



DMS-530: OBSTETRIC/GYNECOLOGY SCANNING LAB (FORMERLY DMS-130)

Effective Term

Fall 2026

BOT Approval Date

01/15/2026

Discipline

DMS - Diagnostic Medical Sonography

Course Number

530

Course Title

Obstetric/Gynecology Scanning Lab (formerly DMS-130)

Short Title

Ob/Gyn Scanning Lab

Credit Status (CB 04)

D - Credit - Degree applicable

Units

Lab Units

1.50

Total Units

1.50

Hours

Lab Contact Hours

72-81

Out of Class Hours Lab

0.00

Total Contact Hours

72 - 81

Total Out of Class Hours

0 - 0

Total Student Learning Hours

72 - 81

Is this an existing Extensive Lab?

No

Do you want to propose this for Extensive Lab?

No

Distance Education

No



Catalog Description

This hands-on laboratory course provides focused instruction in obstetric and gynecologic sonography, emphasizing anatomy, pathology, and scanning protocols. Students will develop proficiency in interpreting clinical laboratory data, correlating signs and symptoms with sonographic findings, and distinguishing between normal and abnormal presentations. Instruction includes faculty-led demonstrations and supervised scanning practice using ultrasound simulators, phantoms, and OB volunteers in a controlled campus lab environment. Students will perform OB-GYN exams under guided conditions, with transvaginal scanning limited to simulators and phantoms. (formerly DMS-130)

Requisites

Corequisite(s)

Corequisite(s) (must be taken simultaneously)

DMS-532

Codes

TOP Code (CB 03)

1227.00* - *Diagnostic Medical Sonography

CIP Code

51.0910 - Diagnostic Medical Sonography/Sonographer and Ultrasound Technician.

Repeatability Code

No

Grading Option

Letter grade OR P/NP

Minimum Qualifications

Minimum Qualifications	And/Or
Diagnostic Medical Technology	End

Learning Objectives

Learning Objectives

Learning Objective
1. Formulate a patient-centered interview using AIDET to gather and document relevant history, current complaints, lab results, and surgical background.
2. Apply culturally sensitive communication techniques during simulated scans
3. Analyze case studies to identify cultural factors affecting clinical decisions.
4. Apply sonographic terminology and scanning principles to obstetric and gynecologic ultrasound examinations.
5. Differentiate normal and abnormal sonographic appearances of the female pelvis, gravid uterus, placenta, cervix, and fetal anatomy.
6. Estimate gestational age and evaluate fetal development using biometric measurements and clinical correlations.
7. Assess first trimester pregnancy viability using sonographic and clinical indicators.
8. Interpret and score the fetal biophysical profile to evaluate fetal well-being.
9. Formulate differential diagnoses by integrating sonographic findings with clinical history, lab results, and other imaging modalities.
10. Compare uterine anomalies and their implications for reproductive health using pelvic ultrasound findings.

Learning Outcome Information

Course Learning Outcomes

Learning Outcome
Students will analyze and complete the biometric measurements required on an obstetric ultrasound examination using the OB training phantom.
Students will create a technologist worksheet for the OB biometric measurements to submit to a radiologist.
Students will document in writing a complete scanning protocol for an OB anatomy screening ultrasound exam.
Students will demonstrate a complete trans-vaginal ultrasound pelvic exam using the female pelvis phantom or simulator.
Students will use the OB simulator to correlate and demonstrate ultrasound images of the second trimester fetal head which includes the cavum septum pellucidum, cerebellum, posterior fossa, and lateral ventricle.
Students will analyze second trimester fetal ultrasound images of the fetal head and document measurements of the cerebellum, posterior fossa, and lateral ventricle.
Students will apply culturally responsive, patient-centered care by creating communication strategies and sonographic techniques to align with the unique needs, values, and preferences of diverse individuals.

