



Course Description

SON2171C | Vascular Sonography | 2.00 credits

This is a comprehensive course designed to teach basic vascular ultrasound technology. Emphasis is placed on recognizing and understanding vascular anatomy, normal hemodynamics, vascular physiology, anatomical variances, recognizing abnormal flow patterns of vascular disease, multiple exams protocols, hemodialysis access structures, vascular graft evaluation, TCD, and vascular data calculations. Prerequisite: SON2161C.

Course Competencies

Competency 1: The student will demonstrate knowledge and comprehension of real-time imaging and vascular theory by:

1. Defining the pulse repetition frequency
2. Analyzing when to change the pulse repetition frequency
3. Describe the functions of each Doppler control and how it changes the sound pulses being sent and reflected
4. Defining the Doppler shift
5. Describing the spectral trace Doppler and average velocities and waveforms

Competency 2: The student will demonstrate knowledge and comprehension of the structure of the ultrasound machine by:

1. Demonstrating Doppler knobs
2. Describe spectral tracing
3. Differentiating Pulse wave Doppler and continuous wave Doppler

Competency 3: The student will demonstrate knowledge, comprehension, and understanding of how to optimize ultrasound images and how the units operate by:

1. Describe what it means to optimize an ultrasound image
2. Describe how to optimize Doppler flow
3. Describe the effects of PRF (scale)
4. Doppler Gain, and Filter

Learning Outcomes:

- Communicate effectively using listening, speaking, reading, and writing skills
- Solve problems using critical and creative thinking and scientific reasoning
- Use computer and emerging technologies effectively