

El Paso Community College

Syllabus

Part II

Official Course Description

SUBJECT AREA	<u>Diagnostic Medical Sonography</u>
COURSE RUBRIC AND NUMBER	<u>DMSO 1460</u>
COURSE TITLE	<u>Clinical - Diagnostic Medical Sonography/Sonographer and</u> <u>Ultrasound Technician II.</u>
COURSE CREDIT HOURS	<u>4 0 : 24</u> <u>Credits Lec Lab</u>

I. Catalog Description

Provides a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. A grade of "C" or better is required in this course to take the next course. **Prerequisite: DMSO 1260. (0:24). Professional Practice Insurance required.**

II. Course Objectives

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

- A. Unit I. Obstetrical Ultrasound Scanning (7 to 14 Weeks)
1. Verify patient identity.
 2. Determine whether the patient has been prepped correctly for the examination to be performed.
 3. Select the proper transducer for the examination to be performed.
 4. Utilize correct anatomical landmarks and scanning reference when performing and labeling a study.
 5. Obtain, through ultrasound examination, a mid-line view demonstrating the lower uterine segment, cervical of (cervix) and vaginal canal.
 6. Determine if the patient's bladder is well distended, over-distended or under-distended and whether the examination should be performed.
 7. Demonstrate, through performance, the correct scanning path and plane for a crown-rump length measurement.
 8. Demonstrate, through performance, the correct technique used to measure an (a) embryo/fetus between 7-14 weeks gestational age.
 9. Determine if embryonic/fetal cardiac motion is present.
 10. Display the uterus and its contents in longitudinal (sagittal) and transverse planes.
 11. Examine the ovaries to determine if a corpus luteum cyst is present.
 12. Discuss gestational sac measurements and accuracy.
 13. Adjust gain compensation to best demonstrate the area being examined.
 14. Identify the structures within the uterus at this gestational period.
- B. Unit II. Obstetrical Ultrasound (14 to 40 Weeks)
1. Verify patient identity.
 2. Determine whether the patient has been prepped correctly for the examination to be performed

3. Select the proper transducer for the examination to be performed.
4. Utilize correct anatomical landmarks and scanning references when performing and labeling a study.
5. Obtain, through ultrasound examination, a mid-line view demonstrating the lower uterine segment, cervical os (cervix) and vaginal canal.
6. Determine if the patient's bladder is well distended, over-distended or under-distended and whether the examination should be performed.
7. Perform the following obstetrical measurements utilizing the correct scanning planes, paths and anatomical references:
 - a. Bi-Parietal Diameter (BPD)
 - b. Head Circumference (HC)
 - c. Abdominal Circumference (AC)
 - d. Femur Length (FL)
8. Display the correct scanning path and plane for obtaining intra-ocular and inter-ocular measurements.
9. Calculate fetal cardiac beats/minute.
10. Identify all anatomical structures associated with:
 - a. Bi-Parietal Diameter (BPD)
 - b. Head Circumference (HC)
 - c. Abdominal Circumference (AC)
 - d. Femur Length (FL)
 - e. Fetal Thorax
11. Assist in the performance of an amniocentesis.
12. Adjust gain controls to best demonstrate the area being scanned.

C. Unit III. Obstetrical Pathology

1. Evaluate the fetus for the following neural tube defects:
 - a. Anencephaly
 - b. Microcephaly
 - c. Hydrocephalus
 - d. Hydranecephaly
 - e. Holoprosencephaly
 - f. Dandy-Walker Cyst
 - g. Encephalomeningocele
 - h. Myelomeningocele
2. Examine the fetus to determine the presence of the following G.I. tract anomalies:
 - a. Esophageal Atresia
 - b. Duodenal Atresia
 - c. Anal Atresia
 - d. Umbilical Cord Hernias
 - e. Omphalocele/Gastroschisis
 - f. Fetal Ascites
3. Evaluate the fetus to determine if the following genito-urinary tract anomalies exist:
 - a. Renal Agenesis
 - b. Hydronephrosis
 - c. Urinary Ascites
 - d. Multicystic Kidneys
 - e. Infantile Polycystic Disease
 - f. Hydrocele
4. Determine if the one of following bone dysplasias are present upon examining a fetus:
 - a. Thanotrophics Dysplasia
 - b. Osteo-Genesis Imperfecta
5. Evaluate the fetus to determine if any of the following conditions are present:
 - a. Teratoma
 - b. Cystic Hygroma
 - c. Scalp Edema

- d. Intra-uterine Growth Retardation
6. Evaluate the uterus for the following conditions:
 - a. Incompetent Cervix
 - b. Fibroids
 - c. Braxton-Hicks Contractions
 - d. Molar Pregnancy
7. Examine the placenta and umbilical cord to determine if any of the following conditions exist:
 - a. Accessory Lobe
 - b. Partial Previa
 - c. Complete Previa
 - d. Abruption Placenta
 - e. Single Umbilical Artery

D. Unit IV. Gynecology

1. Identify patient identity.
2. Determine whether the patient has been prepped correctly for the examination to be performed.
3. Select the proper transducer for the examination to be performed.
4. Utilize correct anatomical landmarks and scanning references when performing and labeling a study.
5. Obtain, through ultrasound examination, a mid-line view demonstrating the lower uterine segment, cervical os (cervix) and vaginal canal.
6. Determine if the patient's bladder is well distended, over-distended or under-distended.
7. Utilize the proper scanning planes and paths to demonstrate the following:
 - a. Uterus
 - b. Ovaries
 - c. Lower Uterine Segment – Cervix
8. Identify, through demonstration, the endometrial line.
9. Demonstrate the uterus longitudinally (sagittally) and transversely.
10. Demonstrate the ovaries along their axis and in a transverse plane.
11. Evaluate the pertinent clinical and laboratory information accompanying the patient to facilitate optimum examination results.

