

DMSO 1341 Abdominopelvic Sonography

CREDIT

3 Semester Credit Hours (3 hours lecture, 2 hours lab)

MODE OF INSTRUCTION

Face to Face

PREREQUISITE/CO-REQUISITE:

COURSE DESCRIPTION

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

COURSE OBJECTIVES

- Upon completion of this course, the student will be able to:
 - Identify the sonographic appearances of normal and abnormal abdominal and pelvic structures
 - Explain physiology of abdominal and pelvic organs
 - Describe ergonomic scanning techniques according to standard protocol guidelines

INSTRUCTOR CONTACT INFORMATION

Instructor: Tracy Ryals, RDMS, RVT

Email: taryals@lit.edu

Office Phone: 409-234-6033

Office Location: Gateway

Office Hours: Please see Starfish to schedule an appointment

REQUIRED TEXTBOOK AND MATERIALS

Diagnostic Medical Sonography: Abdomen and Superficial Structures; by Diane M. Kawamura; Tanya D. Nolan ISBN 978-1-9751-7497-2

ATTENDANCE POLICY

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. **This includes lab!**

Approved: **Initials/date**



**LAMAR INSTITUTE
OF TECHNOLOGY**

- The terminology excused or not excused absence does not apply to this class. All absences are equal. Therefore, no matter the circumstances involved in the student's absence it will be counted towards the total for the semester.
- The sign in sheet will be taken up 15 minutes after class starts. If you are more than 15 minutes late to class you will be counted absent. Also, if you leave the classroom for more than 15 minutes you will be counted absent.
- When absent, the student is required to contact the instructor to obtain make-up assignment for missed class. It is the student's responsibility to make up lab assignments or a grade of zero will be given

DROP POLICY

If you wish to drop a course, you are 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.

COURSE CALENDAR

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
8-22	Syllabus; Introduction	Chapter 1	
8-24	Finish Introduction; Begin Chapter 2	Chapter 2	
8-29	Abdominal Wall and Diaphragm; Peritoneal Cavity	Chapter 2 & 3	
8-31	Vascular Structures		
9-5	Portal Venous System & Hemodynamics		
9-7	Exam #1		Opens 9/7-9/11 (Monday) until 7:00 pm
9-12	Liver and Portal System		
9-14	Liver		
9-19	Continued		
9-21	Gallbladder & Biliary System		
9-26	Exam #2		Opens 9/26-9/29 (Friday) until 7:00 pm
9-28	Pancreas		
10-3	The Kidneys		
10-5	Kidneys cont./ The Lower Urinary System		
10-10	Continue		
10-12	Continue		

10-17	Exam #3		Opens 10/17-10/20 (Friday) at 7:00 pm
10-19	Spleen		
10-24	GI Tract		
10-26	Adrenal Glands/Retroperitoneum		
10-31	Thyroid/Parathyroid		
11-2	Exam #4		Opens 11/2-11/6 (Monday) at 7:00 pm
11-7	Breast		
11-9	Breast		
11-14	Scrotum		
11-18	Prostate		
11-21	Exam #5		Opens 11/21-11/28 (Tuesday) at 7:00 pm
11-23	Happy Thanksgiving!!		
11-28	Review		
11-30	Final Exam		Opens 11/30-12/4 (Monday) at 7:00 pm

* This schedule is subject to change at the discretion of the instructor.

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
8-22	Clean off ultrasound machines; Begin aorta		
8-29	Scan aorta		
9-5	Scan liver		
9-12	Scan liver		
9-19	Scan liver		
9-26	Gallbladder/Biliary System		
10-3	Gallbladder/Biliary System		
10-10	Pancreas		
10-17	Kidneys/Spleen		
10-24	Kidneys/Spleen		
10-31	Kidneys/Spleen		
11-7	Thyroid/Male Scrotum/Breast		
11-14	Practice for scan final		
11-21	Scan Feast		
11-28	Scan Final		

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

Lecture is 85% of Grade

Lab is 15% of Grade

5% Quizzes/Participation/HW Assignments

100% Lab Protocols Average from 1101

65% Exams

30% Final Exam

GRADE SCALE

- 93-100 A
- 85-92 B
- 77-84 C
- 69-76 D
- 0-68 F

Course Outline

- A. Health Assessment
 - 1. Patient Interview Process
 - a. History & Physical
 - 2. Assessment
 - 3. Professionalism
 - 4. Patient History Questions
 - 5. Differential Diagnosis
 - 6. Ultrasound in Patient Management
- B. Abdominal Wall and Chest
 - 1. Abdominal Wall Regions
 - 2. Abdominal Cavities
 - 3. Abdominal Wall Muscles
 - 4. Thoracentesis & Paracentesis
 - 5. Peritoneum & Retroperitoneum
 - a. Anatomy
 - b. Anatomical Relationships
 - c. Vascular Supply
 - d. Laboratory Values
 - e. Sonographic Appearance
 - f. Ligaments
 - g. Pelvic Cavities and potential spaces
- 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. Doppler patterns
 6. Functions
 7. Laboratory Values
 8. Anatomical Variants
 9. 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. Anatomical Variants
 7. Sonographic Appearance
- H. Pancreas
1. Anatomical landmarks
 2. Ductal anatomy
 3. Vascular Supply
 4. Functions
 5. Laboratory Values
 6. Anatomical Variants
 7. Sonographic Appearance
- I. Spleen
1. Anatomy
 2. Anatomical Relationships
 3. Functions
 4. Vascular Supply
 5. Laboratory Values
 6. Anatomical Variants
 7. Sonographic Appearance
- J. Gastrointestinal Tract
1. Anatomy
 2. Functions
 3. Sonographic Appearance
- K. The Kidneys
1. Anatomy
 2. Anatomical Relationships
 3. Functions
 4. Vascular Supply
 5. Laboratory Values

