

## LABETTE COMMUNITY COLLEGE BRIEF SYLLABUS

### **SPECIAL NOTE:**

This brief syllabus is not intended to be a legal contract. A full syllabus will be distributed to students at the first class session.

### **TEXT AND SUPPLEMENTARY MATERIALS USED IN THE COURSE (if any):**

Please check with the LCC bookstore <http://www.labette.edu/bookstore> for the required texts for this class.

**COURSE NUMBER:** DMS 206

**COURSE TITLE:** OB/GYN FOR SONOGRAPHY I

**SEMESTER CREDIT HOURS:** 3

**DEPARTMENT:** Diagnostic Medical Sonography

**DIVISION:** Health Science

**PREREQUISITES:** DMS 205 Sonography Sectional Anatomy & Abdominal Pathology

**REVISION DATE:** 01/2016

### **COURSE DESCRIPTION:**

This course will begin with the normal anatomy of the female abdominopelvic wall/floor (MSK), cavities, and organs. A description of the physiology of the female pelvic organs will also be included as well as an in depth study of the female menstrual/ovarian cycle. Uterine and Ovarian pathology is included and the student will not only learn about the pathology process, but be able to identify the pathology on ultrasound images.

This course will also include the normal anatomy of the first, second, and third trimester fetus, as well as normal measurements. Infertility methods and how they are utilized will be covered, as well as how they affect the female pelvic system. Doppler application will be applied to all areas covered in this course. The normal vs. abnormal laboratory values will be demonstrated. The normal placenta and Amniotic Fluid values will also be a course of study. Study on Transabdominal as well as Transvaginal scanning and application will be covered. Lastly, this course will discuss the pitfalls, artifacts, and normal variants that occur with pelvic/obstetrical ultrasound.

## **COURSE OUTCOMES AND COMPETENCIES:**

**Students who successfully complete this course will be able to:**

### 1. Identify the normal anatomy of the Female Pelvis and apply Doppler applications.

- Recognize the normal anatomy of the uterus, ovaries, fallopian tubes, cervix, and endometrium.
- Distinguish the muscles/ligaments of the abdominopelvic wall/floor (MSK).
- Identify the cavities located in the pelvis.
- Apply Doppler applications to the female pelvic organs and major vessels of the pelvis.
- Differentiate the difference between transabdominal/transvaginal ultrasound images the anatomy of the female pelvis, including organs, MSK, vessels, and cavities.
- Perform transvaginal scanning when necessary.

### 2. Explain the normal function of the female pelvic organs.

- Explain the different phases of the menstrual and the ovarian cycles.
- Compare the hormones involved in the menstrual and ovarian cycles.
- Illustrate, using a calendar, the breakdown of the menstrual and ovarian cycles.
- Compare the cycle changes/differences in pregnant vs. non-pregnant women.
- Analyze the laboratory values utilized in non-gravid females and the normal vs. abnormal values.

### 3. Compare pathologies of the female pelvis.

- Analyze uterine, cervical, ovarian, adnexal and endometrial pathology.
- Identify and recognize the different pathologies of the female pelvis by Sonography.
- Correctly document pathologies of the female pelvis.
- Correlate ultrasound of the pathologies with other imaging modalities.

### 4. Analyze infertility and treatments for infertility.

- Explain the different causes of infertility.
- Summarize treatments available for infertility.
- Discuss how infertility treatments affect the female reproductive system which enables them to be affective.
- Compare the risks and side effects vs. benefits of infertility treatments.
- Analyze the importance of how ultrasound plays a role in infertility treatments/studies.
- Identify how Doppler is utilized with infertility and treatment.
- Analyze the laboratory values that are utilized with infertility.

### 5. Discuss the role of ultrasound in Obstetrics.

- Discuss safety of the ultrasound examination.
- Give examples of indications for obstetric ultrasound.

- Use patient history for accurate diagnosis.

6. Summarize ultrasound evaluation during the first trimester of pregnancy.

- Explain the early development of the embryo.
- Analyze the lab value used in pregnancy: serum human chorionic gonadotropin (hCG-Lab)
- Distinguish the characteristics of the yolk sac, embryo, amnion and chorion, and gestational sac.
- Describe when herniation of bowel occurs in the embryo.
- Choose the correct Sonographic measurements for a first trimester ultrasound.
- Compare the methods of gestational assessment in the first trimester.
- Delineate the differences between transabdominal and transvaginal scanning
- List the goals for Sonography in the first trimester.
- Evaluate the gravid first trimester cervix.

7. Summarize ultrasound evaluation during the second and third trimesters.

- List the guidelines for a second and trimester obstetric Sonography examination.
- Define terminology specific to trimesters, gravidity and parity, and fetal presentation.
- Evaluate Sonographic techniques used to image specific fetal structures.
- Distinguish fetal anatomy visualized in an obstetric Sonography examination.

8. Correlate obstetric measurements and gestational age.

- Analyze gestation sac growth and measurements.
- Describe how to perform a crown-rump measurement.
- Calculate the bi-parietal diameter, head circumference, abdominal circumference, and extremity measurements.
- Assess fetal parameter measurements and fetal growth.

9. Explain and identify the normal placenta.

- Describe embryogenesis of the placenta.
- Explain the functions of the placenta.
- Distinguish the echotexture of a normal placenta in conjunction with placental grading.
- Identify the different placental placements within the uterus and its importance.

10. Examine amniotic fluid and membranes.

- Describe how amniotic fluid is produced.
- Explain the functions of amniotic fluid.
- Distinguish how to assess amniotic fluid volume by three methods.
- Explain how to recognize abnormal volumes of amniotic fluid.

- Compare and explain the different amniotic membranes and when they fuse.

11. Explain the umbilical cord and its significance.

- Discuss the development and normal anatomy of the umbilical cord.
- Analyze quantitative and qualitative Doppler measurements as applied to obstetrics.
- Evaluate the clinical significance of umbilical cord insertion.
- Evaluate the clinical significance of a three vessel cord.

12. Categorize artifacts, pitfalls, and normal variants.

- Discuss the artifacts involved in pelvic/OB scanning.
- Develop ways to correct the artifacts involved in pelvic/OB scanning.
- Define the pitfalls in pelvic/OB scanning.
- Explain normal variants.