DMS-1303: INTRODUCTION TO SONOGRAPHY

Cuyahoga Community College

Viewing:DMS-1303 : Introduction to Sonography

Academic Term:
Fall 2018

Subject Code
DMS - Diagnostic Medical Sonography

Course Number:
1303

Title:
Introduction to Sonography

Catalog Description:
Introduction to the profession of Diagnostic Medical Sonography. Topics focus on professionalism, sonographic terminology, anatomical scanning planes, standard presentation and annotation of ultrasound images, body mechanics, and ergonomics with an overview of diagnostic related imaging specialties.

Credit Hour(s):
2

Lecture Hour(s):
2

Requisites

Prerequisite and Corequisite
BIO-2331 Anatomy and Physiology I or concurrent enrollment; and ENG-0990 Language Fundamentals II or appropriate score on English Placement Test.

I. ACADEMIC CREDIT

Academic Credit According to the Ohio Department of Higher Education, one (1) semester hour of college credit will be awarded for each lecture hour. Students will be expected to work on out-of-class assignments on a regular basis which, over the length of the course, would normally average two hours of out-of-class study for each hour of formal class activity. For laboratory hours, one (1) credit shall be awarded for a minimum of two laboratory hours in a standard week for which little or no out-of-class study is required since three hours will be in the lab (i.e. Laboratory 03 hours). Whereas, one (1) credit shall be awarded for a minimum of two laboratory hours in a standard week, if supplemented by out-of-class assignments which would normally average one hour of out-of-class study preparing for or following up the laboratory experience (i.e. Laboratory 02 hours). Credit is also awarded for other hours such as directed practice, practicum, cooperative work experience, and field experience. The number of hours required to receive credit is listed under Other Hours on the syllabus. The number of credit hours for lecture, lab and other hours are listed at the beginning of the syllabus. Make sure you can prioritize your time accordingly. Proper planning, prioritization and dedication will enhance your success in this course.

The standard expectation for an online course is that you will spend 3 hours per week for each credit hour.

II. ACCESSIBILITY STATEMENT

If you need any special course adaptations or accommodations because of a documented disability, please notify your instructor within a reasonable length of time, preferably the first week of the term with formal notice of that need (i.e. an official letter from the Student Accessibility Services (SAS) office). Accommodations will not be made retroactively.

III. ATTENDANCE TRACKING

Regular class attendance is expected. Tri-C is required by law to verify the enrollment of students who participate in federal Title IV student aid programs and/or who receive educational benefits through other funding sources. Eligibility for federal student financial aid is based in part on enrollment status.

Students who do not attend classes for the entire term are required to withdraw from the course(s). Additionally, students who withdraw from a course or stop attending class without officially withdrawing may be required to return all or a portion of their financial aid based on the date of last attendance. Students who do not attend the full session are responsible for withdrawing from the course(s).

Tri-C is responsible for identifying students who have not attended a course before financial aid funds can be applied to students' accounts. Therefore, attendance is recorded in the following ways:

- For in-person and blended-learning courses, students are required to attend the course by the 15th day of the semester (or equivalent for terms shorter than five weeks) to be considered attending. Students who have not met all attendance requirements for in-person and blended courses, as described herein, within the first two weeks or equivalent, will be considered not attending.
- For online courses, students are required to login at least two times per week and submit one assignment per week for the first two weeks of the semester, or equivalent to the 15th day of the term. Students who have not met all attendance requirements for online courses, as described herein, within the first two weeks or equivalent, will be considered not attending.

At the conclusion of the first two weeks of a semester or equivalent, instructors report any registered students who have "Never Attended" a course. Those students will be administratively withdrawn from that course. However, after the time period in the previous paragraphs, if a student stops attending a class or wants or needs to withdraw, for any reason, it is the student’s responsibility to take action to withdraw from the course. Students must complete and submit the appropriate Tri-C form by the established withdrawal deadline.

Tri-C is required to ensure that students receive financial aid only for courses that they attend and complete. Students reported for not attending at least one of their registered courses will have all their financial aid funds held until confirmation of attendance in registered courses has been verified. Students who fail to complete at least one course may be required to repay all or a portion of their federal financial aid funds and may be ineligible to receive future federal financial aid awards. Students who withdraw from classes prior to completing more than 60 percent of their enrolled class time may be subject to the required federal refund policy.

If illness or emergency should necessitate a brief absence from class, students should confer with instructors upon their return. Students having problems with coursework due to a prolonged absence should confer with the instructor or a counselor.

IV. LEARNING OUTCOMES ASSESSMENT

Occasionally, in addition to submitting assignments to their instructors for evaluation and a grade, students will also be asked to submit completed assignments, called 'artifacts,' for assessment of course and program outcomes and the College's Essential Learning Outcomes (ELOs). The artifacts will be submitted in Blackboard or a similar technology. The level of mastery of the outcome demonstrated by the artifact DOES NOT affect the student's grade or academic record in any way. However, some instructors require that students submit their artifact before receiving their final grade. Some artifacts will be randomly selected for assessment, which will help determine improvements and support needed to further student success. If you have any questions, please feel free to speak with your instructor or contact the Learning Outcomes Assessment office.

V. CONCEALED CARRY STATEMENT

College policy prohibits the possession of weapons on college property by students, faculty and staff, unless specifically approved in advance as a job-related requirement (i.e., Tri-C campus police officers) or, in accordance with Ohio law, secured in a parked vehicle in a designated parking area only by an individual in possession of a valid conceal carry permit.

