to perform vascular tests commonly performed in vascular laboratories and develop an awareness of tests that are routinely performed.

Credit Hours : 2

Prerequisite(s): BIO-209, DMS-201, DMS-213

Co-requisite(s): DMS-214, DMS-220, DMS-223

Student Learning Objectives: As a result of meeting the requirements in this course, students will be able to:

- 1) **Demonstrate knowledge in alternative uses of ultrasound.**
- 2) **Be familiarized with the anatomy and physiology of the circulatory system.**
- 3) **Demonstrate the technical skills needed to perform various vascular exams.**
- 4) **Identify vascular pathology.**
- 5) **Demonstrate different criteria uses in disease interpretation.**
- 6) **Preparation for vascular clinical practicum, professionally and technically.**

Lecture 1: Basic Doppler

Lab: Equipment review demonstration of Doppler/color Doppler modes.

Lecture 2 & 3: Carotid imaging and pathology

Lab: Introduction to scanning carotids

Lecture 4: Vertebral Arteries

Lab: Carotid scanning

Lecture 4 (cont.) : Arterial Hemodynamics

Lab: Carotid scanning

Lecture 5: Lower Extremity Arteries

Lab: Carotid scanning

Quiz #1- Lecture 2, 3 and 4

Lecture 6: Upper Extremity Arteries

Lab: Carotid Scanning

Midterm

Lab: Carotid Lab Test

Lecture 7: The Venous System

Lab: Lower arterial scanning

Lecture 8: Lower Extremities Venous Hemodynamics Testing and Evaluation

Lab: Lower arterial scanning

Lecture 9: Upper Extremity venous and Abdominal vessel anatomy

Lab: Lower ext. venous scanning

Lecture 10: Abdominal Vessels

Lab: Lower ext. venous scanning

Lecture 11: Renal vessel examination

Quiz #2

Lab: Lower extremity venous scanning

Renal Artery Exam- Review for Final

Lab: Lower extremity venous Lab test

Lab testing-LEVD

Final Exam

*** This course syllabus is tentative and subject to change, depending upon the progress of the class.**

Grade calculations:

2 Lab Tests (averaged) 20 %

2 Quizzes (averaged) 20 %

Midterm Exam 25 %

Final Exam 35 %

***A missed quiz may only be made-up before the next class or you will receive a zero.**

Grading Scale:

All grading is "absolute" and will NOT be rounded off.

A "D" GRADE DOES NOT APPLY TO DMS COURSES

92 - 100 A

88 - 91.9 B+

83 - 87.9 B

79 - 82.9 C+

75 - 78.9 C