



LINCOLN UNIVERSITY

DI 165 / UT 165 – Vascular Scanning (Lab)

Spring 2012 Course Syllabus

DATES: 01/17/2012 – 05/03/2012

COURSE TITLE: Vascular Scanning (Lab)

COURSE CODE: DI 165 / UT 165

CREDIT HOURS: 4 units (120 lab hours)

TIME: Tuesdays & Thursdays, 12:30 pm – 4:15 pm

PROFESSOR: Dr. Jahan Orazova

CONTACT INFORMATION: email: jorazova@lincolnuca.edu

COURSE DESCRIPTION:

Scanning protocols and practice in ultrasound examination of vascular structure.

COURSE PRE-REQUISITE: DI 155 / UT 155 – Doppler Vascular Imaging

READING ASSIGNMENT:

1. Hagen-Ansert: Textbook of Diagnostic Ultrasonography, 6th Edition, Vol#2 (ISBN 0323042023, 9780323042024)

2. Vascular Technology: An Illustrated Review. Claudia Rumwell, Michalene McPharlin. Published by Davies Pub., 2004. (ISBN 0941022692, 9780941022699).

3. Diagnostic Ultrasound. Rumack, Wilson, Charboneau. 2-Vol. Set. 3 edition (October 22, 2004). ISBN-10: 0323020232 / ISBN-13: 978-0323020237

GOALS AND OBJECTIVES FOR ULTRASOUND VASCULAR IMAGING:

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

- Utilize the principles of instrumentation to set up the ultrasound equipment for scanning
- Identify normal and abnormal anatomy peripheral and abdominal arteries and an adequate veins
- Apply appropriate measurements scanning techniques
- Perform by standard protocols Extracranial cerebrovascular Vascular Doppler scanning
- Perform by standard protocols Peripheral and Abdominal blood vessels Vascular Doppler scanning
- Determine the hemodynamic status of blood vessels and to detect the presence of pathology
- Perform physiological studies of lower extremity: Ankle-Brachial testing
- Perform an oral or written summary of preliminary findings to the interpreting physician

STUDENT RESPONSIBILITIES:

Students are expected to be prepared in advance before the class sessions. Being prepared includes the following: don't use cell phones in class, attend all classes, be on time to class, participate in scanning lab, ask questions, memorize protocols, bring appropriate materials to class (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 class time effectively and efficiently, and PRACTICE, PRACTICE, PRACTICE scanning during lab hours and self lab hours.

SCANNING LAB RULES:

Lab hours:

- Lab hours are posted front door & bulletin board** (please respect class time, do not enter when class time is in session)
- Each student has a maximum time of 20 min. (times may vary according to instructor or # of students waiting)**
- Timer is used to track accurate time**
- Use student submission envelope for questions or concerns**
- Sign in on preferred machine** (see clipboards) (with your name, start time & finish time) (after finish must resign in if you want to continue to scan)

Respect Others and Lab:

- No eating or drinking in lab** (only water)
- No cell phones** (exit room if must use phone)
- Clean up after yourself** (table, transducer, putting chairs away, moving equipment, trash etc.)
- Inform instructor or staff of needed supplies or equipment broken**
- Keep a low tone of voice** (lab room is small, speaking loudly can be very disruptive to student(s) who need their concentration for scanning)
- Don't interrupt student scanning time** (ask the student is it okay to asked them questions while their scanning?)
- Lecture scanning** (ask questions at appropriate time only ask instructor not other students)
- Personal property** (never leave your personal property unattended, Lincoln University is not responsible for lost or stolen items. Although, Lincoln University does have a zero tolerance for theft, any student(s) caught stealing will be prosecuted)
- Please don't remove any objects from lab room** (books, study materials)
- Leave personal conversation outside lab room**
- Outside patients** (please inform your outside patients to only bring 1 person with them, due to lab size, and number of students present)
- No children allowed unless being scanned**

Machines (Acuson & Mindray):

- Please kindly shut down the machine after scanning class
- Do not erase any information on machines (only instructors or lab assistants)
- Please inform lab assistants of needed supplies (babywipes, paper towels, gel)
- Wipe down transducer after every patient using the Transeptic spray)
- Change paper after every patient , and place pillow under paper not on top
- Please be very careful when moving around equipment (ultrasound machines, patient tables)

IN-CLASS PRESENTATION

Students are to perform library research on a current topic in the field of Vascular Ultrasound and present their findings orally in a PowerPoint presentation (10 minute presentation; 5 minute question period). Students should include enough background information, ultrasound images, pictures and references for their peers to be able to understand the topic. The topic of each presentation will be chosen by the students with the approval of the teacher. Approvals must be obtained by January, 19th, 2012. Presentation dates will be assigned on a first come, first served basis. You may do so in class, during office hours, by phone, or by E-mail. Student presentations will be spaced in every lab class throughout the semester. An oral presentation must be completed **AT LEAST TWO WEEK BEFORE your FINAL HANDS-ON ULTRASOUND LAB EXAMINATION** (see schedule below). In-class presentation will account for 10 percent of your final grade.