Content

Course Lab Content

I. Pelvic Anatomy

- A. Pelvic Cavity
- B. Vasculature
- C. Ligaments
- D. Muscles
- E. Uterus
- F. Fallopian Tubes
- G. Ovaries
- H. Pelvic Spaces

II. Uterine and Vaginal Anomalies

- A. Unicornuate, Bicornuate, Didelphys Uterus
- B. Vaginal Septa and Duplication
- C. Agenesis
- D. Cervical/Vaginal Atresia

III. Pathologies and Devices

- A. Intrauterine Devices (IUDs)
- B. Uterine Leiomyomas and Cancers
- C. Endometrial Pathologies and Endometriosis
- D. Effects of Hormone Replacement Therapy

IV. Menstrual and Ovarian Cycles

- A. Phases of the Menstrual Cycle
- B. Ovarian Cycle
- C. Sonographic Features
- D. Postmenopausal Changes

V. Scanning Techniques

- A. Endovaginal Scanning
- B. Transabdominal Scanning
- C. Translabial Approach

VI. First Trimester Evaluation

- A. Fertilization and Embryonic Period
- B. Decidualized Endometrium
- C. Chorion and Trophoblastic Blood Flow

- D. Lab Values (e.g., hCG)
- E. Gestational Sac
- F. Crown Rump Length
- G. Yolk Sac Appearance
- H. Clinical Indications for First Trimester Ultrasound
- I. Fetal Heart Rate
- J. Sonographic Appearance of:
 - 1. Missed Abortion
 - 2. Ectopic Pregnancy
 - 3. Blighted Ovum
- VII. Second and Third Trimester Evaluation
 - A. Normal Fetal Anatomy
 - 1. Spine
 - 2. Stomach
 - 3. Bladder
 - 4. Kidneys
 - 5. Chest
 - 6. Extremities
 - 7. Brain
 - 8. Face
 - 9. Heart
 - 10. Umbilical Cord Insertion and Appearance
 - B. Fetal Circulation
 - C. Gestational Age Assessment
 - 1. Biparietal Diameter
 - 2. Head/Abdomen Circumference Ratio
 - 3. Four Chamber Heart
 - 4. Femur Length
 - D. Abnormal Fetal Anatomy
 - E. Biophysical Profile
 - 1. Fetal Well-Being
 - 2. Amniotic Fluid Volume
 - 3. Lab Values
 - F. Placental Evaluation
- VIII. Multiple Gestations
 - A. Dizygotic and Monozygotic Twins
 - B. Single Placenta vs. Twin Pregnancy
 - C. Documentation of Multiple Pregnancy
- IX. Cultural Competence in Obstetric and Gynecologic Sonography
 - A. Respect for cultural, religious, and personal beliefs in reproductive health and pregnancy care
 - B. Culturally sensitive communication during pelvic and obstetric ultrasound procedures
 - C. Awareness of health disparities in gynecologic and prenatal outcomes
 - D. Ethical considerations in diverse patient populations, including consent and privacy
 - E. Integration of cultural competence into sonographic evaluation and patient education

Methods of Instruction

Method

Field Trips



Integration

Students are offered the opportunity to attend ultrasound meetings and or conferences held by professional organizations who present lectures given by top physicians in the ultrasound field. Specific for fetal heart protocols and evaluation = UCLA Fetal Echo Symposium. Instructors attend the conference with students and are available for discussions and questions.

Method

Lecture

Integration

Lecture and demonstration will be used to present proper scanning protocols and images required for performing the complete female pelvic, first trimester screening, and obstetric ultrasound examinations.

Method

Observation and Demonstration

Integration

Faculty-Led Demonstrations

Instructors will model scanning techniques and protocols using simulators, phantoms, and volunteers.

Method

Individualized Instruction

Integration

Instructors will supervise hands-on practice during lab sessions. Students will perform scans under guided conditions, receiving real-time feedback on technique, image quality, and protocol adherence.

Method

Activity

Integration

The instructor will give students instructions on how to use the OB phantom to complete three OB worksheets which document normal growth, macrosomia, and IUGR.

Using the OB phantom, students will be directed on proper documentation of normal biometry. Then increase measurements to reflect macrosomia and then decrease measurements to reflect IUGR- intrauterine growth restriction.

