DMS 226 Obstetrical Sonography II
2 lec., 3 lab., 3 Credits (5 hours)
Prerequisites: BIO-109; DMS-102; DMS-113; DMS-115
Co-requisites: DMS-201; DMS-204; DMS-213; DMS-218

COURSE DESCRIPTION: OB Sonography II is a continuance of Ob/Gyn Sonography designed to familiarize the students with the pathophysiology of the female reproductive system. Pelvic scanning protocol along with sonographic interpretation will be utilized in labs. Normal and abnormal obstetrical patterns will be taught and emphasis will be placed on recognition of normal anatomical appearances of a fetus in the second and third trimester. Chromosomal and congenital anomalies are discussed as well as the importance of differential diagnoses. High risk OB ultrasound is presented. Pathological and physiological data for interpretation is stressed. The sonographic criteria for evaluation of the gravid uterus, postpartum uterus, and the fetus will be included.

COURSE OBJECTIVES:
✓ Describe scan protocol in ultrasound scanning as it pertains to obstetrical imaging in the 2nd and 3rd trimester.
✓ Describe normal and abnormal developments occurring in the 2nd and 3rd trimester of pregnancy.
✓ Evaluate fetal age and fetal well being using sonographic measurements and criteria.
✓ Identify congenital and chromosomal abnormalities diagnosed by ultrasound.
✓ Explain Chorionic Villus Sampling, amniocentesis, and PUBS when dealing with high risk pregnancy.
✓ Explain the components of a Biophysical Profile exam.
✓ Identify normal and abnormal sonographic appearances when dealing with the postpartum uterus.
✓ Describe the sonographic appearance of the normal and abnormal placenta and umbilical cord.
✓ Describe amniotic fluid production in the 2nd and 3rd trimester and
✓ Analyze the amniotic fluid volume
✓ Discuss new techniques utilized in-utero to correct congenital defects in the later stages of pregnancy.

TEXTBOOKS REQUIRED:
• Hagan-Ansert, Sandra; Textbook of Diagnostic Ultrasonography; 7th edition; Mosby, St. Louis, Missouri, 2012.

COURSE POLICIES:
• Laboratory scanning time CANNOT be made up.
• Missed quizzes or exams, due to tardiness or absence must be made up in the Testing Center before the next class meeting.
• A physician’s note must be submitted for any absence on a scheduled test day. The missed test must be made up in the Testing Center before the next class meeting.
• Cell phone use is prohibited in the classroom and must be turned off at all times.
• For lab scanning, students are required to be prepared for a pelvic ultrasound exam (properly distended bladder). Failure to be prepared will cause your classmates to lose precious scanning time.
• The lowest quiz grade will be dropped.

ASSESSMENT: Knowledge of course objectives will be assessed by verbal questions prior to, and at the end of each class, quizzes, tests, and lab worksheets. Students will be required to perform a full female trans-abdominal pelvic exam, a full trans-vaginal pelvic exam on an ultrasound phantom, and a fetal biometry exam (BPD, HC, AC, and Femur length) on an ultrasound phantom.
NUMERICAL GRADE CALCULATION

<table>
<thead>
<tr>
<th>Quiz average</th>
<th>35%</th>
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<tbody>
<tr>
<td>Test #1</td>
<td>15%</td>
</tr>
<tr>
<td>Lab scanning exam</td>
<td>35% (full pelvic exam)</td>
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FINAL GRADE CALCULATION

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<tr>
<th>Quiz average</th>
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<td>B+</td>
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<tr>
<td>Test #2</td>
<td>83 to 87.9</td>
<td>B</td>
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<tr>
<td>Lab scanning exam</td>
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<td>C+</td>
</tr>
<tr>
<td></td>
<td>75 to 78.9</td>
<td>C</td>
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<tr>
<td></td>
<td>0 to 74.9</td>
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</table>

All grades are “absolute” and will not be rounded off.

COURSE OF STUDY (Subject to change)

**Week 1**
Normal fetal anatomy in 2nd and 3rd trimester

**Week 2**
Fetal growth assessment
Diagnostic criteria for intrauterine growth restriction
Tests of fetal well being
Fetal macrosomia

**Week 3**
Ultrasound and high risk pregnancy

**Week 4**
Prenatal diagnosis of congenital anomalies
Genetic testing
Maternal serum markers
Chromosomal abnormalities

**Week 5**
Normal and abnormal placenta
Abnormalities of the umbilical cord

**Week 6**
Amniotic Fluid and Membranes
Polyhydramnios
Oligohydramnios

**Week 7**
**TEST #1 (Lectures 1 – 6)**

**Week 8**
Fetal face and neck

**Week 9**
Fetal neural axis

**Week 10**
Normal sonographic characteristics of fetal thorax
Abnormalities of the thoracic cavity

**Week 11**
Sonographic evaluation of the fetal abdominal wall
Abnormalities of the anterior abdominal wall

**Week 12**
Sonographic evaluation of the abdominal cavity
Abnormalities of the hepatobiliary system
Abnormalities of the gastrointestinal tract
Cystic masses in the abdomen
Week 13  
Fetal urinary system  
Sonographic evaluation of the urinary tract  
Abnormalities of the urinary tract  
Renal cystic disease  
Congenital malformation of the genital system

Week 14  
Abnormalities of the fetal skeleton  
Miscellaneous limb abnormalities

Week 15  
TEST #2  (Lectures 7 – 13)