

Abdominopelvic Sonography (DMSO 1441)

Credit: 4 semester credit hours (3 hours lecture, 2 hours lab)



Course Description

Normal anatomy and physiology of the abdominal and pelvic cavities as related to scanning techniques, transducer selection, and scanning protocols.

Required Textbook and Materials

1. *Textbook of Diagnostic Sonography, Seventh Edition Vol. I*, by Hagen-Ansert. ISBN# 978-0-323-07301-1
2. *Flash drive for lab*
3. *1" binder with dividers*

Course Objectives (with applicable SCANS skills after each)

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

1. Identify the sonographic appearances of normal abdominal and pelvic structures. (SCANS: F1, F2, F3, F5, F6, F10, F11)
2. Explain physiology of abdominal and pelvic organs. (SCANS: F1, F2, F3, F5, F6, F10, F11)
3. Demonstrate appropriate scanning techniques using standard protocol guidelines. (SCANS: C5, C6, C7, C8, C18, C19)
4. Demonstrate proper use of the appropriate transducer for area of interest. (SCANS: C5, C6, C7, C18, C19)

SCANS Skills and Competencies

Beginning in the late 1980's, the U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS) conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job. In 1991 the Commission announced its findings in *What Work Requires in Schools*. In its research, the Commission determined that "workplace know-how" consists of two elements: foundation skills and workplace competencies. The three-part foundation skills and five-part workplace competencies are further defined in the SCANS attachment.

Course Outline

- A. Health Assessment
 - 1. Patient Interview Process
 - 2. Assessment
 - 3. Professionalism
 - 4. Patient History Questions
- B. Anatomic and Physiologic Relationships within the Abdominal Cavity
 - 1. Abdominal Wall Regions
 - 2. Abdominal Cavities
 - 3. Abdominal Wall Muscles
 - 4. Ligaments
 - 5. Pelvic Cavities
- C. Vascular System
 - 1. Function
 - 2. Blood Vessel Structure
 - 3. Arterial Abdominal Anatomy
 - 4. Venous Abdominal Anatomy
- D. Liver
 - 1. Structure
 - 2. Ligaments & Fissures
 - 3. Lobar Anatomy
 - 4. Vascular Supply
 - 5. Functions
 - 6. Laboratory Values
 - 7. Normal Variants
 - 8. Sonographic Appearance
- E. Portal Venous System
 - 1. Functions
 - 2. Physiology
 - 3. Sonographic Appearance
- F. Abdominal Doppler
 - 1. Color Maps
 - 2. Directional Flow
 - 3. Hemodynamics
- G. Gallbladder/Biliary System
 - 1. GB Anatomy
 - 2. Bile duct anatomy
 - 3. Vascular Supply
 - 4. Functions
 - 5. Laboratory Values
 - 6. Normal Variants
 - 7. Sonographic Appearance
- H. Pancreas
 - 1. Anatomical landmarks
 - 2. Ductal anatomy
 - 3. Vascular Supply
 - 4. Functions
 - 5. Laboratory Values
- I. Gastrointestinal Tract
 - 1. Anatomy
 - 2. Functions
 - 3. Sonographic Appearance
- J. The Urinary System
 - 1. Anatomy
 - 2. Anatomical Relationships
 - 3. Functions
 - 4. Vascular Supply
 - 5. Laboratory Values
 - 6. Normal Variants
 - 7. Sonographic Appearance
- K. Spleen
 - 1. Anatomy
 - 2. Anatomical Relationships
 - 3. Functions
 - 4. Vascular Supply
 - 5. Laboratory Values
 - 6. Normal Variants
 - 7. Sonographic Appearance
- L. Peritoneum & Retroperitoneum
 - 1. Anatomy
 - 2. Anatomical Relationships
 - 3. Vascular Supply
 - 4. Laboratory Values
 - 5. Sonographic Appearance
- M. Breast
 - 1. Anatomy
 - 2. Functions
 - 3. Vascular Supply
 - 4. Documentation
 - 5. Mammograms
 - 6. Sonographic Appearance
- N. Thyroid/Parathyroid
 - 1. Anatomy
 - 2. Anatomical Relationships
 - 3. Functions
 - 4. Vascular Supply
 - 5. Laboratory Values
 - 6. Sonographic Appearance
- O. Scrotum/Prostate
 - 1. Anatomy
 - 2. Functions
 - 3. Vascular Supply
 - 4. Laboratory Values
 - 5. Sonographic Appearance

