

Techniques of Medical Sonography (DMSO 1101)

Credit: 1 semester credit hours



Course Description

Scanning techniques. Includes scan protocols and procedures within the laboratory setting utilizing live scanning and/or simulated experience.

Required Textbook and Materials

1. Sonography Scanning: Principles and Protocols; 4th Edition Betty Bates Tempkin
 - a. ISBN – 978-1455773213
2. Sonography: Introduction to Normal Structure and Function; 4th ed.
 - a. ISBN – 978-0323322843
3. Workbook and Lab Manual for Sonography: Introduction to Normal Structure and Function, 4th ed.
 - a. ISBN – 978-0323545235

Course Objectives

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

Demonstrate scanning techniques, procedures, and protocols for the area of interest; identify normal sonographic anatomy; discuss steps for the initiation and completion of the sonographic exam; and demonstrate ergonomics.

Course Outline

- A. Your First Scanning Experience:
 - 1. The role of a sonographer
 - 2. Professional standards
- B. Abdominal Aorta
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. Abdominal aorta survey
 - 7. Aorta sonographic images protocol
- B. Inferior Vena Cava
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. IVC anatomical survey
 - 7. IVC sonographic images protocol
- C. Portal Venous System
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. Portal anatomical survey
 - 7. Portal sonographic images protocol
- D. Liver
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. Liver anatomical survey
 - 7. Liver sonographic images protocol
- E. Gallbladder and Biliary Tract
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. Anatomical survey
 - 7. Sonographic images protocol
- F. Pancreas
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. Anatomical survey
 - 7. Sonographic images protocol
- G. Kidneys
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. Anatomical survey
 - 7. Sonographic images protocol
- H. Spleen
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. Anatomical survey
 - 7. Sonographic images protocol
- I. Thyroid
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. Anatomical survey
 - 7. Sonographic images protocol
- J. Breast
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. Anatomical survey
 - 7. Sonographic images protocol
- K. Male Scrotum
 - 1. Anatomy
 - 2. Patient prep
 - 3. Patient position
 - 4. Transducer selection
 - 5. Breathing techniques
 - 6. Anatomical survey
 - 7. Sonographic images protocol

Grade Scale

100 – 93	A
92 – 85	B
84 – 77	C
76-69 (not passing)	D
68-0	F

Course Evaluation

Final grades will be calculated according to the following criteria:

1. Protocol Tests	65%
2. Lab scan final	30%
3. Workbook Checks & Homework	5%

Course Policies

1. No food, drinks, or use of tobacco products in class.
2. Cellphones 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. Two (2) absences will result in a letter grade reduction. This includes lab! Excessive tardiness (more than 10 minutes/class or more than 2 consecutive classes) will result in an absence being awarded.
 - a. 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. 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.
6. All assignments are due when stated. Late assignments are not accepted. If a student has absence assignments will be accepted at the beginning of class upon return. Missed in-class assignments receive a grade of zero.

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Course Syllabi

7. 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.
8. 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.
9. During testing the student will place his/her backpack, books, etc. in the area designated by the instructor. Also, the student will put his/her cellphone into the provided basket and the cell phone will be returned after the test is turned in.
10. Class roll is taken by the sign in sheets. If you did not sign in you will be counted absent.
11. 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.
12. 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
13. There is no extra credit given for this course.
14. You will have the length of the class to finish an exam. No extra time will be given.
15. Students with special needs and/or medical emergencies or situations should communicate with their instructor regarding individual exceptions/provisions. It is the student's responsibility to communicate such needs to the instructor.

Please see the Sonography Student Handbook for program specific policies.

Technical Requirements (for courses using Blackboard)

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:

[https://help.blackboard.com/en-](https://help.blackboard.com/en-us/Learn/9.1)

[us/Learn/9.1](https://help.blackboard.com/en-us/Learn/9.1) 2014 04/Student/015 Browser Support/015 Browser Support Policy A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

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. You may also visit the online resource at <http://www.lit.edu/depts/stuserv/special/defaults.aspx>

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 or obtained in print upon request at the Student Services Office. 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.

