



Course Number and Title: DMS 131 Abdominal/Small Parts 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 diagnostic medical sonography of the abdomen to include cross-sectional anatomy, physiology and pathophysiology of abdominal viscera.

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 cross-sectional anatomy of the abdominal viscera. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
2. Describe the principles of scanning technique in examining the abdominal viscera. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
3. Identify sonographically normal anatomy and the physiology of the abdominal vasculature. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
4. Identify and document the pathology and pathophysiology of the abdominal viscera. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
5. Discuss the laboratory testing associated with the abdominal viscera. (CCC 1, 2, 3, 4, 5; PGC 1)
6. Explain and document the preparation that should precede a sonographic examination of the abdominal viscera. (CCC 1, 4, 5; PGC 1, 4)
7. Perform basic abdominal imaging views using appropriate equipment and techniques. (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 cross-sectional anatomy of the abdominal viscera.
 1. Explain normal gross anatomy, location, size, and adjacent organ relationships of the abdominal viscera, including but not limited to abdominal wall, peritoneal cavity, noncardiac chest, liver, gallbladder and biliary system, and prevertebral vessels.
 2. Discuss the importance of a technical systematic approach in examining the normal morphological structures of the viscera.
 3. Define directional terms, anatomic position, and anatomic planes relating to cross-sectional anatomy.
 4. Define image quality terms and internal echo patterns used in sonographic procedures.
2. Describe the principles of scanning technique in examining the abdominal viscera.
 1. Discuss the importance and benefit of using proper transducer selection and technique in abdominal examinations.
 2. Describe the accepted guidelines and scanning protocols of abdominal examinations.
 3. Perform protocol within allowable scan time limits.
3. Identify sonographically normal anatomy and the physiology of the abdominal vasculature.
 1. Discuss hemodynamic characteristics in abdominal vessels in both fasting and postprandial states.
 2. Discuss vessel composition and systemic circulation.
 3. Discuss visceral physiology and its essential importance to life.
4. Identify and document the pathology and pathophysiology of the abdominal viscera.
 1. Discuss and identify the sonographic appearances of pathologies relating to inflammatory, neoplastic, infectious, obstructive, metabolic, traumatic, degenerative, iatrogenic, congenital, and immunologic process of abdominal viscera, including but not limited to abdominal wall, peritoneal cavity, noncardiac chest, liver, gallbladder, and biliary system, and prevertebral vessels.
 2. Discuss and identify various anatomic variants.
5. Discuss the laboratory testing associated with the abdominal viscera.
 1. Discuss the liver function tests (LFTs).
 2. Discuss the role of cholecystokinin (CCK) in gallbladder function.
 3. Discuss the roles of amylase, lipase, and bilirubin in pancreatic studies.
6. Explain and document the preparation which should precede a sonographic examination of the abdominal viscera.
 1. Describe the steps involved in patient preparation for abdominal studies.
 2. Discuss scanning unit preparation with regard to transducer selection, exam table height, and patient body habitus.
7. Perform basic abdominal imaging views using appropriate equipment and techniques.
 1. Perform imaging and evaluate normal relational anatomy of organs/systems, including but not limited to abdominal wall, peritoneal cavity, noncardiac chest, liver, gallbladder and biliary system, and prevertebral vessels.
 2. Produce written reports of findings using sonographic terminology.

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: Scan Lab Final	5%
Summative: 5 Exams (Exam 1 & 2 10% each, 3, 4, and 5 15% each)	65%
Summative: Final 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.