

DMS A126: OB/GYN SONOGRAPHY

| Item | Value |
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| Curriculum Committee Approval Date | 10/24/2018 |
| Top Code | 122700 - Diagnostic Medical Sonography |
| Units | 4 Total Units |
| Hours | 72 Total Hours (Lecture Hours 72) |
| Total Outside of Class Hours | 0 |
| Course Credit Status | Credit: Degree Applicable (D) |
| Material Fee | No |
| Basic Skills | Not Basic Skills (N) |
| Repeatable | No |
| Grading Policy | Standard Letter (S) |

Course Description

A cross-sectional anatomical and sonographic study of the female reproductive system including the nongravid pelvis as well as the gravid pelvis; includes specific study of embryology, fetal biometric data, normal and abnormal fetal anatomy, placenta, amniotic fluid, umbilical cord, menstrual cycle and pathology of the female nongravid pelvis. Topics of discussion will include appropriate laboratory tests, ultrasound scan protocols of the American Institute of Ultrasound in Medicine (AIUM) and other imaging modalities utilized in OB/GYN. PREREQUISITE: DMS A123 and DMS A150. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Integrate and analyze knowledge of cross-sectional anatomy and sonographic assessment of the female nongravid pelvis and the gravid pelvis.

Course Objectives

- 1. Identify and describe anatomical features of the female reproductive tract
- 2. Identify and describe anatomical features of the embryo/ fetus
- 3. Demonstrate knowledge of normal sonographic findings of the embryo/fetus
- 4. Discuss and demonstrate knowledge of abnormal sonographic findings of the embryo/fetus
- 5. Discuss and demonstrate knowledge of the physiologic menstrual cycle.
- 6. Discuss and demonstrate knowledge of sonographic assessment of maternal complications of pregnancy.
- 7. Discuss and demonstrate knowledge of high-risk pregnancies and sonographic assessment
- 8. Demonstrate knowledge of sonographic protocols of the female nongravid and gravid pelvis
- 9. Identify and describe abnormalities of the fetus.
- 10. Discuss sonographic findings of pathologic processes of the non gravid pelvis

Lecture Content

Anatomic and Sonographic Assessment of the Normal Nongravid Pelvis

- A. Skeleton, ligaments, muscles
- B. Viscera
 1. ovaries
 2. uterus
 3. urinary bladder
 4. vagina
- C. Vascular anatomy
- D. Peritoneal recesses

II. Normal and abnormal physiologic menstrual cycle including Doppler assessment

III. Pathologic Processes of the non-gravid pelvis

- A. Benign
- B. Malignant

C. Doppler assessment

IV. Sonographic assessment and Doppler applications of pathologic conditions

- A. Ovarian
- B. Uterine
 1. vasculature
 2. tubal
- C. Adnexal
- D. Peritoneal recesses
 1. vagina
 2. urinary bladder
 3. musculature

V. Anatomic and Sonographic Assessment of Reproduction

- A. Fertilization
- B. Implantation
- C. Embryology
 1. Sonoembryology
 2. Ultrasound-guided procedures
 3. Pregnancy loss
 4. Gestational trophoblastic disease
 5. Ectopic pregnancy

VI. Anatomic and Sonographic Assessment of Second and Third Trimester; Normal and Abnormal Development of the Fetus

- A. Central Nervous
- B. Cardiovascular
- C. Gastrointestinal
- D. Genitourinary
- E. Skeleton
 - F. Face and Neck
 - G. Lungs and Diaphragm
 - H. Amniotic Fluid s p;
 - I. Placenta
 - J. Cervix
- K. Umbilical Cord
- L. Multiple Gestation
- M. Fetal circulation

VII. Sonographic Assessment of Maternal Complications of Pregnancy

- A. Gestational Diabetes Mellitus (GDM)
 1. No prenatal care
 2. Poor nutritional status
 3. Teen pregnancy
 4. Advanced maternal age (AMA)
- B. Poor prenatal care
- C. Pregnancy induced hypertension (PIH)
 1. Pyleonephritis
 2. Coexisting pelvic masses
- D. Incompetent cervix (CX) s p;
- E. Premature labor (PTL) or premature rupture of the membranes (PROM)
- F. Amniotic Fluid Embolism
- G. Doppler Assessment in Pregnancy
- H. Multiple Gestation - higher order multiples
- I. Reproductive Assistance
- J. Sonographic Assessment of Fetal Complications of Pregnancy
 - A. Intrauterine growth restriction (IUGR)
 - B. Intrauterine fetal death (IUFD)
 - C. Erythroblastosis fetalis
- K. Other Pregnancy-related topics
 - A. Other Imaging Studies
 1. MRI of the gravid pelvis
 2. Radiology
 - B. Amniocentesis
 - C. Laboratory tests
 - D. Sonographic approaches to pregnancy
 1. Transabdominal
 2. Transvaginal
 3. Transperineal
 - E. Portable scanning for the pregnant patient
 1. Labor Delivery
 2. OR
 3. ER/Trauma

Lab Content

Not applicable

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)

Instructional Techniques

Lecture with application of ideas, use of models, study groups and PowerPoint.

Reading Assignments

Student is required to read 5 hours per week from assigned text.

Writing Assignments

Students will demonstrate writing proficiency on exams through short answers and essays.

Out-of-class Assignments

A group project is required. This is 3 hours per week preparation.

Demonstration of Critical Thinking

Objective examinations Demonstration of critical thinking through class participation Writing skill evaluation and final examination

Required Writing, Problem Solving, Skills Demonstration

Written examinations, quizzes, class participation and research project.

Eligible Disciplines

Diagnostic medical technology-diagnostic medical sonography, neurodiagnosti...: Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Callen, P.. Ultrasonography in Obstetrics and Gynecology, ed. Philadelphia: Saunders WB Co, 2017 Rationale: . 2. Required Netter, F. Atlas of Human Anatomy, latest ed. Philadelphia: Elsevier Health Sciences, 2019 Rationale: . 3. Required Stephenson, S. R. Diagnostic Medical Sonography, Obstetrics and Gynecology, 3d ed. LWW, 2018 4. Required Moore, K. Dr, Persaud T.V. N. Before We are Born, Essentials of Embryology and Birth Defects, 9th ed. Saunders, 2016

Other Resources

1. Anatomical models