



Course Number and Title: DMS 107 Essentials in Patient Care/Sonography

Campus Location:

Georgetown

Effective Date:

2018-51

Prerequisite:

MAT 153, BIO 120, PHY 111, ENG 101, 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 introductory course covers patient care skills necessary to perform diagnostic sonographic procedures on all patient populations in the field.

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:

None

Schedule Type:

Classroom Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Describe the responsibilities of the sonographer and maintain effective communication during interactions with patients and healthcare team members. (CCC 1, 2, 3, 4, 5; PGC 2)
2. Use appropriate techniques to safely move and reposition patients. (CCC 1, 2, 3, 4; PGC 1, 4)
3. Discuss general patient issues encountered during care. (CCC 1, 2, 3, 4, 5; PGC 2, 4)
4. Obtain and interpret vital signs. (CCC 1, 3, 4, 5, 6; PGC 1, 2, 4)
5. Practice appropriate infection control techniques required in the healthcare environment. (CCC 1, 3, 4; PGC 1, 3)
6. Identify emergency situations encountered in the healthcare environment. (CCC 1, 2, 3, 4, 5; PGC 1, 2, 3, 4)
7. Acquire cardiopulmonary resuscitation (CPR) certification skills at the healthcare provider level. (CCC 1, 2, 3, 4, 5; PGC 1, 2, 3, 4)
8. Identify the importance of chemical hygiene and fire safety in the health environment. (CCC 1, 2, 3, 4, 5; PGC 2, 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, 3, 5; PGC 2, 3)
11. Discuss the role of the diagnostic medical sonographer with regard to credentialing and ethical practices. (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 and maintain effective communication during interactions with patients and healthcare team members.
 1. Discuss the responsibilities of the healthcare facility and medical team with respect to caring for the ill and trauma patients, promoting health, preventing disease, education, and 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 what information is contained in each.
 5. Explain the importance and characteristics of obtaining a pertinent patient history.
 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 Health Information Portability and Accountability (HIPAA) in regards to disclosure procedures, patient rights, and security standards.
2. Use 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/table to wheelchair
 2. stretcher to table/table to stretcher
 3. wheelchair to bed/bed to wheelchair
 4. stretcher to bed/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 general patient issues encountered during care.
 1. Describe the aspects of patient comfort, including support, warmth, and privacy, and discuss the importance of each to the care and safety of the patient.
 2. Discuss various aspects of general patient care given specific patient populations:
 1. trauma
 2. pediatrics
 3. geriatrics
 4. physically handicapped
 5. emotionally disturbed
 4. Obtain and interpret vital signs.
 1. Explain and discuss the significance of each vital sign in the assessment of patient condition, including temperature, pulse, respiration, and 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. Measure and record each of the vital signs given a simulated patient.
 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. *Center for Disease Control (CDC)*
 5. *human immunodeficiency virus (HIV)*
 6. *hepatitis B virus (HBV)*
 2. Describe and demonstrate the use of 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 and modes for transmission of infections and diseases:
 1. Infectious sources (bacteria and virus)
 2. Transmission modes (airborne, direct contact, and indirect contact) and disease prevention
 4. Describe Occupational Safety and Health Act (OSHA) procedures for infection control through standard precautions.
 5. Discuss psychological considerations for the management of patients using standard precautions.
 6. Identify emergency situations encountered in the healthcare environment.
 1. Identify signs and symptoms that are manifested in the following emergencies:
 1. cardiac arrest
 2. anaphylactic shock
 3. convulsion/seizure
 4. hemorrhage
 5. apnea
 6. vomiting
 7. aspiration
 8. suspected/confirmed fractures
 9. diabetic coma/insulin shock
 2. Describe the emergency medical code system for the institution, and discuss the role of the student in this procedure.
 3. Discuss cardiopulmonary resuscitation, hemorrhage control, and suction as acute care procedures.
 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. Demonstrate basic first aid techniques given simulations.
7. Acquire cardiopulmonary resuscitation (CPR) certification skills at the healthcare provider level.
 1. Successfully complete a CPR course at the healthcare provider level.
8. Identify the importance of chemical hygiene and fire safety in the healthcare environment.
 1. Discuss the Right-to-Know Law.
 2. Discuss employees' and students' 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.
 2. Describe the nature of sound and its effect on body tissues.
 3. Describe common artifacts encountered during ultrasound exam.
 4. Explain basic physics concepts that support ultrasound imaging and acquisition.
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. Explain future applications and works in progress.
 6. 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 Code of Conduct for the profession.
 3. Discuss the Scope of Practice as it distinguishes the diagnostic medical sonographer from other healthcare professionals.
 4. Discuss educational opportunities and credentialing and continuing education requirements, and explain the benefits for a sonographer/technologist.

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
Exam #1 (Multiple Choice, Short Answer/Essay)	20%
Exam #2 (Multiple Choice, Short Answer/Essay)	20%
Exam #3 (Multiple Choice, Short Answer/Essay)	20%
Exam #4 (Multiple Choice)	20%
Discussion Board	10%
Patients' Rights Case Presentation	10%
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.