University of Arkansas - Fort Smith
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General Syllabus

ISS 4513 Obstetrical and Gynecological Sonography II

Credit Hours: 3   Lecture Hours: 2   Laboratory Hours: 2

Prerequisite: ISS 4303 Obstetrical and Gynecological Sonography I

Corequisites: ISS 4501 Professional Seminar and ISS 4544 Clinical Practice IV

Effective Catalog: 2018-2019

I.   **Course Information**

   A. **Catalog Description**
       Advanced study of obstetrical and gynecological anatomy to include clinical
       applications and sonographic methods used to visualize pelvic organs, the
       pregnant uterus and related structures. A comparison of normal sonographic
       patterns with identification of pathology, differentials, and correlations with
       lab tests and related organ development will be presented. Technical
       information on procedural and scanning techniques is included.

   B. **Additional Information -** None

II.   **Student Learning Outcomes**

   A. **Subject Matter**
       Upon successful completion of this course, the student will be able to:

       1. Discuss abnormalities of the fetal thorax, abdomen, pelvis, genitourinary
           system, face and neck, skeleton, central nervous system, cardiovascular
           system, and their diagnostic sonographic findings.
       2. Describe the sonographic assessment of normal and abnormal
           development of fetal limbs and the most prevalent fetal limb
           malformations with their associated anomalies.
       3. Describe the parameters used to determine the size and development of the
           fetus and to estimate the fetal age.
       4. Discuss the Pulse-Wave Doppler principle and its contribution to fetal
           vessel imaging.

5. Explain the role of ultrasound in the visualization of fetal activity in the determination of fetal health.
6. Discuss the role of the sonographer in the accurate diagnosis of a multiple-gestation pregnancy.
7. Correlate the ultrasound findings to the gestational complications associated with the multiple-gestation pregnancy.
8. Discuss the maternal risk factors and fetal pathology associated with Intrauterine Growth Restriction (IUGR).
9. Discuss some of the more commonly encountered maternal diseases and conditions that may adversely affect fetal outcome.
10. Compare/contrast normal and abnormal postpartum pathology.
11. Explain the importance of ultrasound in obtaining fetal information through amniocentesis, chorionic villus sampling, and percutaneous umbilical blood sampling.
12. Discuss the emotional, moral, and ethical overtones associated with fetal testing.
13. Discuss abnormalities of the maternal placenta and cervix.

B. University Learning Outcomes
This course enhances student abilities in the following areas:

Analytical Skills
Critical Thinking Skills: Students will access and evaluate appropriate information through written and electronic means appropriately calculate fetal size by using fetal biometry.
Quantitative Reasoning: Students will assign and use numbers, read and analyze data, draw inferences, and support conclusions based on sound mathematical reasoning. Students will represent mathematical information symbolically, visually, and verbally and interpret data in order to draw inferences about the fetal size and weight and estimated date of confinement based on fetal biometry.

Communication Skills (written and oral)
Students will communicate proficiently with fellow students, faculty, and patients in the lab setting. Students will compose coherent documents appropriate to the intended audience by learning to produce a final report on the sonogram that they have performed on a patient.

III. Major Course Topics

A. Abnormalities of the Fetal Chest, Abdomen, and Pelvis
B. Fetal Echocardiography
C. Normal and Abnormal Fetal Limbs
D. Assessment of Fetal Age and Size
E. Doppler Ultrasound of the Normal Fetus
F. Multiple Gestations

G. Intrauterine Growth Restriction
H. Assessment of the Pregnant Uterus, Including the Placenta and Cervix
I. Effects of Maternal Disease on Pregnancy
J. Sonography of the Postpartum Uterus
K. Amniocentesis and Chorionic Villus Sampling