

# Electrocardiograph Technician 3

Describe the cardiovascular system. - The student will be able to: 1.0

- 1 Locate the heart and surrounding structures. 1.1
- 2 Diagram and label the parts of the heart and list the functions of each labeled part. 1.2
- 3 Trace the flow of blood through the cardiopulmonary system. 1.3
- 4 Identify and describe the electrical conduction system. 1.4
- 5 Describe the function of the autonomic nervous system. 1.5
- 6 Describe signs and symptoms of a patient demonstrating poor perfusion or low cardiac output and state the importance of rapid reporting. 1.6

Identify legal and ethical responsibilities of an EKG technician. -- The student will be able to: 2.0

- 1 Recognize and practice legal and ethical responsibilities as they relate to an EKG aide. 2.1
- 2 Maintain a safe and efficient work environment. 2.2
- 3 Maintain EKG equipment so it will be safe and accurate. 2.3
- 4 Implement appropriate Joint Commission patient safety goals and adhere to HIPAA regulations regarding Protected Health Information (PHI). 2.4

Demonstrate knowledge of, apply and use medical instrumentation modalities. -- The student will be able to: 3.0

- 1 Calibrate and maintain EKG equipment in the work environment. 3.1
- 2 Identify three types of lead systems standard/limb, augmented, and precordial/chest). 3.2
- 3 State Einthoven's triangle. 3.3
- 4 Demonstrate proper lead placement including lead placement with special considerations for various patients with special needs to include pediatric, amputee, and posterior and right sided EKGs. 3.4
- 5 Identify artifacts and mechanical problems. 3.5
- 6 Perform a 3, 5, and 12 lead EKG. 3.6

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- 7 Recognize normal sinus rhythm.** 3.7

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  - 8 Report dysrhythmias that are not normal sinus rhythm.** 3.8

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  - 9 Recognize signs and symptoms of cardiopulmonary compromise on the EKG tracing and understand the importance of rapid reporting.** 3.9

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  - 10 Verify accuracy of lead placement on the EKG.** 3.10

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  - 11 Verify setting on the EKG machine such as paper speed, sensitivity (gain), and Hertz (Hz) prior to use.** 3.11
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**Perform patient care techniques in the health care facility. -- The student will be able to:** 4.0

- 1 Describe the physical and mental preparation of the patient for EKG testing.** 4.1

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  - 2 Identify patient and verify the requisition order.** 4.2

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  - 3 Prepare patient for cardiovascular diagnostic testing.** 4.3

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  - 4 Obtain patient's vitals (temperature, pulse, respirations, blood pressure, and pulse oximetry) in preparation for cardiovascular diagnostic testing and report abnormalities.** 4.4

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  - 5 State precautions required when performing cardiovascular diagnostic procedures.** 4.5

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  - 6 Convey the importance of maintaining a safe patient environment and evaluate potential hazards in the work environment.** 4.6
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**Recognize normal and abnormal monitoring and testing results. -- The student will be able to:** 5.0

- 1 Inspect and measure the various waveforms of a cardiac cycle including, segments, complexes, heart rates and intervals.** 5.1

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- 2 Identify electrical axis.** 5.2

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- 3 Recognize pacemaker spikes on the EKG and state the purpose of pacemakers.** 5.3

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- 4 Recognize normal and deviations from normal sinus rhythms.** 5.4

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- 5 Recognize all atrial rhythms.** 5.5

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- 6 Recognize all junctional rhythms.** 5.6

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- 7 Recognize all ventricular rhythms.** 5.7

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- 8 Recognize all types of heart blocks.** 5.8

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- 9 Recognize normal and deviations from single chamber and dual chamber pacemakers as well as all implantable cardioverter defibrillators.** 5.9

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- 10 Identify myocardial ischemia, injury, and infarction on EKG tracing.** 5.10

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**11 Recognize atrial and ventricular hypertrophies.** 5.11

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**12 Recognize ectopic beats and any rare phenomena.** 5.12

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**13 Recognize normal and deviations from normal 12 lead EKG results.** 5.13

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**14 Describe potential patient responses to all dysrhythmias and other EKG abnormalities.** 5.14

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**15 Recognize and respond promptly to life threatening dysrhythmias during continuous monitoring such as telemetry.** 5.15

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**Describe cardiovascular drugs, their actions, use and adverse effects. --**

**The student will be able to:** 6.0

**1 Describe the mechanisms by which common cardiovascular drugs work including actions and adverse effects.** 6.1

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**2 Differentiate between normal and abnormal EKG changes potentially due to drugs.** 6.2

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**Demonstrate knowledge of other cardiovascular diagnostic modalities. --**

**The student will be able to:** 7.0

**1 Demonstrate knowledge of the application of a Holter Monitor and provide patient education of its use.** 7.1

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**2 Demonstrate the procedures for preparing the patient for stress testing/scanning exercise treatment and provide patient education.** 7.2

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**3 Understand and demonstrate patient documentation for all types of monitoring.** 7.3

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**4 Describe other modalities of cardiovascular diagnosis and interpretation.** 7.4

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**5 Maintain patient cardiac alarm policy at all times as per acceptable facility guideline.** 7.5

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