



Course Number and Title: DMS 106 Intro to Patient Care/Sonography

Campus Location:

Wilmington

Effective Date:

2020-51

Prerequisite:

CHM 110 or concurrent, PHY 111 or concurrent, SSC 100 or concurrent

Co-Requisites:

none

Course Credits and Hours:

3.00 credits

3.00 lecture hours/week

1.00 lab hours/week

Course Description:

This course introduces patient care knowledge and skills necessary to perform sonographic procedures on all patient populations. In addition, an introduction to the field of diagnostic medical sonography is provided.

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:

DMS Program Student Manual

CCHS Non-Employee Orientation Manual

Allied Health/Science Department Program Student Policy Manual

Schedule Type:

Classroom Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Describe the responsibilities of the sonographer during interactions with patients and other healthcare team members while maintaining effective communication. (CCC 1, 2, 3, 4; PGC 2, 4)
2. Demonstrate appropriate techniques to safely move and reposition patients. (CCC 1, 2, 3, 4; PGC 1, 4)
3. Discuss proper patient care techniques for specific patient populations. (CCC 1, 2, 3, 4; PGC 2, 4)
4. Obtain and interpret vital signs. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4)
5. Practice appropriate infection control techniques required in the healthcare environment. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 4)
6. Demonstrate an effective response to emergency situations encountered in the healthcare environment. (CCC 1, 2, 5; PGC 4)
7. Acquire cardiopulmonary resuscitation (CPR) certification at the Healthcare Provider level. (CCC 1, 2, 3, 4, 5; PGC 1, 4)
8. Explain the importance of chemical hygiene and fire safety in the healthcare environment. (CCC 2, 5; PGC 4)
9. Discuss the history and basic principles of diagnostic medical sonography. (CCC 1, 5; PGC 2)
10. Discuss the role of diagnostic medical sonography as an imaging modality. (CCC 1, 2; PGC 2, 4)
11. Discuss the role of the diagnostic medical sonographer with regard to credentialing and ethical practices. (CCC 1, 4; PGC 2, 3, 4)
12. Explain professional behaviors and responsibilities according to clinical affiliates and Diagnostic Medical Sonography (DMS) program policies. (CCC 1, 2; PGC 2, 3, 4)
13. Perform basic scanning skills. (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. Describe the responsibilities of the sonographer during interactions with patients and other healthcare team members while maintaining effective communication.
 1. Discuss the responsibilities of the healthcare facility and medical team with respect to
 1. Caring for ill and trauma patients
 2. Promoting health

3. Preventing disease
4. Education
5. Research
2. Describe the appropriate methods for verifying proper patient identification.
3. Describe and simulate appropriate methods of greeting a patient.
4. Describe the sections of the medical chart and the information contained in each.
5. Explain the characteristics of obtaining a pertinent patient history and their importance.
6. Describe the purpose and contents of the Patient's Bill of Rights.
7. Identify and practice effective communication skills in various simulated patient scenarios.
8. Discuss the components of the Health Information Portability and Accountability Act (HIPAA)
 1. Disclosure procedures
 2. Patient rights
 3. Security standards
2. Demonstrate appropriate techniques to safely move and reposition patients.
 1. Describe and demonstrate safe and sound principles of body mechanics applicable to patient care.
 2. Demonstrate techniques for various types of patient transfers:
 1. Wheelchair to table and table to wheelchair
 2. Stretcher to table and table to stretcher
 3. Wheelchair to bed and bed to wheelchair
 4. Stretcher to bed and bed to stretcher
 5. Three-man lift
 6. Draw sheet lift
 3. Describe and demonstrate the procedures for turning and positioning patients with various conditions:
 1. Severe trauma
 2. Unconsciousness
 3. Disorientation
 4. Amputation
3. Discuss proper patient care techniques for specific patient populations.
 1. Describe the aspects of patient comfort, and discuss the importance of each to the care and safety of the patient:
 1. Support
 2. Warmth
 3. Privacy
 2. Given specific patient situations, discuss various aspects of general patient care:
 1. Trauma
 2. Pediatrics
 3. Geriatrics
 4. Physically handicapped
 5. Emotionally disturbed
4. Obtain and interpret vital signs.
 1. Explain what each vital sign is, and discuss the significance of each in the assessment of a patient's condition:
 1. Temperature
 2. Pulse
 3. Respiration
 4. Blood pressure
 2. Explain the physiological principles related to temperature, pulse, respiration, and blood pressure.
 3. Identify normal values for clinical measurement of temperature, pulse, respiration, and blood pressure.
 4. Discuss the use and maintenance of equipment used for measuring vital signs.
 5. Given a simulated patient, measure and record each vital sign.
5. Practice appropriate infection control techniques required in the healthcare environment.
 1. Define each of the following:
 1. *Infectious pathogens*
 2. *Communicable diseases*
 3. *Nosocomial infections*
 4. *Centers for Disease Control (CDC)*
 5. *Human immunodeficiency virus (HIV)*
 6. *Hepatitis B virus (HBV)*
 2. Describe and demonstrate standard precautions and isolation procedures:
 1. Precautions for blood, body fluids, and secretions
 2. Isolation for respiratory tract-air borne and burn patients
 3. Describe sources, modes for transmission, and prevention of infections and diseases:
 1. Infectious sources (bacteria and virus)
 2. Transmission modes (airborne, direct contact, and indirect contact)
 3. Disease prevention
 4. Describe Occupational Safety and Health Administration (OSHA) procedures for infection control through standard precautions.
 5. Discuss psychological considerations for the management of patients when following standard precautions.
6. Demonstrate an effective response to emergency situations encountered in the healthcare environment.
 1. Identify signs and symptoms manifested in the following emergencies:

