



LINCOLN UNIVERSITY

DI 251 – Advanced Abdomen and Small Parts Spring 2016 Course Syllabus

Credit: 4 units = 3-unit lecture and 1-unit lab
(75 total contact hours = 45 lecture hours + 30 lab hours)

Class Hours: Tuesday 12:30 – 3:15 PM (Lecture),
Friday 9:00 – 11:45 AM (Lab). (02/12/2016-04/29/2016)

Instructor (Lec & Lab): Seyed Asghar Sadatian, MD, RDMS (Abd), RVT, RDCS

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Office Hours: Thursdays and Fridays by appointment

REQUIRED TEXTBOOK:

Textbook of Diagnostic Ultrasonography: 2nd Volume, Sandra L. Hagen-Ansert
2006, ISBN-10: 0323028039

Ultrasound of the Musculoskeletal System: Stefano Bianchi · Carlo Martinoli
2007, ISBN 978-3-540-42267-9

Additional recommended textbooks and instructional materials will be given during classes.

PRE-REQUISITE: DI 170

COURSE DESCRIPTION:

This course covers advanced ultrasound technologies for interpretation and critique of abdominal, superficial, and small parts; corroborates patient history and laboratory data with sonographic appearances; focuses on scanning techniques, transducer selection and scanning protocols.
(4 units = 3 units of lecture and 1 unit of Lab)

LEARNING OBJECTIVES:

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

- Assist patients to and from the exam area
- Explain the examination and instruct the patient properly
- Describe a scanning survey and explain its importance prior to taking images
- Explain the selection of the proper transducer for the exam
- Explain the elements of film labeling
- Describe optimal techniques related to field size, power, gain, and contrast for image interpretation
- Present films/images in a logical sequence
- Describe the anatomy, physiology, normal variations, and pathology of salivary glands, breast, superficial and musculoskeletal structures
- Explain the significance of clinical tests relevant to pathology within the exam structure
- Explain the sonographic findings and differential diagnosis of related pathology

INSTRUCTIONAL METHODS:

Instructional methods include lectures and in-class hands-on scanning. Classroom activities are collaborative – students may and should help each other. The instructor will be available to help

students with all tutorials and other assignments. The previously described topics will be presented through the following activities:

- Assigned text reading;
- Lecture materials;
- Recommended study guide activities;
- Internet resources;
- Group discussions and ultrasound case analysis;
- Quizzes & examinations;
- Practice using ultrasound machines;
- Hands-on ultrasound laboratory protocols;
- Ultrasound laboratory live & video demonstrations;
- Students' Ultrasound Hands-on self-study.

REQUIREMENTS:

- This is a lecture-lab course in which lecture topics are presented by the lecturer and the ultrasound hands-on lab practice is explained and demonstrated by the lab instructor.
- Students are expected to be prepared in advance of the class sessions.
- Preparation includes the following: having read text materials (e.g., textbook readings, and lecture outlines) assigned for that day's activities and bringing required work materials (e.g., textbook, handouts, writing supplies, etc.) to the session.
- Homework assignments include reading topic prior to the class.
- Students are expected to attend and participate in all course lectures and activities, and complete all quizzes, examinations and course assignments on time. Therefore, attendance and being on time are crucial for final grade.
- Students must budget time efficiently and be realistic about all personal and professional commitments that consume time.

ACADEMIC HONESTY:

The University maintains a strict policy concerning academic dishonesty, which includes cheating, plagiarism, giving assistance on an examination or paper when expressly forbidden by the instructor, and any other practices which demonstrate a lack of academic integrity. It is the responsibility of the student to know and to adhere to principles of academic honesty. A student found guilty of academic dishonesty will be subject to academic sanctions ranging from assignment failure to course failure.

ULTRASOUND HANDS-ON LABORATORY TRAINING:

Ultrasound hands-on laboratory training is primarily focused on providing students with the physical execution of the information presented during the lectures. Practical experience will be gained under the guidance of the laboratory instructor. Students are expected to arrive to class on time, and stay through the end of Ultrasound laboratory class.

COURSE GUIDELINES:

To successfully complete this course, the students must pass the quizzes, homework and final exam portions with a 70% or better. **Students should attend all the class meetings (lectures and labs). However, considering possible urgent situations, students may be absent from maximum four class meetings with prior notice to the instructor.** Three late arrivals would affect the grade.

The term grade is based on attendance, class activity, project, midterm and/or sum of quizzes, final examination and lab. Individual projects will be assigned at the beginning of the semester. Project is due by the last meeting before the final examination. No project will be accepted after the due date.

If students have missed a class without a valid reason, no make-up for quizzes and presentations will be allowed. No make-up for missed or failed midterm. **Final examination, if failed, can be retaken**

only once. If failed second time, the subject is considered failed. The course is considered failed if student fails Lab final examination. Dictionaries can be used during the class time. No electronic devices during the test time. A student must take the exam during the scheduled time period. A student missing an exam because of an illness or legitimate emergency may take a make-up exam as soon as possible after the student returns from the illness and as determined by the instructor. In such a circumstance, the student should make every reasonable attempt to contact the instructor before the exam period is over (or as soon as possible). While make-up exams will cover the same content area as a missed exam, the exam format and specific questions may be different.

During the written exam, any student observed in a situation that could be considered suspicious (e.g., an open book within his/her field of vision, looking around or checking a cell phone or other wireless devices, etc.) but no cheating is observed, will be warned. Once warned, any applicant found cheating on the written exam will be failed for the exam and prohibited from retaking the written exam without permission from the dean.

Students cannot leave the room during the test/exam. As soon as a student leaves, his/her exam is considered finished.

