DMSO 1101 Techniques of Medical Sonography

CREDIT
1 Semester Credit Hours (4 hours lab)

MODE OF INSTRUCTION
Face to Face

PREREQUISITE/CO-REQUISITE:

COURSE DESCRIPTION
Fundamentals of scanning techniques; scan protocols and procedures within the laboratory setting utilizing live scanning and/or simulated experience.

COURSE OBJECTIVES
- Demonstrate scanning techniques, procedures and protocols for the area of interest
- Identify the sonographic appearances of normal sonographic anatomy
- Discuss steps for the initiation and completion of the sonographic exam
- Demonstrate ergonomics

INSTRUCTOR CONTACT INFORMATION

Instructor:	Lacey Stinebrickner, BGS, RDMS
Email:	lfstinebrickner@lit.edu
Office Phone:	409-257-0061
Office Location:	Gateway
Office Hours:	Please see Starfish to schedule an appointment

REQUIRED TEXTBOOK AND MATERIALS
Introduction to Normal Structure and Function ISBN# 978-0-323-66135-5; 5th edition

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. _Two (2) absences will result in a letter grade reduction. Please note this is different from your other sonography classes_. Excessive tardiness (more than 10 minutes/class or more than 2 consecutive classes) will result in an absence being awarded. Also, leaving class early will result in an absence.

- 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 a 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)
8/27	Syllabus; Abdominal Aorta & IVC	Chapters 9 & 10	
9/3	*Aorta/IVC Test*		*Aorta/IVC Test*
9/10	Liver/Portal Vein Protocol	Chapters 11 & 12	
9/17	Liver/Portal Vein Review		*Blackboard Image Labeling Quiz due By 11:59 pm*
9/24	*Liver/Portal Vein Test*	Chapter 13	*Liver/Portal Vein Test*
10/1	Gallbladder Protocol	Chapter 13	
10/8	*GB Test*	Chapter 14	*Blackboard Image Labeling Quiz due By 11:59 pm*
10/15	Pancreas Protocol	Chapter 14	
10/22	*Pancreas Test* Kidneys/Spleen Protocol	Chapter 15	
10/29	Review Kidneys/Spleen		
11/5	*Kidneys/Spleen Test*	Chapter 26	*Blackboard Image Labeling Quiz due By 11:59 pm*
11/12	Scan thyroids/Review for abdominal scan final	Chapter 28	

11/19	Scan testicles/Review for abdominal scan final	Chapter 27	*Blackboard Image Labeling Quiz due By 11:59 pm*
11/26	*Holiday*		
12/2	Review for scan final		
12/3-12/4	*Abdominal Scan Final*		

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

COURSE EVALUATION
Final grades will be calculated according to the following criteria:

Protocol Tests	65%
Lab Scan Final	30%
Workbook Checks and Homework	5%

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

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

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.

AI Statement

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI / ChatGPT in their courses.

ADDITIONAL COURSE POLICIES/INFORMATION
1. Students are to arrive promptly at the schedule lab time.
2. Student's attire should be clinical dress code when attending lab sessions.
3. Students are not allowed to eat and drink in the lab.
4. Students are expected to conduct themselves as though they are in the clinical setting. Loud talking, joking, use of foul language or any disruptive behavior will cause the student to be dismissed from the lab session and will result in a disciplinary action.
5. Students will participate in live-scanning practice/assignments. It is mandatory for each student to rotate scan partners.
6. If the student misses the lab session or must leave lab early, the student must make up the missing lab time.
7. Images turned in for scanning assignments must include the student's name, time and date. The student should not crop off the images. Images not containing this information will not be given credit.
8. Images turned in on ANY assignment must be taken by that student, and again include the student's name on the image.

Noncompliance with these rules and procedures will result in disciplinary action for the student as further explained in the student handbook. Lab instructors are also required to comply with the Lab Rules and Procedures.

Protocol Testing Procedure DMSO 1101

- Student/Machine
  - On the day that the protocol is taught, you be given a student's name and a machine. This will be the student/machine that you practice on every lab until the protocol test is given.
- Time
  - Each protocol will be timed. All students will begin at the same time. After their time is up, the instructor will take images of that same student for grading reference. You will let the instructor know at this time if you were unable to get certain images. Then, the instructor will scan the patient quickly. The student will not be able to watch the instructor scan behind them.
- After everyone finishes the test, we will go to the computer lab and you will put the images into the appropriate PowerPoint. You will upload the PowerPoint into the assignment made on Blackboard in DMSO 1101.
- If any image has been altered in any way, this is considered cheating. Cheating results in an automatic F in DMSO 1101. Also, you will be dismissed from the program.
- Each image will be graded on the following scale:
  - *Good   5 pts*
  - *Adequate   3 pts*
  - *Poor/Not imaged   0 pts*
  - *Focus   1 pt*
  - *Gain   2 pts*
  - *Depth   1 pt*
  - *Annotation   1 pt*
  - *Total points for image _____*
- For example, if there are 11 images for your protocol then you could have a total of 110 points for the images. Also, points will be given for the complete worksheet for that organ. 5-Complete; 3-Mostly complete; 0-Incomplete.