

LINCOLN UNIVERSITY
COLLEGE OF GRADUATE, UNDERGRADUATE AND PROFESSIONAL STUDIES

DI 170 Abdomen and Small Parts Scanning (Lab)

SYLLABUS
SPRING 2011

DATE: 1/19/2011 – 05/06/2011
CREDIT HOURS: 4 unit laboratory
TIME: **WEDNESDAY 12.30 TO 3.15PM; FRIDAY 12.30 TO 5.15PM**
PROFESSOR: Dr. DEEPAK TOLIA
M.D. (RADIOLOGY); ARDMS, ARVT
CONTACT: dtolia@lincolnuca.edu
OFFICE HOURS FRIDAY 4.30 TO 5.15 PM ROOM 408

STUDY MATERIAL/RESOURCES

Textbook of Diagnostic Ultrasonography: 1^{set Volume}, Sandra L. Hagen Insert, 2006
ISBN-10: 0323028039

Abdomen and Superficial Structures (Diagnostic Medical Sonography) by Diane M. Kawamura,
Lippincott Williams, 2007; ISBN-13: 978-0323028035

RECOMMENDED WEBSITES:

<http://www.mypacs.net/>
<http://www.sonoworld.com>
<http://www.ultrasoundcases.info/>
<http://www.bartleby.com/> - Gray's Anatomy of the Human Body.
<http://www.ecomovies.com>

COURSE DESCRIPTION

Scanning protocols and practice for ultrasound examination of abdomen and small parts.

COURSE PRE-REQUISITES

- ✓ DI 10 -Physical Principles of Ultrasound
- ✓ DI 20-Medical Terminology
- ✓ DI 30-Anatomy & Physiology
- ✓ DI 110-Ultrasound Principles & Protocols
- ✓ DI 150-Abdomen & Small Parts I
- ✓ DI 160-Abdomen & Small Parts II

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

- ✓ Describe the patient preparation, transducer selection, patient position, and images that should be obtained for all abdominal and soft tissue structures.
- ✓ Data entry after patient identification; protocol selection; knowledge of knobology and image optimization; perfect explanation of the examination to the pt. with regards to cooperation needed by the pt. during exam, maintenance of privacy of pt., taking care of machine and transducer

- ✓ Identify abdominal organs anatomy and physiology.
- ✓ Explain the significance of laboratory values used to evaluate abdominal organs functions.
- ✓ List the primary uses of ultrasound in evaluating abdominal and small parts organs pathology.
- ✓ Demonstrate the correct orientation of an ultrasound image.
- ✓ Demonstrate how to recognize abdominal structures in multiple planes.
- ✓ Conduct hands-on scanning with demonstrating the sectional ultrasound anatomy in the transverse and longitudinal planes abdominal and small parts organs.
- ✓ Demonstrate an understanding of the principles in ultrasound-assisted intervention.

INSTRUCTIONAL METHODS:

- ✓ Demonstration of sonographic techniques;
- ✓ Demonstrations by using Power Point Computer presentations and websites
- ✓ Internet resources;
- ✓ Blackboard;
- ✓ Group discussions;
- ✓ Hands-on laboratory learning activities.

ATTENDANCE AND PARTICIPATION:

- ✓ Students who are tardy, who arrive after roll is taken, or leave before the end of the class will receive only half-credit for attendance;
- ✓ Students are not allowed being late more than 15 minutes!
- ✓ If you are late or absent, a valid excuse such as illness, family emergency, unforeseen heavy traffic or natural disaster is expected.

No requirements to make up any lab missed as a result of an absence. However, it is your responsibility to compensate for scanning you missed; you may have it from other class members.

LAB SCANNING CODE OF CONDUCT:

- ✓ All students are expected to display professionalism in preparation for hospital work. That means arriving on time, remaining quiet when others are speaking, and paying attention to whoever has the floor in the lab.
- ✓ Students are expected to attend and be prepared for all regularly scheduled classes. If a student knows in advance that he or she will need to leave early, he or she should notify the instructor before the lab begins.
- ✓ Students are expected to treat faculty and fellow students with respect. For example, students must not disrupt lab by leaving and reentering during lab, must not distract lab by making noise, and must be attentive to comments being made by the instructor; never speak while the teacher is speaking.
- ✓ Disruptive behavior will not be tolerated, including touching of other classmates or their belongings.
- ✓ Students engaging in disruptive behavior in lab will be asked to leave and may be subject to other penalties if the behavior continues.
- ✓ No eating, sleeping or personal grooming is permitted during lab.
- ✓ Drinks only in closed container.
- ✓ Please turn off your cell phones, and refrain from activities that disturb fellow students.
- ✓ If you use a computer in lab, please use it only to take notes, to access course materials from the course webpage, or to locate information relevant to the lab. Do not use your computer to surf the web, check emails, or send/receive text messages, as these activities are distracting to those around you (and decrease your chances of getting the most out of your time in scanning).
- ✓ The presence of guests to listen to any part of a class requires the consent of the teacher;

STUDENT RESPONSIBILITIES

- ✓ Students are expected to be prepared in advance before the LAB sessions.
- ✓ Being prepared includes the following:
- ✓ Attend all and on time lab classes, participate in scanning, ask questions to the instructor, memorize protocols, bring appropriate materials to lab (e.g. notebook, writing utensils, handouts) having read texted materials (e.g. textbooks lectures & outlines), collect images for review.
- ✓ Retrieve instructors signature to sign off organs & small-parts protocols, use lab time
- ✓ Effectively and efficiently, and PRACTICE HARD, PRACTICE scanning during lab hours and Self-study hours

IN-CLASS PRESENTATION (PROJECT):

- ✓ Each student prepares a power-point presentation on ultrasound diagnostic topic of his/her choice.
- ✓ The presentation should be approximately 10 minutes long followed by 5 minutes discussion. The topics and format for the presentation will be discussed in class. A final draft of the presentation must be submitted for review one week prior to the presentation. An article related to the presentation for students to review must also be submitted one week prior to the presentation.
- ✓ For the grading of student, instructor will prepare 3 questions from the topic submitted for the student presentation. The questions will be due on the day of each of the presentations and will be used to help guide class discussions of the presentation topics.

