PIKES PEAK STATE COLLEGE

Master Course Syllabus

Small Parts Ultrasound – DMS 2100

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

Designed to teach specific knowledge of anatomy of the breast, thyroid, scrotum, prostate and the surrounding structures. The ability to identify pathology in these areas and to perform basic sonographic exams of these organs is emphasized.
Credit Hours: 2
Contact Hours: 30

Required Course Learning Outcomes

1. Describe normal anatomy of the breast, thyroid, scrotum, prostate and surrounding structures as seen on ultrasound.
2. Recognize common pathological conditions in these organs on sonographic images, including nodules, cysts, tumors, and inflammatory or vascular changes.
3. Perform basic sonographic examinations of these small parts using appropriate scanning planes, transducer selection, and patient positioning.
4. Apply standard scanning protocols and image optimization techniques specifically for small-parts ultrasound.
5. Communicate technical findings clearly in a preliminary or technical impression suitable for a supervising sonographer or physician.

Topical Outline

I. Anatomy and Physiology of Small Parts
   a. Breast anatomy, physiology, and development
   b. Thyroid and parathyroid gland anatomy and hormonal function
   c. Male reproductive anatomy (scrotum and prostate)
   d. Superficial structures and musculoskeletal components

II. Sonographic Examination Techniques
   a. High-frequency transducer selection and optimization
   b. Patient positioning and ergonomics for superficial scanning
   c. Standardized scanning protocols and planes

III. Pathology and Image Evaluation

a. Sonographic characteristics of benign vs. malignant lesions
b. Inflammatory and infectious processes in small parts
c. Vascular abnormalities and the application of Color/Power Doppler

IV. Clinical Correlation and Reporting
a. Integration of clinical history and physical findings
b. Preliminary reporting and technical impressions
c. Overview of interventional procedures (e.g., ultrasound-guided biopsy)