CVT A100: INTRODUCTION TO ELECTROCARDIOGRAPHY

Item	Value
Curriculum Committee Approval Date	10/04/2023
Top Code	121500 - Electrocardiography
Units	2 Total Units
Hours	36 Total Hours (Lecture Hours 36)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	Yes
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S)

Course Description

Electrocardiographic interpretation and testing procedures for the ECG technician. Includes anatomy and electrophysiology of the cardiac conduction system; basic cardiac arrhythmias including sinus, atrial, junctional, and ventricular arrhythmias and heartblocks. PREREQUISITE: BIOL A221; or BIOL A220 and BIOL A225. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Identify normal and abnormal cardiac rhythms, perform electrocardiograms and analyze these rhythms for diagnostic quality.

Course Objectives

- 1. Recognize and analyze ECG sinus, atrial, junctional, and ventricular rhythms.
- 2. Perform caliper measurements of the ECG components including rate and axis.
- 3. Evaluate ECG for diagnostic quality for physician interpretations by recognizing various tracing artifacts.
- 4. Apply acceptable principles of patient interaction during ECG performance.

Lecture Content

Course introduction Anatomy and conduction system Electrophysiology Normal ECG waves and protocols for rhythm strip ECG leads and artifacts 12 lead ECG calculations and measurements ECG waves Rhythm recognition and analysis of their origins ECG calculations/AXIS Caliper measurements of the ECG components including rate and axis Sinus and atrial rhythms/AXIS Sinus, atrial, junctional, ventricular or asystole Evaluation of ECG and normal ECG review monitoring leads MCL Correct ECG lead placement and patient preparation to obtain diagnostic readings for physician interpretation Computer input of patient date Sinus arrhythmias 2 Arrhythmia identification and classification for relatable diagnostic severity and treatments.

Lab Content

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Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)

Instructional Techniques

1. Lecture with use of PowerPoint, video and printed examples. 2. Interactive computer learning modules. 3. Group questions/discussion sessions. 4. Patient role playing demonstrations. 5. Measurement exercises. 6. Program graduate presentations or guest lecturer.

Reading Assignments

Students will spend approximately 2 hours per week reading from assigned course text, course handouts, and other provided materials.

Writing Assignments

Students will spend approximately 2 hours per week on written assignments, including: completion of reports which include patient information (name, age, DOB, etc.,) and vital signs and other parameters; proficiency demonstration required in ECG caliper measurement skills and ECG performance skills; proficiency demonstration required in data input skills.

Out-of-class Assignments

Students will spend approximately 3-4 hours per week on out-of-class assignments, including reading, written reports, and assigned ECG/EKG homework measurement exercises.

Demonstration of Critical Thinking

Multiple choice, fill-in the blank quizzes or exams and weekly homework assignments submitted towards total course points; ECG components measurements in lab exercise skills check; ECG performance skills competency check

Required Writing, Problem Solving, Skills Demonstration

Completion of proficiency demonstration required in ECG caliper measurement skills and ECG performance skills; proficiency demonstration required in data input skills.

Eligible Disciplines

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

Textbooks Resources

1. Required Wesley, Kieth. Huszar's ECG and 12-Lead interpretation, 6 ed. Elsevier, 2022 Rationale: -

Other Resources

1. Current internet resources and course handouts