University of Arkansas - Fort Smith
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General Syllabus

DMSO 31002 Clinical Laboratory Practice

Credit Hours: 2 Lecture Hours: Laboratory Hours: 10

Prerequisite: Admission into the diagnostic medical sonography degree program

Corequisites: DMSO 31003 Acoustical Physics and Instrumentation I and DMSO 31103 Cross-Sectional Anatomy

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Application of sonographic-scanning procedures in the laboratory setting. Emphasis on anatomical recognition in the cross-sectional planes and the proper use of sonographic instruments and equipment.

B. Additional Information - None

II. Student Learning Outcomes

A. Subject Matter

Upon successful completion of this course, the student will be able to:

1. Analyze the various transducers used for specific anatomical examinations
2. Survey the parts of the ultrasound machine's controls and explain their use.
3. Integrate scanning protocols and appropriate instrumentation in the investigation of anatomical structures in the transverse, longitudinal, and coronal planes of the:
   a. Vascular System
   b. Abdominal
   c. Female Pelvis
   d. Small Parts
4. Combine the understanding in the use of the ultrasound instruments, the modes of operation, the operator control options, and the frequency selections.

5. Focus on the anatomical structures in the longitudinal and transverse planes of the vascular system, abdomen, female pelvis, and small parts on a sonographic image.
6. Connect effective oral and written communication skills by using appropriate medical terminology.
7. Analyze the role of acoustic physics with sonographic image artifacts as they relate to sonographic equipment, patient care, and pathology.
8. Master all Clinical Lab Practice objectives.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills: Students will think critically to reach viable solutions to a problem and justify those solutions to produce a quality sonographic exam.

Communication Skills (written and oral)

Students will effectively communicate orally in a public setting with patients, clinical staff and physicians.

III. Major Course Topics

A. Ultrasound Machines and Knob Function
B. Transducers
C. Pulsed Ultrasound Instrumentation
D. The Physics of Diagnostic Ultrasound
E. Scanning Protocols
F. Normal Abdominal and Pelvic Anatomy