EVALUATION CRITERIA FOR PRESENTATION:

Basis of evaluation of presentation, is to test the ability of student to understand the given pathology, and the importance of scanning protocol for that and collect relevant content from different material, i.e. from text books, reference books; hand outs and internet. Extra stress will be given on number slides which student had scanned in our lab. Instructor will observe following criteria during presentation for grading.

- ✓ Clinical statement
- ✓ Slide content
- ✓ Slide design
- ✓ Overall understanding and knowledge of topic
- ✓ Number of slides involved which are scanned by student self.
- ✓ Oral presentation and references.

QUIZZES:

- ✓ Student will take 10 quizzes 10-15 questions each. These quizzes will address the detailed content and major concepts presented in the lab scanning, and study guide activities.
- ✓ If the 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 (the student will receive no score for missed quizzes);

ULTRASOUND HANDS ON EXAMINATION:

- ✓ Final ultrasound hands-on examination student have to demonstrate understanding of information presented primarily during hands-on laboratory trainings.
- ✓ Student will schedule time and date 2-3 weeks ahead to Ultrasound hands-on laboratory examination.
- ✓ Student need to be at the Ultrasound Lab – ready to start scanning at the exact time you scheduled your exam for. (It is recommended that you arrive about 15 minutes prior to your scheduled exam time).
- ✓ If a student is late for his/ her scheduled exam time – Your time CANNOT be changed and you will NOT get a full hour! If you are late, you will only have the remaining time left in your hour.
- ✓ On exam days, you may come to class, but it is not mandatory until your scheduled exam time.
- ✓ Only one time RETEST will be given students with a valid excuse such as illness, family emergency, Unforeseen heavy traffic or natural disaster.

✓ **GRADING:**

LAB HANDS ON SCANNING	Tests/Quizzes	20%
	Attendance	20%
	Presentation	20%
	hands-on exam	40%
100-93	A	
92-89	A-	
88-85	B+	
84-81	B	
80-77	B-	
76-73	C+	
72-69	C	
68-65	C-	
64-61	D+	
60-50	D	
49≤	F	

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Spring 2011 Class Schedule

DR. DEEPAK TOLIA

TIMINGS WEDNESDAY 12.30 TO 3.15 PM

FRIDAY 12.30 TO 5.15 PM

1	WED	01/19	Getting started; know your machine; anatomy of liver preparation of patients and positions.
2	FRI	01/21	Anatomy with protocols liver
3	WED	01/26	Scanning liver
4	FRI	01/28	Scanning liver (presentation #1)
5	WED	02/02	Gall bladder anatomy and protocol
6	FRI	02/04	Gall bladder scanning
7	WED	02/09	Pancreas anatomy with protocol(presentation #2)
8	FRI	02/11	Pancreas scanning
9	WED	02/16	Pancreas scanning (presentation #3)
10	FRI	02/18	Spleen anatomy with protocol
11	WED	02/23	Spleen scanning
12	FRI	02/25	Spleen scanning (presentation #4)
13	WED	03/02	Upper urinary tract anatomy
14	FRI	03/04	Renal protocol with scanning
15	WED	03/09	Renal scanning (presentation #5)
16	FRI	03/11	Renal scanning (MIDTERM EXAM)
17	WED	<u>03/16</u>	Spring Recess
18	FRI	<u>03/18</u>	Spring Recess
19	WED	03/23	Abdominal arterial anatomy
20	FRI	03/25	Abdominal arteries protocol with scanning
21	WED	03/30	Abdominal arteries scanning (presentation 6)

22	FRI	04/01	Inferior vena cava anatomy and protocol
23	WED	04/06	Inferior vena cava scanning (presentation 7)
24	FRI	04/08	Thyroid anatomy development and protocol (presentation #8)
25	WED	04/13	Thyroid scanning
26	FRI	04/15	Breast anatomy and protocol (presentation #9)
27	WED	04/20	Breast imaging & Lymph nodes imaging
28	FRI	04/22	Prostate gland anatomy and imaging (presentation 10)
29	WED	04/27	Scrotum anatomy and protocol
30	FRI	04/29	G.I Tract imaging
31	WED	05/04	Hands on examination (final)
32	FRI	05/06	Hands on examination (final)

BREAK TIME WEDNESDAY 2.00PM TO 2.15 PM
FRIDAY 3.00PM TO 3.30PM

DR.DEEPAK TOLIA: It's my pleasure introducing myself to my Lincoln university students. I had done my doctorate and postdoctoral in radiology in India. Since last 28years I worked as radiologist in different places in India and abroad, Participated in numerous radiological conferences having my papers published in different medical journals. I worked as president of radiological association state branch. After my migration to US I passed ARDMS and RVT and having fun time teaching my students sonographic technique.

Last Update: 2/15/2011