



Course Number and Title: DMS 112 OB/GYN Sonography I

Campus Location:

Georgetown

Effective Date:

2019-51

Prerequisite:

MAT 153, BIO 120, PHY 111, ENG 101, SSC 100 or concurrent

Co-Requisites:

none

Course Credits and Hours:

2.00 credits

2.00 lecture hours/week

15.00 lab hours/week

Course Description:

This course studies the reproductive organs of the female in the non-gravid state. The role of diagnostic medical sonography in the determination of congenital anomalies, pathology, infertility management, and contraception is discussed.

Required Text(s):

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

Additional Materials:

Refer to separate instructor handout

Schedule Type:

Classroom Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Examine the sonographic appearance of the female pelvis. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
2. Explain the technique and special considerations adapted in the evaluation of congenital anomalies. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
3. Explain the principles of scanning technique in pediatric gynecologic ultrasound. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
4. Explain the sonographic technique and criteria used in the assessment of benign pathologic masses of the female pelvis. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
5. Explain the role of ultrasound imaging with respect to malignant masses of the female pelvis. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
6. Discuss the efficacy of ultrasound in the evaluation of pelvic inflammatory disease (PID) and endometriosis. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
7. Explain the role of sonography as it relates to the management of infertility and contraception. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
8. Explain the techniques and criteria used in the assessment of an ectopic pregnancy. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
9. Integrate and apply learned didactic and lab principles in a laboratory setting. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Examine the sonographic appearance of structures in the female pelvis.
 1. Name and describe the anatomy of the female pelvis, including skeletal, musculature, pelvic organs, and related structures.
 2. Examine the uterus with respect to the different regions, layers, size, shape, ligaments, and variations in position.
 3. Examine the sonographic appearance, follicular developments, and location of the ovaries.
 4. Discuss Doppler measurements of uterus and ovaries.
2. Explain the technique and special considerations adapted in the evaluation of congenital anomalies.
 1. Discuss the incidence of congenital anomalies of the female reproductive system.
 2. Explain the increased incidence of complications, in pregnant and non-pregnant females, related to congenital anomalies.
 3. Describe the sonographic appearance and scanning technique used to evaluate anomalies of the uterus and vagina.
 4. Discuss potential imaging pitfalls that may simulate an anomaly.
 5. Discuss treatment and complementary imaging modalities used in the assessment of congenital anomalies of the female genital system.
3. Explain the principles of scanning technique in pediatric gynecologic ultrasound.
 1. Integrate previous knowledge of anatomy and physiology to examine the sonographic appearance of structures in the pediatric patient.
 2. Discuss the major indications, examination technique, and protocol for the pediatric patient.
 3. Discuss the diagnostic criteria used in evaluation of abnormalities in the pediatric patient: ambiguous genitalia, precocious puberty, hydrocolpos, and ovarian torsion.
 4. Discuss diagnostic criteria, differential diagnosis, pathology, and treatment of some genital tumors in the pediatric patient.
4. Explain the sonographic technique and criteria used in the assessment of benign pathologic masses of the female pelvis.
 1. Discuss the clinical utility of diagnostic ultrasound in the assessment of benign masses of the female pelvis.
 2. Discuss some of the benign diseases and the sonographic appearance of the vagina, cervix, and uterus.
 3. Explain the increased risk of anatomic and reproductive malformation in both diethylstilbestrol (DES) in the 1940's and 1950's.
 4. Describe the ovaries in terms of anatomy, general sonographic technique, and complementary imaging modalities.
 5. Discuss various benign cystic masses of the pelvic adnexa.
 6. Discuss the differential diagnosis for benign pelvic adnexal masses.
 7. Discuss the role of Doppler in evaluating pathology in the pelvis.
5. Explain the role of ultrasound imaging with respect to malignant masses of the female pelvis.
 1. Discuss the incidence and prognosis of pelvic malignancies
 2. Discuss the epidemiology and risk factors of pelvic malignancies.
 3. Examine the histologic classification, clinical features, and associated sonographic findings relating to malignant masses of the female pelvis.
 4. Discuss the role of ultrasound with regard to the various aspects of the disease process including: spread and staging, clinical considerations, imaging diagnosis, sonographic monitoring, scanning protocol, and differential diagnoses.
6. Discuss the efficacy of ultrasound in the evaluation of pelvic inflammatory disease (PID) and endometriosis.
 1. Compare and contrast pelvic inflammatory disease and endometriosis in terms of etiology, clinical findings, sonographic characteristics, and differential diagnosis.
 2. Discuss the role of ultrasound with respect to the progression, treatment, and management of PID.
 3. Discuss endometriosis in terms of etiology, clinical findings, and sonographic evaluation.
 4. Define *adenomyosis*, and discuss it in terms of the clinical and sonographic findings and treatment.
7. Explain the role of sonography as it relates to the management of infertility and contraception.
 1. Define *infertility*, and discuss different causes of infertility related to males and females.
 2. Discuss the protocol and role of ultrasound in monitoring the process of ovulation, induction, and fertilization.
 3. Discuss in vitro fertilization with embryo transfer (IVF-ET).
 4. Discuss ovulation induction therapy and the associated possible complications of multiple gestation or ovarian hyperstimulation syndrome.
 5. Discuss the role of ultrasound in the management of elective abortion.
 6. Define *intrauterine contraceptive device* (IUD) and discuss in terms of types.
 7. Discuss the sonographic technique and appearance in imaging an IUD.
8. Explain the techniques and criteria used in the assessment of an ectopic pregnancy.
 1. Define *ectopic pregnancy* and the various possible implantation sites.
 2. Discuss the importance of obtaining and correlating clinical information for patient diagnosis.
 3. Explain the sonographic characteristics and the technical protocol used in the assessment of ectopic pregnancy.
 4. Compare and contrast the clinical utility of transvaginal and transabdominal scanning in the evaluation of the suspected ectopic pregnancy.
 5. Discuss the treatment of ectopic pregnancy.
9. Integrate and apply learned didactic and lab principles in a laboratory setting.
 1. Exhibit professional behavior and appropriate communication skills.
 2. Discuss instrumentation and transducer selection.
 3. Perform at a supervised, dependent level the requisite skills necessary to obtain required anatomical images and anatomical planes for measurement.
 4. Explain scanning techniques and performance of quality control.

Evaluation Criteria/Policies:

Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the Delaware Tech grading system:

92	-	100	=	A
83	-	91	=	B
75	-	82	=	C
0	-	74	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Final Course Grade:

Calculated using the following weighted average

Evaluation Measure	Percentage of final grade
Formative: Professional Behaviors	5%
Formative: 5 Quizzes (1% each)	5%
Summative: 4 Tests (15% each)	60 %
Summative: Paper/Presentation	10 %
Formative: 3 Lab Competencies	0%
Summative: Final Comprehensive Exam	20%
TOTAL	100%

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):

1. Perform competently a full range of diagnostic medical sonographic procedures pertaining to their learning concentration.
2. Utilize professional verbal, nonverbal, and written communication skills in patient care, procedure intervention, and professional relationships.
3. Act in a professional and ethical manner and comply with professional scope of practice.
4. Integrate critical thinking and problem solving skills as expected of a healthcare professional.

Disabilities Support Statement:

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.