LINCOLN UNIVERSITY

DI 120 – OB/GYN Ultrasound I

Course Syllabus

Spring 2026

Instructor: Dr. Guillermo Paredes, MD, RDMS (OB/GYN), (AB). RVT (VT).

Schedule: Thursday, 9:00 AM to 11:45 AM. (Lecture) 01/26/2026 – 05/15/2026
Thursday, 12:30 PM to 3:15 PM **(Lab 02/12 - 04/23/2026)**

Credits: 4 units: 3-unit lecture and 1-unit lab. (75 total hours: 45 hours of lectures and 30 hours of lab)

Pre-requisites: *DI 110*

Level: Developed (D)

Office Hours: Tuesday, by appointment . E-mail: gparedes@lincolnuca.edu

TEXTBOOKS:

1. OBSTETRICS AND GYNECOLOGY BY SUSAN RAATZ STEPHENSON THIRD EDITION ISBN—13 978-1-60831-117-0
2. CALLEN'S ULTRASONOGRAPHY IN OBSTETRICS AND GYNECOLOGY SIX EDITION ISBN 978-0-323-32834-0 ULTRASOUND IN OBSTETRICS AND GYNECOLOGY A PRACTIONER'S GUIDE; KATRYN A. GILL
ISBN 978-0-941022-80-4
Additional recommended textbooks and instructional materials will be given during the classes.

Last Revision: January 9th, 2026

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 announced ahead of time in class.

CATALOG DESCRIPTION

This course for beginners focuses on sonographic study of the normal gynecologic anatomy, fetal biometry, and fetal anatomy; developing fetus; patient history and laboratory data; scanning techniques, transducer selection and scanning protocols. *Prerequisite: DI 110*

COURSE OBJECTIVES

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

- Describe optimal sonographic techniques for Obstetrics and Gynecology exams.
- Present exam in a logical sequence.
- Perform Sonographic evaluation of the female pelvic, Describe the function of the uterus and ovaries.
- Identify normal and abnormal Ultrasound findings of the female reproductive organs.
- Differentiate the benign and malignant adnexal findings and sonographic appearance.
- Explain the role of Ultrasound in managing patients with Different Pathological Findings.
- List some normal anatomic structures that can be mistaken for pelvic pathology on clinical exam.
- Describe normal prenatal development from conception through the first three months of pregnancy, including fertilization, implantation, and cell division.
- Perform Sonographic evaluation in the First trimester of Pregnancy.
- Assessment of normal First Trimester Fetal Anatomy.
- Recognize the abnormal Fetal Anatomical findings during the First Trimester.
- Describe the complications of pregnancy during the first trimester.

COURSE LEARNING OUTCOMES[1]

	Course Learning Outcome	Program Learning Outcomes	Institutional Learning Outcomes	Assessment activities
1	Develop and demonstrate knowledge in principles of Ultrasound Diagnostic Imaging. Understand the theoretical basis and physiological implications of diagnostic ultrasound procedures in the OBGYN field. Prepare the student for further professional training, practical skills in OBGYN sonography.	PLO 1 PLO 3	ILO 1a ILO 2a, ILO 3a	Homework, midterm/final exams
2	Prepare the patient examining room, take patient history and assist the physician during the ultrasound guided procedures. Provide basic patient care and comfort. Describe the preparation necessary for the OBGYN examination.	PLO 2	ILO 1a	In-class activities, case studies
3	Utilize oral and written communication. Select required/documentary images; label images according to standard protocols.	PLO 3	ILO 1a, ILO 4a	Course project presentation, case studies
4	Demonstrate knowledge and understanding of Female pelvic anatomy, normal and pathological findings. Explain the role of ultrasound in managing patients with different pathological findings. Explain the advantages and limitations of ultrasound imaging related to the OBGYN studies. Demonstrate knowledge and understanding of ultrasound physics and the probability of biological effects in Obstetrics clinical examinations. Demonstrate knowledge of using correct sonographic terminology. Ensure images/views are adequately recorded.	PLO 1	ILO 1a ILO 2a, ILO 3a	Homework/lab. class training
5	Employ professional judgment and discretion. Utilize available ultrasound machine setting to obtain appropriate images. Select the appropriate scanned planes. Perform required measurements using calipers; uses software packages as applicable and/or perform manual calculations.	PLO 3	ILO 1a, ILO 4a	Lab. class training
6	Understand the fundamental elements for implementing a quality assurance and improvement program, and the policies, protocols, and procedures for the general function of the ultrasound office/department.	PLO 1	ILO 1a ILO 2a, ILO 3a	Lab. class training
7	Describe the basic operation, controls, and features of the entire sonographic unit. Demonstrate safe handling and appropriate operation of the ultrasound unit, keyboard, transducer, cables, and ancillary equipment. Clean transducer, cables and units using appropriate methods and disinfection solution/wipes.	PLO 2	ILO 1a	Lab. class training

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.

