



Master Course Syllabus

Abdominal Ultrasound II – DMS 2102

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

Offers a systematic study of the gastrointestinal tract, pediatric abdomen, neonatal brain and transplanted organs. The student will review and extend foundational abdominal and sectional anatomy and abdominal sonography knowledge from the earlier course.

Credit Hours: 2

Contact Hours: 30

Required Course Learning Outcomes

1. Identify and describe normal and variant sonographic anatomy of the gastrointestinal tract, pediatric abdomen, neonatal brain, and transplanted organs on ultrasound images.
2. Explain physiology and common pathologies affecting these structures, including how disease processes alter sonographic appearance.
3. Differentiate normal, variant, and abnormal findings and relate them to clinical indications and lab data.
4. Apply appropriate scanning protocols and planes for GI, pediatric abdomen, neonatal brain, and transplant studies, including patient positioning and image optimization.
5. Correlate clinical information with imaging findings to support preliminary interpretations within the sonographer's professional scope.

Topical Outline

- I. Gastrointestinal Tract Sonography
 - a. Cross-sectional and relational GI anatomy
 - b. Normal sonographic appearance of stomach, small bowel, and colon
 - c. Common GI pathologies (appendicitis, bowel wall thickening, pyloric stenosis)
- II. Pediatric Abdominal Sonography
 - a. Age-specific anatomy and normal variants in children
 - b. Pediatric liver, biliary system, kidneys, and spleen
 - c. Common pediatric pathologies (intussusception, pediatric renal abnormalities)
- III. Neonatal Brain Ultrasound

- a. Neonatal cranial anatomy via fontanelles
 - b. Normal sonographic landmarks (ventricles, corpus callosum, choroid plexus)
 - c. Common neonatal brain pathologies (intraventricular hemorrhage, hydrocephalus)
- IV. Transplanted Organs
- a. Abdominal organ transplant anatomy (renal and hepatic)
 - b. Normal and abnormal Doppler and grayscale appearances
 - c. Complications (rejection, thrombosis, fluid collections)
- V. Protocols, Image Optimization, and Documentation
- a. Standardized imaging planes and patient positioning
 - b. Standard measurements and required image sets
 - c. Preliminary reporting and clinical correlation