

Print Date: 8/5/14

Course Objectives/Course Outline
Spokane Community College

Course Title: Ultrasound Physics and Instrumentation

Prefix and Course Number: SONO 125

Course Learning Outcomes:

By the end of this course, a student should be able to:

This course emphasizes ultrasound physics, the physics of waves, sound transmission, attenuation, pulse wave principles, transducer and ultrasound systems operations.

- Apply mathematic concepts in the evaluation of ultrasound and its transmission though human soft tissue.
- Describe ultrasound waves in their transmission propagation, characteristics and parameters.
- Describe ultrasound waves in their attenuation and effects on imaging human tissue.
- Describe the use for pulse wave parameters and applications within ultrasound imaging
- Identify the various characteristics of ultrasound transducers and their effects on ultrasound images.
- Apply the physical principles of ultrasound in the operation of medical sonographic equipment.

COURSE OUTLINE

- I. Mathematic concepts utilized in ultrasound physics
- II. Ultrasound waves
- III. Attenuation of ultrasound waves
- IV. Pulsed wave operations
- V. Ultrasound transducers
- VI. Ultrasound system operation