Methods of Evaluation**Method**

Final Performance

Integration

Assessment will be made using a final lab practical examination demonstrating a complete transvaginal pelvic examination using sonography phantoms or simulators. Student images will be stored on a PACS cloud storage= Tricify. The instructor will observe the student simulation and an examination worksheet will be completed and submitted by the student.

Rubric evaluation will be on accuracy of diagnostic images, proper labeling, proper imaging protocol, and accurate write-up on the examination worksheet.



Method

Final Performance

Integration

The student will perform final lab practical's in: first trimester transvaginal OB exam, second trimester written protocol for screening anatomy exam, biometry measurements on the phantom, head and heart views on the simulator.

A Technologist worksheet will be submitted with the lab practical's. Student images will be stored on a PACS cloud storage= Tricefy. An examination worksheet will be completed by the student. Rubric evaluation will be on accuracy of diagnostic images, proper labeling, proper imaging protocol, and accurate write-up on the examination worksheet.

Method

Role-playing/Simulation

Integration

During the final lab practical's, students will be evaluated on how they simulate patient conversations using AIDET- Acknowledge (themselves), Introduce (themselves), Duration (of exam), Explanation (of procedure), and Thank you.

A rubric is used to calculate points for each complete step of AIDET using the final practical rubric and exam documentation.

Method

Simulation

Integration

From the activity assigned: Using the OB phantom, document normal biometry. Students will be evaluated on proper measurements on each technologist worksheet for each scenario of fetal growth to reflect normal growth, macrosomia, and IUGR- intrauterine growth restriction.

Method

Final Performance

Integration

The instructor will grade the students NT exam submission that includes ultrasound images and technologist worksheet. The assignment grading scale will award points for each criteria set by the Fetal Medicine Foundation.

Assignments**Assignment Type**

Other

In-class and/or outside of class

In-class

Formative or Summative

Formative

Assignment

Role-Play Scenario: Transvaginal Sonography & Cultural Sensitivity

Patient Profile

Name: Ms. Elena Rodriguez

Age: 27

Cultural Background: First-generation Mexican-American

Language: Bilingual (Spanish/English)

Concerns:

- Expresses discomfort with transvaginal exams due to cultural beliefs about modesty and virginity
- Requests clarification about the procedure
- Asks if her mother can be present during the scan
- Appears anxious and hesitant

Student Sonographer Task:

Your goal is to conduct a culturally sensitive pre-exam conversation that includes:

1. Explaining the procedure clearly and respectfully
2. Addressing patient concerns about modesty and cultural beliefs
3. Offering options for support persons or female staff presence
4. Ensuring informed consent and emotional comfort
5. Using inclusive language and active listening

Use these to guide the interaction:

- "I understand this procedure may feel personal. Would it help if I explained each step before we begin?"
- "We want you to feel safe and respected. Would you prefer a female sonographer or to have your mother present?"
- "Let me know if you'd like to pause or ask questions at any time."
- "Your comfort and privacy are important to us. Let's talk about what feels right for you."

Debrief & Reflection

After the role-play, discuss:

- What strategies helped build trust and respect?
- How did cultural awareness influence your communication?
- What would you do differently next time?
- How can sonographers prepare for culturally diverse patient encounters?

Assignment Type

Reading

In-class and/or outside of class

Outside of class

Formative or Summative

Formative

Assignment

Read the following webpage guidelines on the 11-14 week scan for nuchal translucency from the Fetal Medicine Foundation: <https://www.fetalmedicine.org/fmf-certification-2/nuchal-translucency-scan>.

Note the measurements and specific field of view of the first trimester fetus. Reproduce the NT exam from the transvaginal simulator NT module.

Submit: A complete technologist worksheet for the exam with measurements and findings.

Assignment Type

Other

In-class and/or outside of class

In-class

Formative or Summative

Formative

Assignment

OB Biometric Measurement Lab



Purpose: Practice biometric measurements using an OB phantom.

Instructions: During lab, you'll perform biometric measurements including BPD (biparietal diameter), HC (head circumference), AC (abdominal circumference), and FL (femur length) using the OB phantom. Focus on proper caliper placement and image optimization.

