

University of Arkansas - Fort Smith
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General Syllabus

DMSO 44003 Pathophysiology and Special Applications

Credit Hours: 3 Lecture Hours: 3 Laboratory or other types of Hours:

Prerequisites: DMSO 31103 Cross-Sectional Anatomy and DMSO 32102 Acoustical Physics and Instrumentation II

Corequisites: DMSO 44103 Abdominal Sonography II, DMSO 44303 Vascular Sonography II, and DMSO 44304 Clinical Practice III

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Explores the principles of human physiology and pathologic processes related to the human disease process. Application and use of ultrasound in the imaging of superficial organs and structures, such as the thyroid and parathyroid glands, breast, and scrotum will be presented.

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 anatomy, physiology, and function of the thyroid and parathyroid glands.
2. Break down the normal variants of the thyroid and parathyroid glands and correlate with abnormalities.
3. Evaluate the scanning protocol for the thyroid and parathyroid glands.
4. Diagram the anatomy and dissect the physiology of the breast.
5. Critique the sonographic appearance of normal and abnormal breast tissue.
6. Organize the types of benign and malignant pathologies found in breast sonography.
7. Assess the sonographic appearance of various body tissues found in the adult musculoskeletal system.

8. Break down the anatomy and functions of the scrotum
9. Outline the types of extra-testicular and intra-testicular pathology.
10. Classify the laboratory tests and results associated with prostate abnormalities.
11. Evaluate the anatomy and function of the prostate.
12. Discuss the symptoms and pathology of prostate disease.
13. Describe the scanning protocols for sonographic examinations of the scrotum and prostate

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 when scanning patients with pathologic processes related to human disease processes.

Communication Skills (written and oral)

Students will effectively communicate orally in a public setting with fellow students and faculty to appropriately relay clinical information.

III. Major Course Topics

- A. Breast
- B. Scrotum
- C. Prostate
- D. Thyroid and Parathyroid
- E. Gastrointestinal Tract and Superficial Structures