College of DuPage

Non-Invasive Electrocardiography Certificate Program

The Non-Invasive Electrocardiography program provides the student with didactic, laboratory and clinical experience in preparation for a health career as a Certified Non-Invasive Electrocardiographic Technician.

Note: Please see specific program registration or admission packets for detailed information on when to begin completing health requirements, drug tests, CPR, criminal background checks and proof of insurance submission. Timing varies depending upon either entrance to or participation in the clinical component of a given program. Funds paid to Edward Corporate Health or to a personal health care provider/ source, CastleBranch.com, insurance companies, and funds used towards CPR completion are not eligible for any sort of refund from College of DuPage if the required course(s) are not successfully completed.

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Electrocardiography (EKG) is a procedure that records the electrical activity of the heart muscle via electrodes placed on the chest and displays it as a visual record or tracing. This tracing provides valuable information about the electrical activity in the heart as it relates to both the conduction system of the heart and the normal or abnormal formation of electrical impulses. EKG is a highly specialized and technical tool used for assessing cardiac function and diagnosing cardiac disease. Non-invasive EKG procedures do not involve incisions or entry into the thoracic (chest) cavity.

EKG technicians work directly with patients. They have the responsibility of placing leads on the patient and recording the electrical activity of the heart with a 12-lead EKG machine, performing stress testing, and holter monitor testing of patients. The EKG program now includes a module in telemetry in both the didactic and the clinical component. Telemetry is a highly automated communications process by which measurements are made and data collected at remote or inaccessible points and then the data is transmitted to receiving equipment. Telemetry is used for patients who are at risk of abnormal heart activity, generally in a coronary care unit. Such patients are outfitted with measuring, recording and transmitting devices. Telemetry technicians are responsible for monitoring patients on these devises. Numerous telemetry positions are available in many hospitals.

The EKG technician must set high standards for themselves and be deeply committed to the delivery of quality health care. The cardiologist depends on the EKG technician to collect quality tracings that allow the physician to make accurate diagnoses and deliver exceptional patient care. To do this, the EKG technician must understand the importance of correct lead placement and monitoring of the patient while performing EKGs in a skillful, safe and reliable manner. The ability of the EKG technician to recognize normal and abnormal tracings as well as identify artifacts on a tracing is critical to the accuracy of the test results.

EKG technicians must like challenge and responsibility. They must be accurate, work well under pressure and communicate effectively as they are a vital member of the health care team. Because the EKG technician works directly with the patient, he or she must also act as the “eyes and ears” of the doctors, nurses and office professionals. The EKG technician must relay any important information during interaction with patients to the cardiologist and must be able to handle emergency situations, if necessary.

In 2012, the average EKG technician earned $15 to $16 per hour. Employment is expected to grow by 29 percent from 2010 to 2020, much faster than average for all occupations. As imaging technology evolves, medical facilities will use it to replace more invasive, costly procedures. As the number of elderly people increases, so too will their need for cardiac care.

**Mission Statement**

The goal of the Non-Invasive Electrocardiography program is to provide students with didactic, laboratory and clinical experiences in preparation for a health career as a Certified Non-Invasive Electrocardiographic Technician. Upon completion, the student will deliver compassionate patient care to all patients and will function as an integral member of the health care team with competence and confidence.

**Program Information Disclaimer**

This program information packet is published for that purpose; however, the information in this packet is not to be regarded as an irrevocable contract between the student and the program. The program reserves the right to change, at any time, without notice, requirements, fees and other charges, curriculum, course structure and content, and other such matters as may be within its control, notwithstanding any information set forth in the program information packet in accordance with College of DuPage policies and procedures.
**Standard Skills in EKG**

To participate in the clinical education portion of the Non-Invasive Electrocardiography program, the student must possess additional non-academic skills. These technical standards are consistent with the duties of the entry-level technician in a professional position. These skills, which protect the health and well-being of patients, may include but are not limited to the ability to:

- Move, adjust equipment and perform EKG procedures
- Position patients for procedures
- Respond appropriately to sounds such as the patient’s voice and movements at a normal conversational volume
- Demonstrate visual acuity to assess the equipment
- Manipulate appropriate equipment
- Perform for a prolonged period without breaks in a typical shift of eight hours
- Communicate orally and in writing in the English language with patients, doctors and other personnel clearly and effectively
- Follow verbal and written directions in the English language
- Respond appropriately to emergency procedures

If you are uncertain of your ability to perform these essential functions or feel you need reasonable accommodations to perform them, please consult with Special Student Services.

**Non-Discrimination Policy**

The College prohibits discrimination in its admissions, employment, and educational programs or activities on the basis of race, color, sex, religion, creed, national origin, age, ancestry, marital status, sexual orientation, gender identity and expression, arrest record, military status or unfavorable military discharge, citizenship status, and physical or mental disability. The College will protect an individual’s right to express their viewpoint or opinion, so long as it does not violate State or Federal law and is not detrimental to the College.

