

ERCD 1211

Electrocardiography

Spring 2026



**LAMAR INSTITUTE
OF TECHNOLOGY**

CREDIT

SCH 2 (2 hours lecture, 1 hours lab)

MODE OF INSTRUCTION

Face to Face

PREREQUISITE/CO-REQUISITE

A&P I and A&P I Lab

COURSE DESCRIPTION

Fundamentals of cardiovascular anatomy and physiology. Includes basic electrocardiography procedures, interpretation of basic dysrhythmia, and appropriate treatment modalities.

COURSE OBJECTIVES

Describe the anatomy and physiology of the cardiovascular system; perform basic electrocardiography procedures; and interpret basic dysrhythmias.

Upon completion of this course, the student will be able to

- Describe the anatomy and physiology of the heart relevant to ECG
- Explain the conduction system and its role in cardiac function
- Demonstrate proper preparation and electrode placement for ECG
- Operate the electrocardiograph machine accurately and safely
- Identify and troubleshoot common ECG artifacts and errors
- Interpret basic ECG rhythms and waveforms
- Understand exercise and ambulatory ECG testing procedures
- Recognize the medical assistant's role in pulmonary function testing
- Adhere to safety, infection control, and patient care standards during ECG procedures.

INSTRUCTOR CONTACT INFORMATION

Instructor:

Email:

Office Phone:

Office Location:

Office Hours:

REQUIRED TEXTBOOK AND MATERIALS

- Clinical Procedures for Medical Assisting, McGraw Hill
- Access to LIT's Blackboard LMS
- ECG electrodes, simulator, and lab access

ATTENDANCE POLICY

Regular attendance and active participation are essential for success in this course. Students are expected to attend all scheduled classes and engage fully in course activities. Attendance will be recorded and may impact final grades, especially in cases of excessive absences.

Students must notify the instructor in writing by the 15th day of the semester if they will be absent for religious holy days. Absences due to illness, emergencies, or other valid reasons should be communicated promptly.

LATE ASSIGNMENT POLICY

Assignments are due on the date specified in the course calendar or as announced in class. Late submissions will be accepted up to 7 calendar days after the original due date with a 10% deduction per day. After 7 days, the assignment will receive a grade of zero unless prior arrangements have been made due to documented emergencies. No late work will be accepted during finals week.

Students are responsible for managing their time and communicating proactively with the instructor if challenges arise. Extensions may be granted at the instructor's discretion for valid, documented reasons.

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specific drop date as listed on the Academic Calendar. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

COURSE CALENDAR

Week 1 – Introduction to Electrocardiography and Medical Assisting Role
 Week 2 – Anatomy and Physiology of the Heart
 Week 3 – The Conduction System of the Heart
 Week 4 – The Electrocardiograph Machine: Components and Functions
 Week 5 – Preparing to Administer an ECG
 Week 6 – Applying Electrodes and Connecting Wires
 Week 7 – Operating the Electrocardiograph and Recording ECGs
 Week 8 – Troubleshooting Artifacts and Other Problems
 Week 9 – Completing the ECG Procedure and Documentation
 Week 10 – Interpreting the ECG: Basic Principles
 Week 11 – Exercise Electrocardiography (Stress Testing)
 Week 12 – Ambulatory Electrocardiography (Holter Monitoring)
 Week 13 – Introduction to Pulmonary Function Testing and Spirometry
 Week 14 – Review and Practical Lab Sessions
 Week 15 – Final Exam and Course Wrap-up

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

GRADE BREAKDOWN

- Quizzes & Weekly Assignments – 25%
- Lab Exercises & Case Studies – 20%
- Midterm Exam – 15%
- Final Project (ECG Simulation) – 20%
- Final Exam – 20%

GRADE SCALE

- 90-100 A
- 80-89 B
- 70-79 C
- 60-69 D
- 0-59 F

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimum-computer-requirements>. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

STUDENT CODE OF CONDUCT STATEMENT

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be

accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

These policies are designed to promote fairness, accountability, and academic success. Students are expected to read and follow all guidelines outlined in the LIT Catalog and Student Handbook.

Attendance & Participation

- Regular attendance is required and tracked.
- Students must notify the instructor by the 15th class day if they will be absent for religious holy days.
- Excessive absences may result in administrative withdrawal or impact final grades.
- Active participation in discussions, labs, and assignments is expected.

Late Assignment Policy

- Assignments are due on the date specified in the course calendar or announced in class.
- Late submissions are accepted up to 7 calendar days after the due date with a 10% deduction per day.
- After 7 days, the assignment will receive a grade of zero unless prior arrangements are made due to documented emergencies.
- No late work will be accepted during finals week.