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