School of Health & Human Services
Continuing Education

MEDL 408V 001
Electrocardiology
Winter 2015

Course Outline

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Course Outline

This course introduces the anatomy and physiology of the heart and electrical conduction system of the heart. It teaches the* theory, knowledge and skills necessary to conduct select tests and procedures.

Learning Outcomes

At the end of the course the student will be able to:

1. Describe the anatomy of the heart to increase understanding of the functioning of the heart
2. Identify and describe the electrical conduction system of the heart
3. Use cardiac testing procedure and technologies to assist in the assessment of heart function
4. Identify normal and abnormal heart rhythms to determine arrhythmias

Course Objective

The Electrocardiology component of the Medial Laboratory Assistant Program introduces the student to the Anatomy of the Heart and the Electrical Conduction System of the Heart. Emphasis is placed on learning correct electrocardiograph technique and recording of the electrocardiogram. An overview of basic arrhythmia recognition and analysis of the ECG is covered. Special applications, pacemaker tracings and Ambulatory monitoring are discussed.

SECTION A/B (Class 1 – 3)
A: Cardiac Anatomy:

Identify and describe function of:

- Layers of the Heart
- Chambers of the Heart
- Valves
- Great Vessels of the Heart
- Right Heart/Left Heart
- Circulation of blood through the Heart
- Coronary Arteries

Terms associated with Heart function

B: Electrical Conduction System of the Heart:

- Identification and function of the Electrical Conduction System
- Relation of the Conduction System to Heart Function
- Autonomic Nervous System
- Relation of the Conduction System to the Electrocardiogram
- Identification of the ECG Complex

Terms associated with Electrical Conduction System

SECTION C: ECG RECORDING (Class 4 – 8)

- Identify components of the ECG machine and their function
- Determine ecg recording technique
- Determine patient preparation
- Determine electrode placements
- Determine electrode placement for Right Side Leads
- Determine electrode placement for Posterior Leads, 7,8,9
- Determine electrode placement for 15 lead ECG
- Determine Lead theory
- Recognize artifact and correction
- Determine measurement values of ecg complex
- Determine measurement values and their relation to cardiac conduction

Terms associated with ECG Recording

SECTION D: IDENTIFICATION OF ARRYTHMIAS (Class 9 – 15)

- Identify Normal ECG tracing
- Identify Common Sinus Arrhythmias
- Identify Common Atrial Arrhythmias
- Identify Common Ventricular Arrhythmias
- Identify ST Elevation; ST Depression, Myocardial Infarction
- Identify pacemaker tracing
- Have Knowledge of 24 hour Ambulatory Monitoring and 24 hour Blood pressure monitoring

Abbreviations of common Arrhythmias

ECG PRACTICAL SKILLS: Saturday Labs

The Student will gain experience in:

- Electrode placement on the patient
- Operation of the electrocardiograph machine
- ECG Recording and labeling
- Identification and correction of Artifacts
- Application of Blood Pressure Monitor

The student will be evaluated on:

- ECG electrode placement
- Recording technique
- Lead theory

Evaluation of Learning

Cardiac Anatomy & Electrical Conduction System Exam	25%	February 17
ECG Recording Exam	25%	March 3
Arrhythmia ID. Exam	25%	March 19
ECG Practical Skills Evaluation	25%	March 14

Passing Grade

The passing grade for this course is 65 % (C+).

Grading System

Percentage	Grade	Description
90-100	A+	
85-89	A	
80-84	A-	
77-79	B+	
73-76	B	
70-72	B-	
65-69	**C+**	***Minimum grade to successfully complete Med Lab Assistant theory courses.***
60-64	C	
50-59	D	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.
0-49	F	Minimum level has not been achieved.

Important Notes

- Please arrive on time. The instructor will begin class on time.
- This course emphasizes experiential learning. Students are expected to attend all classes and to participate in class discussions and activities. Consistent attendance and participation is critical for success.
- The college provides many services to students; please contact the Registration department at either campus. Please note that not all services may apply to Continuing Education (CE) students. CE students are not contributing members of Camosun College Student Society (CCSS) and therefore do not pay CCSS fees or receive member benefits with their Photo ID.
- Please complete and submit the written assignment on the designated date at the beginning of the class. Marks will be deducted at 15% per day for a late assignment.
- It is your responsibility to obtain course material if absent from class.
- Please have pagers and cell phones on "mute" and leave room to return emergency phone calls.
- Please tidy up your area before you leave.
- All Camosun policies are available in PDF format at http://camosun.ca/about/policies/ or in the current print credit calendar. Please refer to the section Academic Policies & Procedures for information on Student Conduct, Student Appeals, Standards of Academic Progress and more. Please note that not all policies apply to Continuing Education (CE) students. Please refer to the *Student Guide for Continuing Education* or the Medical Lab program http://camosun.ca/learn/programs/medical-laboratory-assistant/ for more information.