Bossier Parish Community College
Master Syllabus

Course Prefix and Number: SONO 219 **Credit hours**: 2

Course Title: Advance OB/GYN Sonography

Course Prerequisites: Enrollment in the DMS program courses is limited to those students who have been selected and admitted to the professional phase of the program. Program courses are sequenced by semester and must be taken as a group each semester per program requirements and policies. Completion of SONO 212 required.

Textbook(s):
Required Textbooks: Diagnostic Medical Sonography Obstetrics and Gynecology: Stephenson & Dmitrevia 4th edition

Course Description:

Laboratory tests, signs, symptoms, and sonographic evidence of gynecologic disease will be discussed with a focus on uterus, ovaries, and cervix anatomy. Abnormal and pathological findings of maternal and fetal origin during the first, second and third trimesters are studied. Scanning techniques and protocols are included.

Learning Outcomes:

A. Demonstrate knowledge of pathology, physiology, pathophysiology, sonographic technique, measurements, sonographic appearances, and Doppler patterns in gynecologic disease processes.

1) Inflammatory processes
2) Congenital anomalies
3) Benign uterine/adnexal masses
4) Malignant uterine/adnexal masses
5) Contraceptive devices
6) Infertility procedures
7) Post-partum

B. Demonstrate knowledge of pathology, physiology, pathophysiology, sonographic technique, sonographic appearance, measurements, and Doppler patterns in obstetric abnormalities.

1) First trimester complications
2) Congenital anomalies
3) Genetic syndromes
4) Growth abnormalities
5) Multiple gestation complications
6) Viability
7) Amniotic fluid

8) Placenta
9) Umbilical cord
10) Fetal monitoring
11) Effects of maternal conditions

C. Demonstrate knowledge and understanding of the role of the sonographer in performing interventional/invasive/advanced procedures.

1) Infertility procedures
2) Amniocentesis
3) Chorionic villus sampling
4) Fetal therapy
5) Nuchal translucency
6) Sonohysterography
7) Three-dimensional obstetric and gynecologic sonography

To achieve the learning outcomes, the student will or will be able to

- Associate endometrial carcinoma with its risk factors, imaging appearance, and prognosis
- Distinguish the difference between a leiomyoma and leiomyosarcoma
- Identify fallopian tube carcinoma risk factors, imaging characteristics, and long-term prognosis
- List the disease process and imaging characteristics for cervical carcinoma
- Summarize the genetic makeup of persistent trophoblastic neoplasia
- Relate clinical signs, symptoms, and laboratory tests specific to ovarian cancer
- Summarize diagnostic imaging diagnosis of ovarian malignancies
- List the forms of ovarian carcinoma
- Identify common risk factors for ovarian cancer
- Describe the treatment and prognosis of ovarian cancer
- Describe the normal sonographic appearance of the fetal skeletal system
- Summarize measurement techniques of the fetal long bones
- Evaluate limbs for abnormal size and appearance
- Identify fetal skeletal abnormalities and their associated findings
- Discuss differential diagnoses for pathology visualized
- List the components of the biophysical profile
- Describe the scoring method for the BPP
- Identify factors affecting the BPP score
- Interpret the biophysical profile
- List the types of twin gestations and how they occur
- Describe the clinical and laboratory findings associated with a multiple pregnancy
- Summarize the sonographic criteria for determining chorionicity and amnionicity in the first, second, and third trimesters
- Explain the differences and similarities of the sonographic examination between a singleton and a multiple pregnancy

- Identify the process occurring with a vanishing twin, vasa previa, twin reversed arterial perfusion (TRAP) sequence, twin-to-twin transfusion syndrome (TTTS), and conjoined twins
- Understand maternal and fetal complications that occur with multiple and higher order pregnancies
- Define small for gestational age, symmetric, and asymmetric IUGR
- Summarize the adverse effects of intrauterine growth problems found in prenatal and postnatal life
- List the 2D and Doppler parameters that help in diagnosis and management of IUGR
- Differentiate between mitosis and meiosis
- Compare structural and numerical abnormalities to a normal chromosome
- Describe autosomal dominant, autosomal recessive, X-linked, and multifactorial inheritance patterns
- Identify risk factors for chromosomal abnormality occurrence
- List the prenatal laboratory testing used to identify an abnormal embryo and/or fetus
- List the maternal infections associated with the acronym TORCH
- Explain maternal and fetal complications associated with maternal and gestational diabetes
- Describe the pregnancy-induced hypertension
- Discuss the fetal associations with essential hypertension
- Identify the differences between eclampsia and preeclapsia
- Describe changes in the uterus, ovaries, and ligaments after delivery
- Explain normal postpartum physiology
- Recognize the sonographic appearance of the normal and abnormal postpartum uterus
- Identify causes and sonographic appearance of puerperal infections
- Summarize postpartum ovarian vein thrombophlebitis findings
- List cesarean section complications
- Define amniocentesis, chorionic villi sampling (CVS), and percutaneous umbilical blood sampling (PUBS)
- List the indications for amniocentesis, CVS, fetal tissue sampling, and endovaginal procedures
- Determine the correct gestational age to perform a genetic amniocentesis or CVS sampling
- Describe the procedure for performing amniocentesis and CVS
- Define common terms related to 3D/4D imaging
- Describe the differences between 2D, 3D, and 4D imaging
- Identify the advantages of 3D/4D imaging
- List the benefits and drawbacks of the three acquisition techniques
- Recall 3D volume data set manipulation through use of the MPR format
- List the advantages of using the MPR format
- Describe tomographic or multislice ultrasound imaging and list the benefits of this viewing format

- Explain common rendering modes and the clinical application of each
- Define VOCAL, listing potential clinical applications in both OB and GYN imaging
- Describe common clinical applications for 3D ultrasound in obstetric and gynecological imaging
- Identify the concerns surrounding keepsake imaging and describe the current position of the ultrasound community

Course Requirements: **In order to pass the course, the student must earn 76% of the total possible points on the unit tests for the course and make a minimum score of 70% on the final exam. The student must achieve an overall course average of 76%. Grades will not be rounded. Failure to complete any of the course requirements listed below will result in an "F" for the course.**

The student will:

- Participate in/complete all classroom/laboratory experiences (such as discussion questions; quizzes; section test; case studies; concept mapping; DVD, video, web-site, or reading assignments).
- Be held responsible for the content of the entire course. The final exam is mandatory, will be cumulative, and worth 25% of the overall grade for the course.

Course Grading Scale:

93 –	100%=	A
85 –	92%=	B
76 –	84%=	C
68 –	75%=	D
0 –	67%=	F

Attendance Policy: The college attendance policy (for the classroom) is available at http://catalog.bpcc.edu/content.php?catoid=5&navoid=369#class-attendance

Course Fees: (if applicable)

Nondiscrimination Statement

Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

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