Lecture is not a substitute for textbooks. Students should read textbooks and use other sources to be prepared for the tests. Lecture is to guide the students to prepare for the course subjects.

HOMEWORK:

The goal of the homework is to help students achieve the course learning objectives. Homework consists of two parts. First part is to read the textbooks and materials to review and analyze the lecture given during a previous class session. Students are expected to spend six hours for each class session outside of class in completing the reading assignments related to each lecture. These assignments are graded through short quizzes given at the beginning of the following class session. Second part of the homework consists of a project presented at the end of the course. Each student will choose the topic for presentation or will be assigned one by the instructor. The presentation should be approximately 10 minutes long and with 5 minutes for a discussion. The presentation should include ultrasound images related to the topic of presentation. The images need to be dated and should indicate the student's name. The topic and format for the presentation will be discussed in class for more details. A final draft of the presentation must be submitted for review one week prior to the presentation.

Evaluation Criteria for Project:

- Clinical statement: 2%
 - Background information: 2%
 - Slide content: 2%
 - Slide design: 1%
 - Resolution of the problem: 2%
 - Oral presentation in class: 1%
- Total: 10% of all the course grading elements

TESTING:

Quizzes:

Students will take 10 quizzes; 10-20 questions each. These quizzes will address the detailed content and major concepts presented in the lectures, lecture outlines and text readings to evaluate students' work outside of the classroom. If a student takes more than ten quizzes, only the best ten quiz scores will be used in calculating the student's total points. Each quiz will be timed; 1 minute for every question to complete. No make-up quizzes for missed quizzes will be administered (students will receive no score for missed quizzes).

Scanning Performance: 20%

Effective use of lab time, demonstrating development of scanning skills, applying scan techniques, effective use of ultrasound machine controls, IE: TGC, Depth PRF, Freq. Transducers, and improving images on each patient. Complete/full participation and working during class time is expected. Students are encouraged to use open lab time as needed. Students are required to complete 20 hours in lab self-study (with 6 independently performed studies, which would represent date and student's name on each ultrasound image).

Attendance: 10%

Absences, late arrival, poor use of class times, early leaves will result in students' poor or failing grade.

Midterm & Final Examinations

- The written examinations (multiple choice and true/false format are proctored and will be closed-book exams).
- Midterm Exam (20%) will cover all topics that have been taught up to the date of exam.
- Final exam will cover all topics that have been covered during semester.
- The scantron machine will be used in grading multiple-choice tests.
- Students must take the exam during the scheduled time period.
- There are no make-up exams.

Ultrasound Hands-on Laboratory Examination:

- Final ultrasound hands-on examination – students have to demonstrate understanding of information presented during lectures and hands-on laboratory training.
- Students have to perform different ultrasound protocols and demonstrate scanning technique and images in B-mode, M-mode, Color and Spectral Doppler.
- Students are required to schedule time and date 2-3 weeks ahead for ultrasound hands-on laboratory examination.
- Students need to be at the Ultrasound Lab, ready to start scanning at the exact scheduled time. (It is recommended that the student arrive about 15 minutes prior to the scheduled exam time.)
- If a student is late for the scheduled exam time, the time **CANNOT** be changed and the student **WILL NOT** get a full hour! The student will only have the remaining time left in the hour.
- Only one time **RETESTS** will be given to students with a valid excuse such as illness, family emergency, unforeseen heavy traffic or natural disaster.

GRADING:

GRADING FACTORS		%
LECTURE	Final Exam	20
	Midterm Exam	20
	Quizzes	10
	Attendance	10
	Project	10
LABORATORY	Scanning Performance	20
	Attendance	10
TOTAL		100

%	Grades
100-94	A
93-90	A-
89-87	B+
86-84	B
83-81	B-
80-78	C+
77-76	C
75-74	C-
73-72	D+
71-70	D
69<	F

Schedule: DI 251 – Advanced Abdomen and Small Parts
Spring 2016

Weeks	Lecture #	Date	Topics	Quiz
1	1	01/19/16	Superficial structures: epidermal inclusion cyst, pilomatricoma, lipoma, cellulitis, abscess, hematoma, hemangioma, hernia, foreign body...	
2	2	01/26/16	Salivary glands	1
3	3	02/02/16	Principle of MSK Ultrasound; nerve, muscle, tendon, ligament, bursa, joint	2
4	4	02/09/16	Neck & shoulder	3
5	5	02/16/16	Elbow, wrist, fingers	4
6	6	02/23/16	Hip	5
7	7	03/01/16	Knee & Ankle	6
8	8	03/08/16	Vertebral column & LP	7
9		15-19	Spring recess	
10		03/22/16	Mid-term Exam	
11	9	03/29/16	Ultrasound in Rheumatologic Diseases	
12	10	04/05/16	Interventional ultrasound in MSK	8
13	11	04/12/16	Elastography, B-flow ultrasound	9
14	12	04/19/16	Fast Exam, Therapeutic ultrasound	10
15		04/26/16	Review and presentation	
16		05/03/16	FINAL EXAM	

Makeup exam: 05/06/2016

Syllabus updated: 01/28/2016

Note: Instructor may change this syllabus and course schedule at any time according to the judgment as to what is best for the class. Any changes will be declared ahead of time in class.

Lab Schedule DI 251	
date	Topic
Feb 12	Salivary scanning
Feb 19	Neck
Feb 26	Shoulder
March 4	Elbow
March 11	Wrist & fingers
March 15-19	Spring recess
March 25	Knee
Apr 1	Ankle
Apr 8	Hip
Apr 15	Breast
Apr 22	Scrotum
Apr 29	FAST exam
May 6	Final Exam