1. Cardiac arrest
2. Anaphylactic shock
3. Convulsion/seizure
4. Hemorrhage
5. Apnea
6. Vomiting
7. Aspiration
8. Suspected and/or confirmed fractures
9. Diabetic coma and/or insulin shock
2. Discuss acute care procedures (cardiopulmonary resuscitation, hemorrhage control, and suction) for the above emergencies.
3. Describe the emergency medical code system for the institution, and discuss the role of the student in this procedure.
4. Discuss the use of medical emergency equipment and supplies:
 1. Oxygen
 2. Aspirator
 3. Resuscitator
 4. Medications
 5. Emergency cart
5. Demonstrate set up of emergency equipment, including oxygen and suction.
6. Given simulations, demonstrate basic first aid techniques.
7. Acquire cardiopulmonary resuscitation (CPR) certification at the Healthcare Provider level.
 1. Successfully complete a CPR course at the Healthcare Provider level.
8. Explain the importance of chemical hygiene and fire safety in the healthcare environment.
 1. Discuss the Right-to-Know Law.
 2. Discuss the employee's and the student's rights and obligations.
 3. Identify a workplace chemical list.
 4. Interpret labels and material safety data sheets (MSDS).
 5. Discuss physical and health hazards of chemicals.
 6. Explain proper handling, storage, and disposal practices.
 7. Use protective measures.
9. Discuss the history and basic principles of diagnostic medical sonography.
 1. Relate the evolution of diagnostic medical sonography as an imaging modality to current practices.
 2. Describe the nature of sound and its effect on body tissues.
 3. Describe common artifacts encountered during an ultrasound exam.
 4. Explain basic physics concepts involved with ultrasound imaging and acquisition.
 5. Explain future applications and works in progress.
10. Discuss the role of diagnostic medical sonography as an imaging modality.
 1. Describe the efficacy of diagnostic medical sonography in healthcare.
 2. Explain bio-effects consideration for the safety of diagnostic ultrasound.
 3. Discuss the advantages of ultrasound imaging.
 4. Discuss the disadvantages and limitations of ultrasound imaging.
 5. Discuss the importance of ergonomically correct scanning techniques.
11. Discuss the role of the diagnostic medical sonographer with regard to credentialing and ethical practices.
 1. Discuss the need for professional credibility and adherence to ethical standards in the practice of medical sonography.
 2. Discuss the profession's code of conduct.
 3. Discuss the profession's scope of practice that distinguishes the diagnostic medical sonographer from other healthcare professionals.
 4. Discuss educational opportunities, credentialing, and continuing education requirements and benefits for a sonographer/technologist.
12. Explain professional behaviors and responsibilities according to clinical affiliates and Diagnostic Medical Sonography (DMS) program policies.
 1. Explain clinical affiliate policies regarding student behaviors.
 2. Discuss the duties and responsibilities of student sonographers.
 3. Identify the Society of Diagnostic Medical Sonography (SDMS) professional behaviors with regard to the educational process.
 4. Explain the DMS program's didactic and clinical policies, including but not limited to attendance, dress code, make-up time, and grading system.
13. Perform basic scanning skills.
 1. Explain the function of controls/knobs on the ultrasound unit.
 1. Depth
 2. Focal zone
 3. Gain
 4. Time Gain Compensation (TGC)
 5. Calipers (measurement)
 2. Demonstrate technical skills and use of controls by acquiring basic images of a simulated patient.
 1. Right kidney; long axis, with measurement
 2. Right kidney; transverse, with measurement
 3. Aorta and inferior vena cava (IVC) in transverse
 4. Aorta longitudinal

5. IVC longitudinal

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
3 Tests (30% each) (summative)	90 %
Cultural Diversity presentation (formative)	10 %
All skill competencies and online assignment are pass/fail only. Students need to pass in order to pass the course. (formative)	Pass/fail
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

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

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.