

DMS-1950: FIELD EXPERIENCE II

Cuyahoga Community College

Viewing: DMS-1950 : Field Experience II

Board of Trustees:

May 2020

Academic Term:

Fall 2020

Subject Code

DMS - Diagnostic Medical Sonography

Course Number:

1950

Title:

Field Experience II

Catalog Description:

Supervised practical application of sonography scanning techniques in clinical setting under personal and direct supervision of registered diagnostic medical sonographer or qualified physician. Emphasis on intermediate-level scanning skills. Continued performance of basic-level procedures. Student continues skill development related to departmental processes, procedures, protocols, and patient care. Clinical experience in an ultrasound lab.

Credit Hour(s):

2

Other Hour(s):

360

Other Hour Details:

Field Experience: 360 hours per semester offering

Requisites

Prerequisite and Corequisite

DMS-1940 Field Experience I.

Outcomes

Course Outcome(s):

Demonstrate cooperation and collaboration within the health care environment.

Objective(s):

1. Exhibit proper communication skills with diverse populations in the clinical environment.
2. Seek to assist and cooperate when opportunity arises.
3. Display a work ethic that is considerate to their fellow peers.
4. Demonstrate professionalism in the clinical environment.
5. Model behavior of a professional health care provider.

Course Outcome(s):

Recognize the importance of the patient.

Objective(s):

1. Adhere to infectious control policies and standard precautions.
2. Respect and protect the confidentiality of acquired patient information and patient rights.
3. Engage in clear, effective communication with diverse populations.
4. Provide for patient needs.

Course Outcome(s):

Perform intermediate-level technical functions within the scope of practice of a sonographer.

Objective(s):

1. Demonstrate continuous improvement in skills and behaviors.
 2. Identify and produce quality examinations by using appropriate equipment capabilities while maintaining safety.
 3. Recognize normal vs. abnormal anatomy while scanning a patient.
 4. Perform sonographic procedures indicated in the Diagnostic Medical Sonography Clinical Manual using proper protocols.
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Methods of Evaluation:

1. Observation
2. Oral quizzing
3. Image interpretation
4. Student clinical evaluation
5. Exam competency
6. Completion of all clinical requirements

Course Content Outline:

1. Concepts
 - a. Exam specific protocols
 - i. Abdomen-OB/GYN according to American Institute of Ultrasound in Medicine (AIUM) Clinical Guidelines
 1. pelvis
 - a. Transvaginal
 - b. Transabdominal
 2. 1st Trimester gravid
 3. 2nd/3rd Trimester gravid
 4. Testes
 5. Thyroid
 - ii. Cardiac according to American Society of Echocardiography (ASE) Guidelines and Standards
 1. parasternal views
 2. apical views
 3. subcostal views
 4. suprasternal
 - iii. Vascular according to Society for Vascular Ultrasound (SVU) Positions and Guidelines
 1. Venous lower extremity
 2. Vein mapping
 3. Artrial lower physiological testing
 4. Carotids
 5. Arterial upper physiological testing
 6. Venous upper extremity
 - b. Professionalism
 - c. Cooperation and collaboration
 - d. Quality
 - e. Workflow
 - f. Facility policies and procedures
 - g. Exam protocols
 - h. Workplace politics
2. Skills
 - a. Using independent judgment when scanning a patient
 - b. Working as a functional member of the team
 - c. Performing a technical scan of organs specific to the option
 - i. Abdomen-OB/GYN according to AIUM Clinical Guidelines
 1. transvaginal scan of pelvis
 2. transabdominal scan of pelvis
 3. 1st trimester gravid scan
 4. 2nd/3rd trimester gravid scan