Submit: labeled images for each measurement, enter measurements into OB package, store report page, upload to Tricefy PACS.

Assignment Type

Writing

In-class and/or outside of class

In-class

Formative or Summative

Formative

Assignment

Technologist Worksheet Submission

Purpose: Document biometric measurements in a format suitable for radiologist interpretation.

Instructions:

Complete the standardized OB worksheet using your biometric measurements from the phantom scan. Ensure all fields are filled accurately and legibly, using correct terminology and formatting.

Submit: A completed OB technologist worksheet

Optional peer review exchange for feedback

Assignment Type

Writing

In-class and/or outside of class

In-class

Formative or Summative

Summative

Assignment

OB Anatomy Protocol Documentation and Final OB practical

Purpose: Create a complete scanning protocol for OB anatomy screening.

Instructions: Write a detailed scanning protocol for a second trimester OB anatomy exam using a list or category method. Include all required views, biometric measurements, and labeling standards.

Using the simulator, scan the proper views for the fetal heart = 4 chamber, Right Ventricular Outflow Tract, Left Ventricular Outflow Tract. You'll be observed and evaluated during the simulation.

Using the simulator, scan the proper views for the fetal Head= Cavum Septum Pellucidum, Cerebellum, Cisterna Magna, and lateral ventricle. You'll be observed and evaluated during the simulation.

Submit: All simulator images and a complete written OB protocol document.

Assignment Type

Other



In-class and/or outside of class

In-class

Formative or Summative

Summative

Assignment

Transvaginal Pelvic Exam Simulation

Purpose: Demonstrate scanning technique and patient care during a transvaginal pelvic ultrasound.

Instructions: Using a simulator or phantom, perform a full transvaginal pelvic ultrasound. Follow proper scanning technique, patient care protocols, AIDET, patient history interview, and documentation standards. You'll be observed and evaluated during the simulation.

Submit: A completed pelvic transvaginal scan with labeled images and appropriate technologist worksheet with proper measurements and impression.

Assignment Type

Other

In-class and/or outside of class

In-class

Formative or Summative

Formative

Assignment

Biometry Variation Simulation

Purpose: Explore biometric changes in macrosomia and IUGR.

Instructions: Using the OB phantom, document normal biometric measurements. Then adjust increased measurements to simulate macrosomia and decreased measurements to simulate intrauterine growth restriction (IUGR). Reflect on how these changes affect clinical interpretation.

Submit: Three OB worksheets with all biometric measurements; EFW- estimated fetal weight, growth percentage, and technologist impression.

1. Three labeled image sets: normal, macrosomia, IUGR
2. Short written comparison of findings
3. Optional sketchbook reflection on diagnostic reasoning

Course Materials**Textbooks**

Hagen-Ansert, Sandra. S. (2022). Textbook of Diagnostic Sonography. 9th edition. Elsevier.
eBook ISBN: 9780323826495
Hardcover ISBN: 9780323826464

Class Size Information**Class Size**

30

Class Size Category

F - Individualized, skills#based instruction/field practice 30

Diversity and Inclusion

Course Design and Materials: Course will incorporate diverse perspectives, authors, and examples that reflect a variety of cultures, identities, and lived experiences. Instructional materials will be reviewed regularly to ensure representation, inclusivity, and alignment with equity-minded practices across disciplines.

Inclusive Learning Environment: Instructors will establish classroom norms and policies that promote respect, civil discourse, and belonging in both online and face-to-face classes. Clear expectations for communication and engagement will support a learning space where all students feel valued and heard.

Accessible Instruction: Course content will be delivered using accessible design. Materials will follow accessibility guidelines within the CMS, including captioned media, readable document formats, and multiple means of engagement to support diverse learning.

Equitable Teaching Practices: Instructors will use transparent and grading criteria, varied assessment methods, and timely feedback to promote fairness and student success. Opportunities for revision, reflection, and multiple demonstrations of learning may be incorporated when appropriate to the discipline.