This Policy against discrimination applies throughout all College environments, whether on campus, at work assignments off campus, at College-sponsored social functions, or otherwise.

Procedures to facilitate the College’s prohibition of discrimination will be promulgated consistent with the Policy. (Board Policy 20-5).

**Citizenship/Visa Status**

If you are not a U.S. citizen or a permanent resident of the U.S., and if you have any questions or concerns regarding your eligibility to participate in health sciences programs, please contact the [International Student Office](mailto:intistdt@cod.edu), SSC 2225, (630) 942-3328, e-mail: intistdt@cod.edu.
**College Admission**

In order to register for courses students must submit a [College of DuPage Admission Form online](#) or in person in the College of DuPage Admissions & Outreach office, SSC 2207 and pay the non-refundable $20 application fee. This is an admission form for the College of DuPage only. Students will receive a My Access ID number after completion of admission paperwork. The ID number is used to register for courses.

**Academic Prerequisites**

1. Completion of or concurrent enrollment in Health Science 1110, Biomedical Terminology, with a grade of “C” or higher.
2. To register for HLTHS 1110 and 1126 concurrently students must register in person

The above material must be on file prior to registration.

**Course Requirements**

The courses in this program can register only a limited number of students. The number of students registered in the EKG courses is determined by the current availability of clinical sites. Currently we offer sections in all terms, including summer. Students will be assigned a clinical site that offers adequate supervision/mentoring with an appropriate learning environment.

The Non-Invasive Electrocardiography Certificate program is an intensive curriculum, with classes in Basic EKG the first semester and Advanced EKG the second semester. The EKG clinical experience is offered after completion of both the basic and advanced EKG courses and is designed to meet the needs of the students and the clinical affiliation. Clinical placement is the decision of the program coordinator.

**Prerequisite**

| Health Science 1110  Biomedical Terminology | 3 credit hours |

**1st Semester**

| Health Science 1126  Basic EKG | 2 credit hours |

**2nd Semester**

| Health Science 1128  Advanced EKG | 3 credit hours |

**Students must receive a “C” or higher in Health Science 1110, Health Science 1126 and Health Science 1128 to continue with the clinical component.**

**3rd Semester**

| Health Science 1129  EKG Clinical | 1 credit hour |

**Total credits for certificate**

10 credit hours

Upon successful completion of all program requirements students are eligible to sit for the Certified Cardiographic Exam through by [Cardiovascular Credentialing International (CCI)](#). Upon passing this exam, the student becomes a Certified Cardiographic Technician (CCT). For more information about CCI or the CCT exam visit the [Cardiovascular Credentialing International (CCI)](#) website. Students can also petition to receive a certificate from the college upon completion of the required courses.
Clinical Requirements must be completed before registering for HLTHS 1129

1. Medical Malpractice Insurance is required and is included in the tuition of HLTHS 1129.
   a. Students must be registered and listed on the instructor’s course roster to be covered by this malpractice insurance.

2. Prior to starting clinicals, all students will need to complete health requirements, a drug screen, background check, and complete the medical document manager requirement. You will be informed by the Program Coordinator when you will need to complete your health requirements. Please do not complete these requirements until you are instructed to do so. The Health Requirements packet is available on the Health Sciences Admissions and the program webpages. Some clinical affiliates require further testing, which is the responsibility of the student.

   Students with chronic medical conditions and physical limitations are required to submit documentation of current health status relating to their specific condition. The statement should include the physician’s assessment as to the student’s ability to meet the program objectives and standard skills in sonography, and the current medications the student is required to take for health maintenance.

3. CPR Certification is required before registering for HLTHS 1129

4. Criminal Background Checks are required before beginning a clinical assignment. If a student is found guilty of a felony, clinical facilities may not allow a clinical assignment.

5. Students are responsible for their own medical care and health insurance.

6. Transportation: Students are responsible for providing their own transportation to and from the clinical site.

Clinical Sites available (subject to change)
- Alexian Brothers Medical Center, Elk Grove Village
- Central DuPage Hospital (CDH), Winfield
- Delnor Community Hospital, Geneva
- DuPage Medical Group, Downers Grove
- Edward Hospital, Naperville
- Elmhurst Hospital, Elmhurst
- Glen Oaks Hospital, Glendale Heights
- Good Samaritan Hospital, Downers Grove
- Hinsdale Hospital, Hinsdale
- Provena Mercy Medical Center, Aurora
- Provena St. Joseph, Joliet
- Rush Copley Hospital, Aurora
- St. Alexius Medical Center, Hoffman Estates

Non-Invasive Electrocardiography Advising Sessions are available on an individual basis. For more information, contact Nancy Feulner M.S. Ed., MT (ASCP), (630) 942-2124, Feulner@cod.edu