CVT A265: ECHOCARDIOGRAPHY CLINICAL LAB 3

Item	Value
Curriculum Committee Approval Date	11/01/2023
Top Code	121300 - Cardiovascular Technician
Units	8 Total Units
Hours	396 Total Hours (Lecture Hours 18; Lab Hours 378)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Pass/No Pass (B)

Course Description

Clinical experience in echocardiography in an assigned clinical facility practicing a variety of Echocardiograms. The emphasis on scanning using appropriate Doppler interrogation and calculations to recognize between normal and pathology processes relating to actual patient situations. Successful clinical performance evaluation and submission of written patient case study. PREREQUISITE: CVT A210 and CVT A224. COREQUISITE: CVT A250 and CVT A255. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Demonstrate the entry level skills of a cardiac sonographer identified by imaging industry standards.

Course Objectives

- 1. Perform echocardiographic studies independently with sufficient diagnostic quality including 2D/M-mode/Doppler color flow studies on adults.
- 2. Recognize basic congenital heart anatomy and relate that anatomy to abnormal findings.
- 3. Perform cerebral vascular ultrasound studies with supervision and sufficient diagnostic quality when available.
- 4. Identify each cardiac structure and its orientation or anatomical relationship.
- 5. Demonstrate the entry level skills of a cardiac sonographer identified by imaging industry standards.
- 6. Perform measurements of cardiac structures/chambers/valves accurately for diagnostic evaluation.
- 7. Demonstrate the ability to conduct oneself in a professional manner as illustrated in the clinical syllabus.
- 8. Demonstrate the use of Doppler interrogation when indicated to create ultrasound images for diagnostic interpretation.
- 9. Submit a written case study for an oral seminar presentation.
- 10. Submit for evaluation an echocardiographic exam and completed syllabus towards final grade.

Lecture Content

This is an assigned clinical experience in cardiac echocardiography and cerebral vascular ultrasound for routine and advanced imaging, Doppler, and color flow Doppler studies for adult and pediatric patients. In the clinical setting, the student will observe, assist, and perform echo, TEE, stress/pharmacologic stress echos, and vascular studies under direct supervision of a clinical instructor. Written progress evaluations will be maintained weekly to monitor skill development and proficiency demonstration. Evaluation of effective and appropriate communication skills with clinical staff, patients, and physicians will be assessed. Weekly seminar discussions and written case study submitted for seminar oral presentation.

Lab Content

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Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- Lab (04)
- DE Live Online Lab (04S)
- Directed/Independent Study (40)
- Field Experience (90)
- Non-Directed Clinical (NDR)

Instructional Techniques

Direct supervision in the clinical setting Seminars/conferences/physician lectures Examples of skills proficiency Questions/discussion sessions

Reading Assignments

It is recommended that students read 5 hours per week from their textbooks.

Writing Assignments

Written case study that will be presented to the class.

Out-of-class Assignments

Clinical preceptor or allied health staff may give students a topic to investigate and report back infromation, 1-3 hours.

Demonstration of Critical Thinking

Imaging skills demonstration Problem solving in cardiac calculations exercises

Required Writing, Problem Solving, Skills Demonstration

Written case study Completed clinical experience syllabus requiring weekly written skill assessments.

Eligible Disciplines

Cardiovascular technology: Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required DeWitt, Susan King. Echocardiography from Sonographers Perspective The notebook 7, ed. Launch Printing Promotions, 2018 Rationale: - 2. Required Palma, Richard A. The Echocardiographerss Pocket Reference, ed. Arizona Heart Foundation, 2020

Other Resources

1. Clinical Workbook 2. Ultrasound imaging equipment at each clinical facility.