

## Polaris Career Center Course Syllabus

### Cardiographic Technician Adult

#### Course Information

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		Room:	211
		Meeting Time:	Monday and Wednesday, 6:00 pm -10:00 p.m.
		Availability:	Please call or e-mail to make specific arrangements

#### Course Description

A Cardiographic Technician's primary duty is to perform electrocardiograms on patients. An electrocardiogram (EKG) measures the electrical activity of the heart and can be used to diagnose a range of heart diseases. The Certified Cardiographic Technician Program is designed to prepare the student to enter the exciting field of Cardiographic Technology as an EKG technician, cardiac monitor technician or cardiac stress technician. The course includes 130 hours of instructional theory and lab time, and a 100-hour unpaid externship in an area hospital or independent testing facility, which runs concurrently with the program. Students gain knowledge of anatomy and physiology of the heart and cardiac conductive system, basic and advanced arrhythmia interpretation, and 12-lead EKG performance and EKG interpretation. In addition, students learn how to perform vital signs, and Basic Cardiac Life Support (BCLS) certification. The use of a Holter monitor application and scanning is also covered. No previous medical experience is required. A course in Medical Terminology is required as a pre-requisite to acceptance into the program.

#### Major Course Goals

The major goals of the Adult Cardiographic Technician program/course will ask students to:

1. To become proficient at obtaining vital signs.
2. To learn to apply and scan Holter monitors.
3. To become proficient at performing electrocardiograms
4. To become proficient at interpreting basic and advanced cardiac arrhythmias.
5. To attain certification as a Certified Cardiographic Technician (CCT) by Cardiovascular Credential International.
6. To attain CPR certification (BCLS).
7. To gain real-world experience at a cardiology setting through the 100 hour externship.

## **Instructional Philosophy**

Each night typically contains both lab and instructional theory time. Lab time is from 6:00 -7:30 p.m. Lab activities can vary but most labs consist of training on the use of EKG, stress monitors, or the Holter monitor. During the EKG lab, students will rotate lab partners to work while learning how to perform EKGs. The goal is to obtain an EKG on each student by the end of the program. In addition, students will obtain exercise blood pressures on fellow students. Students will also rotate partners in the stress lab. During the Holter lab, students will be assigned a lab partner for Holter application. Holter scanning is done as a group in the computer lab.

Classroom instructional theory typically runs from 7:45 p.m.-9:00 p.m. both evenings. After the lecture, students break off into small groups to work on EKG interpretation. Homework is assigned each class session. Students are encouraged to ask for assistance from the instructor while they work on their homework from 9:30 -10:00 p.m. in the classroom.

## **Course Units of Study**

The major units of study include:

- Medical Ethics
- Infection Control/Blood-borne Pathogens/OSHA
- Effective Communication
- Cardiac Anatomy and Physiology
- Electrophysiology of the Heart
- Sinus Rhythms
- Atrial Rhythms
- Junctional Rhythms
- Ventricular Rhythms
- Pacemaker Rhythms
- Atrioventricular Blocks
- 12-lead EKG Axis Determination
- Bundle Branch Blocks
- Cardiac Medications
- Chamber Enlargement
- Stress Testing
- Ischemia, Injury and Infarctions
- Holter Monitoring
- Miscellaneous EKG Abnormalities

## **Primary Curriculum Materials**

EKG Made Easy: ISBN 978-0323069243

Rapid Interpretation of ECG: ISBN 978-0912912066

## **Business and Industry Credentials, Certifications, and/or Licenses**

Basic Cardiac Life Support certification by American Heart Association  
Certified Cardiographic Technician certification by Cardiac Credentialing International

## **Course Projects and Special Activities**

Course Projects and Special Activities include:

- Anatomy: Model of human heart using Playdohs
- EKG Lab: Perform 12-lead EKGs on peers
- Stress Lab: Utilize treadmills in the exercise room to simulate Bruce stress protocol, and practice taking exercise blood pressures
- Vital signs: Practice taking blood pressures, pulse and respiration
- Holter Lab: Each student will wear and apply a Braemar 900 24-hour Holter monitor. Computer review and analysis of the Holter reports.

## **Course Policies**

### **Code of Conduct:**

The published Code of Conduct for Polaris Career Center found in the Student Handbook will be enforced at all times. Students should refer to the Handbook for discussions of due process and safety violations. Polaris is a nonsmoking facility and smoking is not permitted anywhere on the premises. Additionally, all externship sites are also nonsmoking facilities. Failure to comply may result in expulsion from the sites. Criminal background checks are given prior to the start of student externships (provided by Polaris Career Center). Clear criminal background checks may be required for acceptance to an externship site. In addition, Cardiovascular Credentialing International has the right to deny an application for CCT Certification, revoke eligibility of a candidate, or take action against any registrant who is convicted, plead guilty, or leads no contest to an offense which is classified as a misdemeanor or felony which is directly or indirectly related to public health. These crimes may include but are not limited to sexual assault, driving while intoxicated or impaired, and controlled substance abuse.

### **Dress and Grooming Guidelines:**

Students should wear appropriate scrubs and white tennis shoes in the classroom and lab. In addition, female students are required to wear a bathing suit top to lab underneath their scrubs. Students are also required to cover visible tattoos and piercings (other than ear piercings).

### **ID:**

None required.

### **Attendance/Tardiness:**

90% attendance required to receive a program certificate of completion. Students will have points deducted for tardiness (more than 15 minutes late). Participation is required in all classroom activities.

### **Make-up Work:**

Students who have excused absences may make up the work they missed and receive 50% credit. It is the student's responsibility to check with each teacher the day the student returns from an absence to arrange specific dates for completing the work and for taking tests, if any tests have been missed. Assignments that were due and tests that were scheduled on the day of the absence will be due on the day the student returns. The student will be allowed one day for each day of an excused absence to make up the assigned work.

### **Computer Usage:**

Students receive an access code and password for use in the computer lab. Students may access approved Holter monitor scans only in the computer lab and are not permitted Internet access. The use of technology is a privilege, not a right. Any student who violates the policy may lose their access to these items. Polaris Career Center reserves the right to monitor computer and Internet access.

**Infinite Campus:**

Students will be given an access code to access their grades through Engrade. Students may check their grades at any time using [www.engage.com](http://www.engage.com).

**Syllabus Changes:**

The instructor/Polaris Career Center Administration reserves the right to make changes to this syllabus throughout the year.

**Course Assessment Plan**

Grading scale based on the following:

Tests and Quizzes	40%
Class Participation	10%
Homework/Quizzes	10%
Lab	15%
Externship	25%

**Grades for the course will be based on the following levels of performance:**

<b>Grade</b>	<b>Description</b>
<b>A</b> (90-100%)	Work is correct with only minor flaws (not having to do with the main idea of the problem). The concepts presented in class were understood and were appropriately applied to real-world examples. All assignments were completed on-time and were of a work quality.
<b>B</b> (80-89%)	Work was done with a few flaws. The concepts presented in class were applied with help. Almost all tasks and assignments were completed on-time and demonstrated with sufficient skills
<b>C</b> (70-79%)	Some difficulty was had understanding class concepts or applying concepts to real-world situations. Some assignments were late.
<b>D</b> (60-69%)	Only some of the work was completed for class. Work completed was frequently late or was of low quality with errors and omissions.
<b>F</b> (0-59%)	Did not complete a significant amount of work for the class. Work had major errors and did not meet standards.