As a Tri-C student, your behavior on campus must comply with the student code of conduct which is available on page 29 within the Tri-C student handbook, available athttp://www.tri-c.edu/student-resources/documents/studenthandbook.pdfYou must also comply with the College's Zero Tolerance for Violence on College Property available athttp://www.tri-c.edu/policies-and-procedures/documents/3354-1-20-10-zero-tolerance-for-violence-policy.pdf

Outcomes

Course Outcome(s):
Recognize the various issues involved in the profession of Diagnostic Medical Sonography.

Objective(s):
1. Identify the characteristics of a professional.
2. Identify the various diagnostic imaging specialties that are used in conjunction with sonography.
3. Apply the various characteristics of a professional to medical scenarios.
4. Use medical terminology, abbreviations, and annotations appropriately.
5. Describe a sonographic image using ultrasound related terminology.
6. Define and demonstrate the various scanning planes utilized for sonographic imaging.
7. Explain the importance of proper image labeling.
8. Explain why proper body mechanics is essential to the longevity of a career in diagnostic medical sonography.
9. Describe the work related injuries associated with scanning.
10. Examine advancements and legislative changes related to diagnostic medical sonography.

Methods of Evaluation:
1. Article reviews
2. Class participation
3. Homework assignments
4. Final Exam
5. Role playing
6. Self assessment
7. Written tests/quizzes

Course Content Outline:
1. Concepts
   a. Professionalism
   b. Work ethic
   c. Credentialing
   d. Accreditation
   e. Continuing education
   f. Compliance
   g. Policies and procedures
   h. Patient’s Bill of Rights
      i. Confidentiality
   j. Health insurance portability and accountability act (HIPAA)
   k. Scope of practice
   l. Medicolegal aspects
m. Teamwork
n. Diversity
o. Time management
p. Stress management
q. Critical thinking
r. Ultrasound related medical terminology
s. Common medical abbreviations
t. Patient positioning
u. Standard scanning planes
v. Image presentation on the monitor
w. Image labeling
x. Ergonomics
y. Body mechanics
z. Work-related musculoskeletal disorders (WRMSD)
aa. Occupational Safety and Health Administration (OSHA) alliance with Society of Diagnostic Medical Sonography (SDMS)
bb. Diagnostic imaging specialties

2. Skills
   a. Demonstrate effective communication skills
   b. Demonstrate preventive exercises recommended by SDMS

3. Issues
   a. Professional ethics
   b. Ethical decisions
   c. Personal values and morals
   d. Reputation
   e. Decision making
   f. Respect and trust
   g. Honesty
   h. Diversity
      i. “After hours” image
   j. Language and grammar
k. Personal habits
l. Appearance and grooming
m. Medicolegal issues
n. Ergonomics

Topical Outline

1. Professionalism
   a. Professional vs. non-professional vs. unprofessional
   b. Work ethic
      i. Attendance and punctuality
      ii. Reliability and accountability
      iii. Attitude and enthusiasm
      iv. Code of Ethics for the Profession of Diagnostic Medical Sonography
   c. Quality of work
      i. Competence - credentialing and accreditation
      ii. Continuing education
      iii. Commitment
      iv. Diagnostic Ultrasound Clinical Practice Standards
   d. Compliance
      i. Policies and procedures
      ii. Patient rights
         1. Emotional needs
         2. Patient Bill of Rights
         3. Patient-healthcare worker relationships
      iii. Confidentiality - HIPAA
      iv. Medicolegal aspects
      v. Scope of Practice for the Diagnostic Ultrasound Professional
   e. Personal Traits of Professionalism
      i. Character and personal values
      ii. Reputation
      iii. Judgment and decision making
      iv. Respect and trust
      v. Honesty
      vi. Ethics and morals
         1. Principles applied to make ethical decisions
         2. Ethical issues healthcare workers may encounter
         3. Handling diversity issues
   f. Personal Image
      i. Appearance and grooming
      ii. Personal habits
      iii. Language and grammar
      iv. "After hours" image
   g. Teamwork
      i. Interpersonal relationships
      ii. Valuing diversity
      iii. Social skills
      iv. Effective customer service
      v. Effective communication skills
      vi. Conflict resolution
   h. Personal management skills
      i. Time management
      ii. Stress management
      iii. Problem solving and critical thinking
      iv. Managing change

2. Development of sonography as a profession
   a. Historical events/people
   b. Professional organizations
   c. Trends in the field

3. Ultrasound related medical terminology
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a. Relating to structure orientation
b. Relating to sonographic images
c. Relating to pathology
d. Commonly used medical abbreviations

4. Standard presentation of ultrasound images
   a. Patient position
   b. Standard scanning planes
   c. Image presentation on the monitor
   d. Basic cross-sectional anatomy presentation

5. Image labeling and annotation
   a. Purpose of labeling - legal document
   b. Recommended format
   c. Recommended location

6. Body mechanics
   a. Ergonomics
      i. Equipment
      ii. Legislation - OSHA alliance with SDMS
      iii. Industry Standards for the Prevention of Work-Related Musculoskeletal Disorders in Sonography
   b. Work-related musculoskeletal disorders (WRMSD)
      i. Contributing and risk factors
      ii. Types of WRMSD
      iii. Signs and symptoms
      iv. Stages of severity
      v. Diagnosis and treatment
      vi. Prevention
         1. Changing your approach to scanning
         2. SDMS recommended exercises

7. Diagnostic related imaging specialties
   a. Radiography
   b. Mammography
   c. Computed Tomography (CT)
   d. Magnetic Resonance Imaging (MRI)
   e. Magnetic Resonance Angiography (MRA)
   f. Nuclear Medicine
   g. Angiography

Resources


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