- 5. Testes
 - 6. Thyroid
 - ii. Cardiac - according to ASE Guidelines and Standards, with minimal assistance if needed
 - 1. aortic stenosis
 - 2. aortic regurgitation
 - 3. mitral stenosis
 - 4. mitral regurgitation
 - 5. tricuspid regurgitation
 - 6. left ventricular systolic function
 - 7. left ventricular diastolic function
 - 8. all 2D and M-mode measurements
 - iii. Vascular according to SVU positions and guidelines
 - 1. Venous lower extremity
 - 2. Vein mapping
 - 3. Arterial lower physiological testing
 - 4. Carotids
 - 5. Arterial upper physiological testing
 - 6. Venous upper extremity
 - d. Correlating exam findings with patient medical information
 - e. Taking appropriate safety precautions in the lab environment
 - f. Continuing to demonstrate patient care skills previously taught
 - g. Using proper body mechanics while scanning and positioning patients
 - h. Using ergonomic features of the equipment to your benefit
 - i. Preparing the exam room and equipment for the exam
 - j. Manipulating equipment controls for a quality exam
 - k. Selecting the proper equipment to perform a procedure
 - l. Communicate to a diverse population
3. Issues
- a. Ethics
 - b. Legal
 - c. Standards of practice
 - d. Diversity
 - e. Standard precautions
 - f. Safety
 - g. Quality
 - h. Scope of practice
 - i. Workplace politics

Topical Outline

- 1. Clinical site orientation (see clinical site orientation checklist)
- 2. Equipment instrumentation
 - a. Safe operation
 - b. Maintenance for quality assurance and safety
 - c. Equipment capabilities and inabilities
 - i. Probes
 - ii. Doppler
 - iii. 3D and 4D imaging
 - iv. Harmonics
 - v. PACS - Picture Archival Communication System
 - vi. Measurement reports/worksheets
- 3. Department processes
 - a. Information system
 - b. Exam/report routing system
 - c. Test results
 - d. HIPAA and Patient Rights
 - e. Scan lab preparation and maintenance
- 4. Progression of appropriate communication skills

- a. Patient and visitors
- b. Medical site associates
- c. Medical professionals
5. Progression of appropriate behavioral skills
 - a. Patient and visitors
 - b. Medical site associates
 - c. Medical professionals
 - d. Workplace politics
6. Infection control and prevention
 - a. Standards
 - b. Techniques
 - c. Reporting
7. Exam protocols for procedures to be performed as indicated in the Diagnostic Medical Sonography Clinical Manual
8. Performance of clinical procedures
 - a. Progressive development of skills
 - i. Professional
 - ii. Personal
 - iii. Technical
 - iv. Speed
 - b. Scan techniques assessment
 - i. Observance
 - ii. Assistance
 - iii. Independent
 - c. Demonstration of sonographic anatomy
 - i. Normal
 - ii. Anomaly
 - iii. Pathology
 - iv. Pathophysiology
 - d. Normal vs. abnormal values
 - i. Anatomical structure
 - ii. Doppler
 - iii. Laboratory values
 - e. Evaluation and analysis
 - i. Patient medical history
 - ii. Supportive clinical data
 - iii. Sonographic exam information
 - f. Accurate technical findings
 - i. Oral
 - ii. Written

Resources

Harry, Mark J and Tess Behrends. *Essentials of Echocardiography: An Illustrative Guide*. 4th ed. Cardiac Ultrasound Consulting, 2014.

Otto, Catherine M. *Textbook of Clinical Echocardiography*. 6th ed. Philadelphia: Elsevier, 2018.

Rumack, Carol M. and Deborah Levine. *Diagnostic Ultrasound*. 5th ed. Philadelphia: Elsevier, 2018.

Rumwell, Claudia, and Michalene McPharlin. *Vascular Technology: An Illustrated Review*. 5th ed. Pasadena: Appleton Davies, 2014.

Tempkin, Betty B. *Sonography Scanning: Principles and Protocols*. 4th ed. Philadelphia: Saunders, 2014.

Curry, Reva Arnez, and Betty Bates Tempkin. *Sonography: Introduction to Normal Structure and Function*. 4th ed. St Louis: Saunders, 2015.

Kupinski, Ann Marie. *Diagnostic Medical Sonography: The Vascular System*. 2nd ed. Baltimore: Wolters Koller, 2018.

Armstrong, William F. and Thomas Ryan. *Feigenbaum's Echocardiography*. 8th ed. Philadelphia: Wolters Kluwer, 2019.

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