PIKES PEAK STATE COLLEGE

Master Course Syllabus

Vascular Ultrasound – DMS 2400

Purpose of Document

This document contains important information for transfer. It may be helpful for you to retain a copy for your records, along with the class specific syllabus. This document will be especially helpful if you decide to later change your course of study.

Pikes Peak State College and the Colorado Department of Higher Education have determined that graduates should have a broad range of learning skills as well as discipline related skills. Both types of skills are detailed below.

Course Description

Covers basic positioning and scanning protocol of the vascular system. Review of the anatomy, hemodynamics and terminology unique to the vascular system.
Credit Hours: 2
Contact Hours: 30

Required Course Learning Outcomes

1. Describe vascular anatomy relevant to sonographic examination, including the arterial and venous systems.
2. Explain basic hemodynamic principles as they relate to vascular ultrasound, such as flow patterns, pressure gradients, and Doppler concepts.
3. Use appropriate positioning and scanning protocols to perform basic vascular ultrasound examinations.
4. Correctly use terminology unique to the vascular system in the context of ultrasound imaging.

Topical Outline

I. Vascular System Review
   a. Overview of arterial and venous anatomy of extremities, neck, and abdomen
   b. Normal vascular physiology and hemodynamics

II. Fundamentals of Vascular Ultrasound
   a. Scanning planes and image orientation for major vessels
   b. Transducer selection and basic Doppler settings

III. Positioning and Scanning Protocols
   a. Standard protocols for peripheral venous and arterial studies
   b. Patient positioning for lower-extremity and upper-extremity exams
   c. Basic carotid and other commonly scanned vessels

IV. Hemodynamics & Doppler Concepts
   a. Laminar vs. turbulent flow
   b. Velocity profiles and spectral waveform interpretation at a basic level

V. Vascular Terminology
    a. Descriptive terms for stenosis, occlusion, reflux, and thrombosis
    b. Reporting language and documentation basics