Culturally Responsive Pedagogies: Instructional strategies will encourage critical thinking about diverse perspectives and systems of power relevant to the course content. Faculty will foster opportunities for students to connect course material to real-world contexts.

Ongoing Reflection and Improvement: Faculty will engage in continuous professional development related to IDEAA principles and reflect on course practices using metacognition to identify opportunities for increased equity, inclusion, and accessibility.

Explain how diversity and inclusion(e.g., gender, culture/race, sexuality, etc.) is infused into the course.

Students put patient care didactic knowledge into practice in this course by practicing AIDET; performing a patient interview before starting the imaging exam, recognizing cultural differences from their own, practicing appropriate communication, and practicing patient positioning and draping.

Course objectives and learning outcomes are supported through the concurrent clinical course and practice within the hospital environment. Prior foundational knowledge of patient care scenarios and case studies are also put into practice that seeks to foster knowledge, empathy, and patient advocacy in developing future healthcare professionals. Sonography students, and as future graduates, will encounter scanning patients from diverse populations.

Describe how assignments, instruction, evaluation, course content, and interactions are contextualized for diverse learners promoting an equitable course.

The course resources are presented in multiple forms to offer diverse learning methods to students. Audio learners can utilize voice-over lectures; Visual learners can utilize power-point diagrams, textbook, lab demonstrations, and videos; Hands-on learners can utilize lab simulation and practice concepts or protocols in the campus lab. Instructors provide individualized guidance during lab sessions, while adapting instruction based on each students' pace and prior experience.

Evaluations focus on skill mastery rather than just memorization. Rubrics clearly define expectations. Formative Feedback: Frequent, constructive feedback during scanning practice helps learners self-correct and grow without fear of punitive grading. Accessible Testing Conditions: Evaluations are conducted in controlled environments with accommodations available for learners with disabilities or language needs.

Interactions

Explain how the course will incorporate student-to-student interaction.

Students work in pairs or small groups during supervised scanning sessions using ultrasound simulators, phantoms, and OB volunteers. This setup encourages learners to observe, assist, and provide constructive feedback to one another, reinforcing technique and clinical reasoning.

Students may participate in role-play scenarios simulating patient interactions, with peers acting as patients or observers. This enhances communication skills and empathy in OB-GYN contexts, while allowing students to learn from each other's approaches.

Explain how the course will incorporate instructor-to-student interaction.

This course provides opportunities for students to observe instructor demonstrations of patient care or scanning protocols and then practice what was observed. Instructors interact through face to face lab opportunities where students may ask clarifying questions in the moment. During hands-on lab sessions, instructors offer individualized coaching, correcting technique, and reinforcing best practices. Students receive immediate feedback while scanning simulators, phantoms, and OB volunteers, ensuring safe and accurate skill development.

The CMS houses announcements, syllabi, voice-over lectures, and course schedule through modules. Instructor uses real-life experience stories during lectures to enhance student learning. Instructor encourages use of office hours or meeting after class if student needs assistance or guidance.

Explain how the course will incorporate student-to-content interaction.

The CMS houses announcements, syllabi, voice-over lectures, and course schedule through modules. Lab protocol rubrics are used extensively during lab sessions for step by step scanning instruction, reference, and reading assignments

Students interact directly with ultrasound simulators, phantoms, and OB volunteers to apply scanning protocols and interpret real-time imaging. This hands-on experience reinforces anatomical knowledge and diagnostic reasoning through active scanning techniques.

Explain how the course will incorporate student-to-self interaction (metacognitive).

This course fosters student-to-self interaction by encouraging metacognitive reflection on the evolving role of the sonographer in patient care and diagnostic interpretation. Students are guided to consider how their action, from initial patient contact to final documentation, impact clinical outcomes and patient experience. Through structured sketchbook entries, faculty-led debriefs, and opportunities to revisit prior scans and case analyses, learners reflect on their growth, identify areas for improvement, and recognize progress in both technical and interpersonal skills. Positive self-talk and reflection on clinical observations are promoted to build confidence, self-awareness, and a deeper understanding of their professional development.

Key: 1230