[1] Detailed description of learning outcomes and information about the assessment procedure are available at the Learning Outcomes Assessment section of LU website.

- Group discussions and ultrasound case analysis.
- Quizzes & examinations.
- Ultrasound laboratories live & video demonstrations.
- Students' ultrasound hands-on self-study.

Assignments and projects require students to actively use resources of the library. Detailed guide to business *resources of the library* as well as the description of Lincoln University approach to *information literacy* are available at the LU Library website (lincolnuca.libguides.com).

REQUIREMENTS

- This is a lecture course in which lecture topics are presented by the instructor.
- Students are expected to be prepared in advance for the class sessions.
- Preparation includes the following: having read text materials (e.g., textbook readings, and lecture outlines) assigned for each class session and bringing required work materials (e.g., textbook, handouts, writing supplies, etc.) to the session.
- Homework includes reading topics 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 students 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.

COURSE GUIDELINES

To successfully complete this course, students must pass the quizzes, project, midterm, and final exam portions with 70% or better. Students should attend all the class meetings. However, considering possible urgent situations, students may be absent from maximum four class meetings with prior notice to the instructor. Three late arrivals will 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 a student misses a class without a valid reason, no make-up for quizzes and presentations is allowed. With a valid document, a student is allowed to take missed tests within one week. There is no make-up for missed or failed midterm. The final examination, if failed, can be retaken only once. Dictionaries can be used during class time. No electronic devices during the test time.

Exams must be taken 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 circumstances, 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 device,

etc.) but no cheating is observed will be warned. Once warned, any applicant found cheating on 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.

Lectures are 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 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: 10-15 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).

GRADING

	Evaluation	Weighting
Lecture	**Attendance**	**10%**
	Quizzes	**20%**
	Project	**10%**
	Midterm Exam	**30%**
	Final Exam	**30%**
Total		**100%**

Grade Scale	A	A-	B+	B	B-	C+	C	C-	D+	D	F
Points	94-100	90-93	87-89	84-86	81-83	78-80	76-77	74-75	72-73	70-71	0-69

CLASSROOM PROTOCOL

- 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 classroom.
- 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 class period begins.
- Students are expected to treat faculty and fellow students with respect. For example, students must not disrupt class by leaving and reentering during class, must not distract class by making noise, and must be attentive to comments being made by the instructor and by peers.
- Never speak while the instructor is speaking.
- **Disruptive behavior will not be tolerated.**
- Students engaging in disruptive behavior in class 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 lecture and ultrasound laboratory classes.
- Drinks only in closed containers.
- Please turn off your cell phones.
- If you use a computer in class, please use it only to take notes, to access course materials from the course webpage, or to locate information relevant to the class discussion.
- 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 class).
- To encourage the free flow of conversation, no part of any class may be recorded on audio or video media without the permission of the instructor. You may record notes by hand or by typing into a mobile computer.
- The presence of guests to listen to any part of a class requires the consent of the instructor.

Lecture Schedule
Thursday 9:00 AM to 11:45 AM

Lecture #	Dates Tuesdays	Topics	Quizzes
1	January 29th	Principles of Scanning Technique in Obstetrics and Gynecology. Embryonic development of the Female Genital System. Chapters 1, 2	
2	February 5th	Congenital Anomalies of the Female Genital System. Chapter 3	
3	February 12th	The female cycle. Chapter 4	
4	February 19th	Normal Anatomy of the Female Pelvis. Chapter 5	Quiz 1
5	February 26th	Pediatric Pelvis. Doppler evaluation of the Pelvis. Chapters 6, 7	
6	March 5th	Benign Disease of the Female Pelvis. Chapter 8	
7	March 12th	Malignant Disease of the uterus and Cervix. Malignant Disease of the ovary. Chapter 9, 10	
March 19th		Spring Break	
8	March 26th	Midterm Exam	
9	April 2nd	Pelvic Inflammatory Disease and Endometriosis. Chapter 11	
10	April 9th	Assisted Reproductive. Technologies, Contraception and Elective -Abortion. Chapter 12	
11	April 16th	Ultrasound use in the First Trimester. Chapter 13	Quiz 2
12	April 23rd	Sonographic evaluation of the First Trimester Complications. Chapter 14	
13	April 30th	Sonographic assessment of the Ectopic Pregnancy. Chapter 15	
14	May 7th	Presentation Material Review, Questions	
15	May 14h	Final exam	