Evaluation Criteria for Presentation:

- Clinical statement
- Background information
- Slide content
- Slide design
- Resolution of the problem
- Oral presentation

GRADING SCALE

HANDS-ON LAB EXAM:

- Each student will be assigned a partner and time;
- Each partner will have his/her turn to perform parts of the Physical Exam covering any of the material taught during semester;
- All Vascular Doppler protocols will be demonstrated and trained students during semester;
- Student performs independently from lab instructor three Vascular Doppler protocols with limited time for every protocol;
- Student have to conduct and demonstrate finished ultrasound protocols with required to sonograms qualities: proper using transducers, scanning modes (B-scan, Color- , Power-, and Spectral Doppler), Color mapping, accurate measurements of anatomical structures, and proper labels on the images, and so on;
- Student have to submit final Performance of scanning all required by course Vascular Doppler protocols throughout of the semester;
- Student have to conduct **three Vascular Doppler protocols** in final lab exam:
 - **two Peripheral Vascular Doppler and one Abdominal Vascular Doppler protocols;**
- Final exam dates is scheduled in the syllabus (see schedule below).
- Student must pass the final exam with **AN AVERAGE OF 72-69% (grade “C”) OR BETTER OR YOU WILL FAIL THE ENTIRE OURSE AND WILL NEED TO TAKE LAB CLASS AGAIN.**

GRADING:

Attendance	10%
Presentation	20%
Performance of scanning protocols	30%
Final exam- Performance of scanning protocols	40%
Total	100%

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

SCHEDULE: SPRING 2012**DI 165 / UT 165 – Vascular Scanning (Lab)**

WEEKS		DATES	ULTRASOUND HANDS-ON SCANNINGS
1 W	T	17-Jan	Extracranial Cerebrovascular Duplex
	TH	19-Jan	Extracranial Cerebrovascular Duplex
2 W	T	24-Jan	Extracranial Cerebrovascular Duplex
	TH	26-Jan	Upper Extremity Arterial Duplex
3 W	T	31-Jan	Upper Extremity Arterial Duplex Imaging
	TH	2-Feb	Upper Extremity Arterial Duplex Imaging
4 W	T	7-Feb	Upper Extremity Arterial Duplex Imaging
	TH	9-Feb	Upper Extremity Arterial Segmental Pressure Evaluation
5 W	T	14-Feb	Lower Extremity Arterial Segmental Pressure Evaluation
	TH	16-Feb	Upper Extremity Arterial Segmental Pressure Evaluation
6 W	T	21-Feb	Lower Extremity Arterial Segmental Pressure Evaluation
	TH	23-Feb	Lower Extremity Arterial Duplex Imaging
7 W	T	28-Feb	Lower Extremity Arterial Duplex Imaging
	TH	1-Mar	Lower Extremity Arterial Duplex Imaging
8 W	T	6-Mar	Lower Extremity Arterial Duplex Imaging
	TH	8-Mar	Lower Extremity Arterial Duplex Imaging
9 W	T&TH	13-17 March, Spring Recess	
10 W	T	20-Mar	Lower Extremity Venous Duplex Imaging
	TH	22-Mar	Lower Extremity Venous Duplex Imaging
11 W	T	27-Mar	Mesenteric /Splanchnic Artery Duplex Imaging
	TH	29-Mar	Mesenteric /Splanchnic Artery Duplex Imaging
12 W	T	3-Apr	Mesenteric /Splanchnic Artery Duplex Imaging
	TH	5-Apr	Abdominal Aortic Iliac Duplex Imaging
13 W	T	10-Apr	Abdominal Aortic Iliac Duplex Imaging
	TH	12-Apr	Abdominal Aortic Iliac Duplex Imaging
14 W	T	17-Apr	Evaluation of Portal Hypertension
	TH	19-Apr	Evaluation of Portal Hypertension
15 W	T	24-Apr	Renal Artery Duplex Imaging
	TH	26-Apr	Renal Artery Duplex Imaging
16 W	T	1-May	Final hands-on examination
	TH	3-May	Final hands-on examination

The syllabus updated 12/26/2011

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