Sonography of High Risk Obstetrics (DMSO 2442)

Credit: 4 semester credit hours (3 hours lecture, 2 hours lab)

Course Description

Maternal disease and fetal abnormalities. Includes scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols.

Required Textbook and Materials

1. Textbook of Diagnostic Ultrasonography, Vol. Two 7th Edition; Sandra L. Hagen-Ansert; Elsevier Mosby
2. Internet access
3. Flash drive

Course Objectives

Upon completion of this course, the student will be able to:

1. Identify and differentiate normal and abnormal fetal and maternal structures. (SCANS: F1, F2, F3, F5, F6, F10, F11)
2. Demonstrate pertinent measurement techniques and scanning techniques using accepted protocols. (SCANS: C5, C6, C7, C8, C18, C19)
3. Evaluate patient history and laboratory data as it relates to ultrasound. (SCANS: F1, F2, F5, F10, F11)
4. Select appropriate transducer for area of interest. (SCANS: C5, C6, C7, C18, C19)

SCANS Skills and Competencies

Beginning in the late 1980's, the U.S. Department of Labor **S**ecretary's **C**ommission on **A**chieving **N**ecessary **S**kills (SCANS) conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job. In 1991 the Commission announced its findings in *What Work Requires in Schools.* In its research, the Commission determined that "workplace know-how" consists of two elements: foundation skills and workplace competencies.

Course Outline

A. 1st Trimester Complications Ch 44:
   1. Cranial Abnormalities
   2. Abdominal Wall Defects
   3. Ectopic Pregnancy
   4. Complete and Incomplete Abortions
   5. Fetal Demise
   6. Anembryonic Pregnancy
   7. Abnormal Gestational Sac
   8. Gestational Trophoblastic Disease

B. Evaluation of Fetal Growth Ch 47 & 49:
   1. Intrauterine Growth Restriction
   2. Placenta Involvement
   3. Amniotic Fluid Index
   4. Biophysical Profile
   5. Umbilical Artery Doppler
   6. Macrosomia
   7. Maternal Serum Markers
   8. Chromosomal Abnormalities

C. High Risk Pregnancies
   1. Hydrops Fetalis
   2. Isoimmunization
   3. Alloimmune Thrombocytopenia
   4. Maternal Diseases
   5. Preterm Labor
   6. Multiple Gestation
   7. Abnormalities in Multiple Gestations

D. Placenta, Umbilical Cord, and Amniotic Fluid Ch 51, 52, & 53
   1. Placental Abnormalities
   2. Umbilical Cord Abnormalities
   3. Abnormal Amniotic Fluid Levels

E. Fetal Face & Neck
   1. Abnormalities of the fetal profile
   2. Abnormalities of the skull
   3. Abnormalities of the upper lip and nose
   4. Abnormalities of the orbit
   5. Facial Clefts
   6. Abnormalities of the neck

F. Fetal Neural Axis Ch 55
   1. Fetal Brain Abnormalities
      a. Anencephaly
      b. Acrania
      c. Cephalocele
      d. Encephalocystomeningocele
      e. Dandy-Walker Malformation
      f. Agenesis of Corpus Callosum
      g. Holoprosencephaly
      h. Aqueductal Stenosis
      i. Vein of Galen Aneurysm
      j. Cysts of the fetal brain
      k. Ventriculomegaly
   2. Fetal Spine Defects
      a. Spina Bifida

G. Fetal GI & Abdominal Wall Defects
   1. Normal Development of the Bowel
   2. Omphalocele
   3. Gastroschisis
   4. Umbilical Hernia
   5. Amniotic Band Syndrome
   6. Beckwith-Wiedemann Syndrome
   7. Cloacal Exstrophy
   8. Pentalogy of Cantrell
   9. Limb-Body Wall Complex
   10. Meckel's Diverticulum
   11. Abnormalities of the Hepatobiliary System
   12. Situs Inversus & Partial
   13. Pseudoascities
   14. Atresia of portions of the GI system
   15. Bowel Obstructions

Grade Scale

93-100	A
85-92	B
75-84	C
68-74 (not passing)	D
67-0	F

Course Evaluation

Final grades will be calculated according to the following criteria:

Lecture is 75% of Grade	**Lab is 25% of Grade**
5% Class participation/Homework assignments	50% Lab Quizzes
85% Exams	50% Lab Final
10% Case Studies	

Course Requirements

1. Unit exams
2. Participation and challenges assigned in lab
3. Blackboard assignments due on each test day
4. One case study of fetal abnormalities

Course Policies

1. No food, drinks, or use of tobacco products in class.
2. Beepers, telephones, headphones, and any other electronic devices must be turned off while in class.
3. Do not bring children to class.
4. Students are expected to be in class unless prior arrangements have been made. Absences must be limited to serious illness and/or immediate family emergencies; unexcused absences are not allowed. *Three (3) absences will result in a letter grade reduction*. Excessive tardiness (more than 10 minutes/class or more than 2 consecutive classes) will result in an absence being awarded. In the event that LIT is forced to cancel classes due to inclement weather, DMS classes and clinical rotation will also be canceled. Notification of closures will be made through local radio and TV stations. Students out of the immediate broadcast area should contact the Program Director for information. *It is extremely important that students communicate with faculty regarding absences by telephone and/or email at all times.*
5. All assignments are due when stated. Late assignments are not accepted. If a student has an *excused absence* with written documentation, assignments will be accepted at the beginning of class upon return. Missed in-class assignments receive a grade of zero.
6. All exams will be on the dates specified unless the instructor makes a change. In case of an absence on exam day, the exam must be completed on the day the student returns to class or a grade of zero will be awarded. Any exam grade less than a 75 is unacceptable

and will result in student being placed on academic probation. A score of 75 or greater final average on tests must be met to continue in the program.

7. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an 'F' in the course.
8. Cheating on any (lecture/lab) exam results in immediate dismissal from the program and an F for the course.
9. Please refer to the Diagnostic Medical Sonography Handbook for further policies.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building.

Course Schedule

Date	Topic	Reference
Week 1	1st Trimester Complications	Chapter 48, page 1081
	1st Trimester Complications	
Week 2	Fetal Growth & Assessment Prenatal Diagnosis of Congenital Anomalies	Chapter 51, page 1158 Chapter 53, page 1190
	Fetal Growth & Assessment Prenatal Diagnosis of Congenital Anomalies	
Week 3	Test #1	
	Placenta, UC, AFI	Chapter 55-57, page 1220
Week 4	Placenta, UC, AFI	
	Test #2	
Week 5	Case Study	
	High Risk	Chapter 52; page 1170
Week 6	High Risk cont; Face & Neck	Chapter 58; page 1267
	Face & Neck	
Week 7	Test #3	
	Neural Axis	Chapter 59, page 1289
Week 8	Neural Axis	
	Pyloric Stenosis; Review	
Week 9	Test #4	
	Fetal Thorax	Chapter 60, page 1311
Week 10	Anterior Abdominal Wall/Abdomen	Chapter 61-62, page 1323
	Test #5	

*****This is a tentative schedule it may be changed throughout the semester*****

Contact Information:

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