

COURSE SYLLABUS

Course Number: DI 125

Course Title: Electrocardiography

Lecturer: Chris Nguyen, Ph.D. and Frank Porter

Course Credit: 3 units

Pre-Requisite: DI 110 or by permission of the instructor

COURSE DESCRIPTION

This course introduces Electrocardiography principles and instrumentation. Topics include Basic ECG waves, ECG Leads, Normal ECG, Abnormal ECG, ECG Interpretation. Related topics such as Patient preparation, Ethics, Safety, Quality, Accuracy, and ECG Reporting are also covered. Hands-on in ECG Lab is adequately offered.

COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this course, the students will be able to:

- Understand ECG Principles and Instrumentation
- Understand the Basic ECG waves, ECG Leads, Normal ECG and Abnormal ECG.
- Understand, Read and Interpret following items: Electrical Axis and Axis Deviation, Atrial and Ventricular Enlargement, Ventricular Conduction Disturbances, Myocardial Ischemia and Infarction, Electrolyte Abnormalities and Metabolic Factors, Pericardial, Myocardial and Pulmonary Syndromes, Wolf-Parkinson-White Pre-excitation Patterns, Sinus Rhythm, Tachycardias and Bradycardias, Supraventricular Arrhythmias, Ventricular Arrhythmias, Atrioventricular Heart Block, Cardiac Arrest and Sudden Death, Pacemakers and Implantable Cardioverter-Defibrillators.
- Take and Interpret an ECG (As quickly as possible within a certain time limit)
- Understand and apply Differential Diagnosis.
- Understand the Uses and Limitations of ECG.
- Review all the materials taught in the ECG Class to prepare themselves for Competency Testing for National Certified ECG Technician (In the past, all our students who took the Competency Testing passed it)

INSTRUCTIONAL METHODS:

Instructional methods will include Instructor lectures and educational material presentations. Classroom activities are collaborative - students may and should help each other. The Instructor will be available to help students with all tutorials, assignments, and Lab practices

45 hours of lecture and Lab

EVALUATION

1. Weekly Homework and Quizzes – Written homework assignments will be given periodically; Additionally, unannounced quizzes will be given during class time.
2. Lab practice
3. Final Examination

Grading Scale:

Class Participation	15%
Quizzes	15%
Homework	20%
Lab	20%
Final Exam	<u>30%</u>
	100%

90 -- 100	A
80 -- 89	B
70 -- 79	C
60 -- 69	D
Below 60	F

To successfully complete this course, the student must attend lectures, perform Lab, and pass quizzes, homework and final exam with a total score 70% or better.

RESOURCE MATERIALS

- Clinical Electrocardiography, Ary L. Goldberger, MD (by Mosby)
- 12-Lead EKG Confidence, Jacqueline M. Green
Anthony J. Chiaramida, MD (by Lippincott)
- ECGs Made Easy, Barbara Aehlert (by Mosby)