

Course Number and Title: DMS 230 Special Topics

Campus Location:

Wilmington

Effective Date:

2021-51

Prerequisite:

DMS 202 or CVS 202

Co-Requisites:

none

Course Credits and Hours:

2.00 credits

2.00 lecture hours/week

0.00 lab hours/week

Course Description:

This course integrates knowledge learned in previous courses to produce thorough, sequential information in areas of special topics pertaining to diagnostic medical sonography. Pathology research presentations provide a means to discuss and review pathology, clinical manifestation of symptoms, differential diagnosis, sonographic patterns, and protocols in scanning. Review for the American Registry for Diagnostic Medical Sonography (ARDMS) board examination is also included.

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:

Diagnostic Medical Sonography Program Student Manual

CCHS Non-Employee Orientation Manual

Allied Health/Science Department Program Student Policy Manual

Instructor Handouts

Schedule Type:

Classroom Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Explain the importance of continued development of knowledge and skills in the field of diagnostic medical sonography. (CCC 1, 2, 4, 5; CVS PGC 3, 4, 5; DMS PGC 2, 3, 4)
2. Prepare a résumé, and discuss interview skills. (CCC 1, 2, 4, 5; CVS PGC 3, 4, 5; DMS PGC 2, 3, 4)
3. Integrate sonography principles and instrumentation knowledge to solve mock board exam questions. (CCC 1, 2, 5, 6; CVS PGC 1, 2, 3, 4, 5; DMS PGC 1, 2, 3, 4)
4. Use technical knowledge to solve mock board exam questions. (CCC 1, 2, 5, 6; CVS PGC 1, 2, 3, 4, 5; DMS PGC 1, 2, 3, 4)
5. Prepare a pathology research presentation to accurately form a sonographer's impression of the pathology. (CCC 1, 2, 3, 4, 5, 6; CVS PGC 1, 2, 3, 4, 5; DMS PGC 1, 2, 3, 4)
6. Describe the fundamental elements for implementing a quality assurance and improvement program as well as the policies, the protocols, and the procedures for the general function of the ultrasound laboratory. (CCC 1, 2, 4, 5; CVS PGC 1, 2, 3, 4, 5; DMS PGC 1, 2, 3, 4)
7. Select and complete an ARDMS exam in one specialty. (CCC 1, 2, 4, 5, 6; CVS 1, 2, 3, 4, 5; DMS 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. Explain the importance of continued development of knowledge and skills in the field of diagnostic medical sonography.
 1. Describe various professional societies and the services they offer.
 2. Explain the importance of continuing education within the profession.
 3. Explain the process of the ARDMS board exam and the importance of acquiring the registry in Registered Diagnostic Medical Sonographer (RDMS), Registered Diagnostic Cardiac Sonographer (RDCS), or Registered Vascular Technologist (RVT).
 4. Explain the requirements for continuing competency through the continuing medical education (CME) credits.
 5. Explain other available board exams, including but not limited to exams through The American Registry of Radiologic Technologists (ARRT) and Cardiovascular Credentialing International (CCI).
2. Prepare a résumé, and discuss interview skills.
 1. List components and the structure of a résumé.
 2. Discuss résumé writing and formatting.
 3. Discuss effective cover letter formatting.
 4. Prepare a résumé related to the field of sonography.
 5. Discuss interview skills appropriate for different phases of the process.
3. Integrate sonography principles and instrumentation knowledge to solve mock board exam questions.
 1. In preparation for mock board exam questions, retrieve and explain proper patient care techniques including:
 1. Patient identification and documentation
 2. Patient interaction
 3. Verification of requested examination
 4. Emergency situation
 5. Universal precaution
 6. Bioeffects and as low as reasonably achievable (ALARA) principle
 2. Integrate and describe physical principles of sound waves and the interaction with tissue to solve mock board exam questions.
 3. Retrieve and explain the construction, characteristics, and types of transducer to solve mock board exam questions.
 4. Use spatial resolution and temporal resolution to solve mock board exam questions.
 5. Integrate and describe pulse-echo instrumentation to solve mock board exam questions.
 6. Integrate and explain Doppler effect, instrumentation, and hemodynamics to solve mock board exam questions.
 7. Retrieve and describe quality assurance and quality control of equipment to solve mock board exam questions.
4. Use technical knowledge to solve mock board exam questions.
 1. Retrieve and integrate basic anatomy and sonographic images of structures related to either abdominal, gynecological/obstetric (GYN/OB), cardiac, or vascular technology to solve mock board exam questions.
 2. Integrate and explain normal physiology and pathophysiology of structures related to either abdominal, GYN/OB, cardiac, or vascular technology to solve mock board exam questions.
 3. Integrate and explain patient history, physical exam, and sonographic procedures related to either abdominal, GYN/OB, cardiac, or vascular technology to solve mock board exam questions.
 4. Integrate and explain treatment, including prophylaxis, medical, surgical, and interventional procedures to solve mock board exam questions.
 5. Retrieve and describe other non-invasive and invasive diagnostic procedures to solve mock board exam questions.
5. Prepare a pathology research presentation to accurately form a sonographer's impression of the pathology.
 1. Describe a clinical pathology pertaining to technology by retrieving, organizing, analyzing, and interpreting data.
 2. Discuss disease process and complications of the pathology, including origin, signs and symptoms, risk factors, ultrasound involvement, and treatment.
 3. Create a PowerPoint presentation.
 4. Prepare and present orally in a professional manner.
6. Describe the fundamental elements for implementing a quality assurance and improvement program as well as the policies, the protocols, and the procedures for the general function of the ultrasound laboratory.
 1. Describe the elements in a quality assurance and improvement program.
 2. Discuss typical policies, protocols, and procedures for the general function of an ultrasound laboratory.
 3. Discuss current trends in healthcare systems.
7. Select and complete an ARDMS exam in one specialty.
 1. Select and complete the ARDMS adult echocardiography or vascular technology specialty exam (cardiovascular sonography students only).
 2. Select and complete the ARDMS abdomen or OB/GYN specialty exam (diagnostic medical sonography student only).

Evaluation Criteria/Policies:

The grade will be determined using the Delaware Tech grading system:

90	-	100	=	A
80	-	89	=	B
70	-	79	=	C
0	-	69	=	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
Tests (summative)	
CVS: SPI (5%), Echocardiography (15%), Vascular (15%)	
DMS: SPI (5%), abdomen (15 %), OB/GYN (15%)	35 %
<ul style="list-style-type: none"> • SPI = Sonography Principles & Instrumentation 	
Mock Board Exams (summative)	
CVS: SPI (15%), Echocardiography (20%), Vascular (20%)	55%
DMS: SPI (15%), abdomen (20%), OB/GYN (20%)	
ARDMS Board Exam (student select to take one specialty exam) (summative)	
CVS: ECH or VAS	If the student passes the ARDMS specialty exam, student will have the full 35% grade replacing the same subject tests (15%) + mock exam (20%) grades
DMS: Abdomen or Ob/GYN	
Pathology Research Presentation (summative)	10 %
Resume writing & Interview skills (formative)	Satisfactory/ unsatisfactory
Stewards of Children (formative)	Requirement for graduation
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):**CVS Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his/her major):**

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

DMS 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.