Grade Scale

93 – 100	A
92 – 85	B
84– 75	C
74– 70 (not passing)	D

Course Evaluation

Final grades will be calculated according to the following criteria:

Lecture is 75% of Grade

5% Class participation/Homework assignments

60% Exams

30% Final Exam

5% Project

Lab is 25% of Grade

60% Lab Quizzes

Course Requirements

1. Unit exams
2. Participation and challenges assigned in lab
3. Blackboard assignments

Course Policies

1. No food, drinks, or use of tobacco products in class.
2. Beepers, telephones, headphones, and any other electronic devices must be turned off while in class.
3. Do not bring children to class.
4. Students are expected to be in class unless prior arrangements have been made. Absences must be limited to serious illness and/or immediate family emergencies; unexcused absences are not allowed. Three (3) absences will result in a letter grade reduction. Excessive tardiness (more than 10 minutes/class or more than 2 consecutive classes) will result in an absence being awarded. In the event that LIT is forced to cancel classes due to inclement weather, DMS classes and clinical rotation will also be canceled. Notification of closures will be made through local radio and TV stations. Students out of the immediate broadcast area should contact the Program Director for information. It is extremely important that students communicate with faculty regarding absences by telephone and/or email at all times.
5. All assignments are due when stated. Late assignments are not accepted. If a student has an *excused absence* with written documentation, assignments will be

accepted at the beginning of class upon return. Missed in-class assignments receive a grade of zero.

6. All exams will be on the dates specified unless the instructor makes a change. In case of an absence on exam day, the exam must be completed on the day the student returns to class or a grade of zero will be awarded. Any exam grade less than a 75 is unacceptable and will result in student being placed on academic probation. A score of 75 or greater final average on tests must be met to continue in the program. Any student with a semester exam average of 85% or greater is exempt from taking the final exam.
7. Cheating on any (lecture/lab) exam results in immediate dismissal from the program and an F for the course.
8. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an 'F' in the course.

Please see the Sonography Student Handbook for program specific policies.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building.

Contact Information:

Instructor: Lacey Stinebrickner
Office: Office 210, Multipurpose Building
Telephone: (409) 839-2907
E-mail: lacey.stinebrickner@lit.edu
Office Hours: TBA

Course Schedule

Date	Topic	Reference
Week 1	Syllabus	
	Health Assessment	Chapter 2
Week 2	Abdominal Cavity	Chapter 7
	Vascular System	Chapter 9
Week 3	Vascular System Continued	
	Exam #1	
Week 4	Liver & Portal System	Chapter 10
	Portal Venous System & Hemodynamics	
Week 5	Gallbladder & Biliary System	Chapter 11
	Review for exam	
Week 6	Exam #2	
	Pancreas	Chapter 12
Week 7	Urinary System	Chapter 14
	Urinary System Continued; Review	
Week 8	Exam #3	
	TBA	
Week 9	Project Presentation	
	Project Presentation	
Week 10	Gastrointestinal tract	Chapter 13
	Spleen	Chapter 15
Week 11	Retroperitoneum/Peritoneum Cavity	Chapter 16 & 17
	Thyroid/Parathyroid	Chapter 22
Week 12	Exam #4	
	Breast	Chapter 21
Week 13	Scrotum; Scrotum Video	Chapter 23
	Happy Thanksgiving!!	
Week 14	Prostate; Prostate Video	
	Review for final	
Week 15	EXAM #5	
	Comprehensive Final Exam	