E. Unit V. Gynecologic Pathology

1. Recognize the following conditions:
 - a. Endometriosis
 - b. Pelvic Inflammatory Disease
 - c. Tubo-ovarian Abscess
 - d. Hydrosalpinx
 - e. "Chocolate Cysts"
 - f. Hydatiform Mole
 - g. Ectopic Pregnancy
 - h. Hematocolpos
 - i. Mucinous Cystadenoma
 - j. Dermoid Cyst
 - k. Teratoma
 - l. Polycystic Ovaries
 - m. Blighted Ovum
 - n. Ectopic Pregnancy
 - o. Pseudocyesis
 - p. Corpus Luteum Cyst
2. Examine the posterior cul-de-sac and determine if fluid is present. Evaluate the uterus for:
 - a. Fibroids

- b. Complex Masses
- c. Simple Masses
- d. Double Decidual Sac Sign
- e. Ectopic Pregnancy
- 3. Determine if the following ovarian conditions are present:
 - a. Simple Mass
 - b. Complex Mass
 - c. Cysts
- 4. Evaluate the adenexa for:
 - a. Tubo-ovarian Abscess
 - b. Hydrosalpinx
 - c. Ectopic Pregnancy

III. THECB Learning Outcomes (WECM)

As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

IV. Evaluation

A. Evaluation Methods:

1. Monthly Hospital Performance Evaluation – This evaluation will be completed by hospital personnel. Either the clinical instructor or the supervising staff technologist, under the supervision of the clinical instructor, will complete this evaluation on a monthly basis.
2. Hospital Performance Evaluation By College Instructors - This evaluation will be completed by the EPCC DMSO Program Instructors.
3. Bi-Weekly Clinical Evaluations – A minimum of seven (7) clinical performance evaluations will be conducted on a bi-weekly basis by college instructors. Evaluations will determine if the student has obtained the skills necessary to perform Obstetric and Gynecologic Ultrasound examinations.
4. Final Evaluation – A written exam will be administered during the last two (2) weeks of the semester in the areas of Obstetrics, Gynecology and Abdominal anatomy, terms and concepts.

B. Grading Scale:

100 – 96 = A
 95 – 91 = B
 90 – 86 = C
 85 – 81 = D
 80 – 0 = F

No **grade of less** than “C” will be considered as successful completion of a professionally related course. **Grades of .5 or higher** will be rounded of the next whole number grade.

C. Final Grade Determination

Bi-Weekly Performance Evaluations	50% of final grade
Instructor/Hospital Evaluation	30% of final grade
Final Evaluation	<u>20%</u> of final grade
	100%

D. Remediation

Failure to achieve a minimum competency of 85% on bi-weekly evaluations will result in re-evaluation, using the same examination. Failure in the re-evaluation will result in the student being recycled to the college laboratory for additional practice and remedial study. Following remediation, the student will be re-evaluated in the clinic on that examination. Failure in this examination will result in failure of the course.

E. Attendance

1. All students are required to sign an attendance sheet in the Clinic. Failure to do so will indicate an unexcused absence.
2. During this semester, no absent days are allotted all absences or partial absences must be made up.
3. If a student is absent on an assigned clinical day, that student is REQUIRED to call both the clinical instructor and the instructor of record at least (30) minutes before the student is scheduled to be present. Failure to do so will indicate an UNEXCUSED ABSENCE.
4. Three (3) UNEXCUSED absences from the clinic will be cause for dismissal from the DMSO Program.
5. If a student, due to time limitations, is unable to complete the required number of hours for that semester, that student will be given an incomplete (I) until the time is made up. If the time is not made up, the incomplete will change to a grade of "F".
6. Students are required to remain at the clinical site during the entire assigned period (with the exception of lunches). In the event that all cases have been completed, the student is encouraged to study within the department or the HOSPITAL LIBRARY. Students not in their assigned area will given a written counseling statement. An accumulation of two (2) counseling statements within the 13 month program period will result in student dismissal.

F. Tardiness

1. Students are expected to report to their assigned areas on time. Tardiness will not be tolerated.
2. Excessive or continued tardiness may be cause for dismissal from the DMSO Program.
3. The amount of time that the student is late must be made up the same day.

G. Guidelines for Patient-Student Safety

Students who fail to abide by "Guidelines for Patient and Student Safety" will be suspended from the clinic for a period of time to be determined by the Program Coordinator. (SEE ATTACHMENT "GUIDELINES FOR PATIENT AND STUDENT SAFETY")

H. Name Tags and El Paso Community College Patches

Name tags and El Paso Community College patches must be worn by students in the clinics at all times.

I. T.B. Tine Test

Evidence of an updated T.B. Tine test must be submitted to a DMSO Instructor for placement in that student's file no later than one (1) week after the beginning of the semester. Failure to do so will result in that student's suspension from the clinical facility until the above requirement is met. All hours missed must be made up before the end of the semester

J. Clinical Affiliation Dress Code

Students who are not in compliance with the “Clinical Affiliation Dress Code” will be placed on clinical probation for a time to be determined by the DMSO Program Coordinator. (SEE ATTACHED CLINICAL AFFILIATION DRESS CODE”)

V. Disability Statement (Americans with Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.