6. Normal Variants
7. Sonographic Appearance
- L. The Lower Urinary System
 1. Anatomy
 2. Anatomical Relationships
 3. Functions
 4. Vascular Supply
 5. Laboratory Values
 6. Anatomical Variants
- M. Peritoneum
 1. Anatomy
 - i. Potential spaces
 2. Anatomical Relationships
 3. Vascular Supply
 4. Laboratory Values
 5. Sonographic Appearance
- N. Retroperitoneum (includes adrenal glands)
 1. Anatomy
 2. Anatomical Relationships
 3. Vascular Supply
 4. Laboratory Values
 5. Sonographic Appearance
- O. Breast
 1. Anatomy
 2. Functions
 3. Vascular Supply
 4. Documentation
 5. Mammograms
 6. Sonographic Appearance
 7. Anatomical Variants
- P. Thyroid/Parathyroid
 1. Anatomy
 2. Anatomical Relationships
 3. Functions
 4. Vascular Supply
 5. Laboratory Values
 6. Sonographic Appearance
- Q. Scrotum/Prostate
 1. Anatomy
 2. Functions
 3. Vascular Supply
 4. Laboratory Values
 5. Anatomical Variants
 6. Sonographic Appearance

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimum-computer-requirements>. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

STUDENT CODE OF CONDUCT STATEMENT

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

- No food, drinks, or use of tobacco products in class.
- Cellphones and any other electronic devices must be turned off while in class.
- Do not bring children to class.
- All assignments are due on the day and time when stated on the addendum unless the instructor makes a change. Late assignments will have a 10 point deduction for every class day that the assignment is late. Missed in-class assignments receive a grade of zero.

- All exams will be on the dates specified unless the instructor makes a change. If an exam is turned in past the due date, the student will have a 10 point reduction on his/her test score. The score will continue to drop 10 points for every day following the test. Also, if the student attends any sonography classes on test day, he/she must take the test that day or a zero will be given.
 - It shall be considered a breach of academic integrity (cheating) to use or possess on your body any of the following devices during any examination unless it is required for that examination and approved by the instructor: Cell phone, smart watch/watch phone, laptop, tablet, electronic communication devices (including optical), and earphones connected to or used as electronic communication devices.
 - a. Cheating on any (lecture/lab) exam results in immediate dismissal from the program and an F for the course.
 - Exams will be online. You will be using LockDown Browser with Webcam Monitoring if the exam is done at home. The rules for the tests are:
 - Disable all notifications on your computer. This is how LockDown Browser is used to take a test.
 - Locate the “LockDown Browser” shortcut on the desktop and double-click it. (For Mac users, launch “LockDown Browser” from the Applications folder.)
 - If prompted to close a blocked program (e.g. screen capture, instant messaging) choose Yes.
 - Log into the course, navigate to the test and select it.
 - A Startup Sequence will guide the student through a webcam check and other items required by the instructor.
 - The test will then start.
- 20-point deductions for each occurrence:
- Where you are taking your exam must be well lit. If it is not well lit, you will have 20 points deducted from your test.
 - Your face must be visible the entire length of the test. If your face cannot be seen even for a few seconds you will have 20 points deducted from your test.
 - No music should be playing nor should a TV/radio/video be on in the background.
 - You may not read the questions out loud. If you do so, you automatically receive a 20-point deduction.
 - You may not wear sunglasses, hats, hoodies, earbuds, headphones, etc. during the exam. Your ears must be fully visible the entire exam, failure to comply with this will be a 20-point deduction. If you do this on another exam it will turn into a 50-point deduction
- 50-point reduction or a zero on the entire test
- You must be in a private location. If another person is seen or heard while you are taking your test this could be misconstrued as cheating resulting in a 50-point reduction or a zero. That is up to the situation and your instructor.
 - All phones, notes, books, and other papers must be removed from the testing location. If these items are seen during your exam, you receive an automatic zero on the exam.

- Do NOT leave the exam room for any reason, if you do, it is an automatic 50-point deduction.
- Any suspicious activity that appears to be cheating will result in a zero.

Testing Tips

1. **You must use Google Chrome browser.**

- You must have a webcam and a microphone attached to your computer
- Be prepared to scan the room with a camera, if you cannot move your computer, you will need to have a mirror available to assist with scanning the room.

2. It is the student's responsibility to ensure that ALL of the above requirements are met. By completing the verify signature portion of the exam, you are accepting responsibility for your actions during the exam. Failure to follow the requirements will result in deductions from your exam grade when reviewed by your Instructor.

- There is no extra credit given for this course.
- You will 1 ½ minutes per question. No extra time will be given.
- **You will get one test reset per semester!!**