# EKG Technician Course No. 36991 Credit: 0.5

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| --- | --- | --- | --- |
| **Student name:**  |  | **Graduation Date:** |  |

Pathways and CIP Codes: **Health Science**

Course Description: **Application Level:** A program that prepares students to perform and interpret EKGs in the health care setting. Students acquire knowledge, skills, and experiences related to setting up and administering EKGs and stress tests, preparing patients for Holter or ambulatory monitoring, editing and delivering final test results for analysis by physicians, and more.

Directions:The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

**RATING SCALE:**

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.

3. Proficient Achievement:Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.

2. Limited Achievement:Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.

1. Inadequate Achievement:Student lacks knowledge, skills or professional attitude.

0. No Instruction/Training:Student has not received instruction or training in this area.

## Benchmark 1: Safety, Compliance, and Coordinated Patient Care

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Adhere to HIPAA regulations. |  |
| 1.2 | Adhere to infection control practices (e.g., OSHA, universal precautions). |  |
| 1.3 | Adhere to scope of practice and comply with ethical standard. |  |
| 1.4 | Communicate appropriately with patients and members of the multidisciplinary health care team. |  |
| 1.5 | Obtain and interpret patient vital signs. |  |
| 1.6 | Instruct patients about preparation for and expectations during stress testing. |  |
| 1.7 | Instruct patients on use of ambulatory monitoring (e.g., Holter, event), and verify their understanding. |  |
| 1.8 | Utilize electronic medical records/electronic health records (EMR/EHR) to input patient information (e.g., patient history, medications, vitals, completed EKG). |  |
| 1.9 | Recognize signs and symptoms of cardiopulmonary compromise. |  |

## Benchmark 2: EKG Acquisition

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 2.1 | Maintain EKG equipment (e.g., load paper, replace clips, disinfect machines and leads). |  |
| 2.2 | Verify EKG machine settings (speed, gain). |  |
| 2.3 | Prepare skin for electrode placement. |  |
| 2.4 | Position patient for cardiac testing (e.g., 3-, 5-, 12-lead, stress test, telemetry). |  |
| 2.5 | Apply electrodes and attach leads for:  |  |
|  | * Standard 12-lead EKG
 |  |
|  | * Ambulatory (e.g., Holter, event) monitoring
 |  |
|  | * Stress testing
 |  |
|  | * Telemetry
 |  |
|  | * Patients who have special considerations (e.g., right-sided heart, posterior chest, amputations, pediatric)
 |  |
| 2.6 | Verify that all leads were recorded. |  |
| 2.7 | Identify and resolve artifacts from the tracing (e.g., wandering baseline, somatic, electrical). |  |
| 2.8 | Mount a completed EKG tracing strip for patient's chart. |  |
| 2.9 | Assist in monitoring patient condition during stress testing. |  |
| 2.10 | Provide support in responding to complications during stress testing. |  |

## Benchmark 3: EKG Analysis and Interpretation

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 3.1 | Calculate patient's heart rate from the EKG tracing. |  |
| 3.2 | Determine the regularity of the patient's heart rhythm from the EKG tracing. |  |
| 3.3 | Measure EKG intervals and waveforms (e.g., PR interval [PRI], QRS duration, QT interval). |  |
| 3.4 | Inspect the waveform characteristics (P waves, QRS complexes, ST segments, T waves) for symmetry, direction, and amplitude. |  |
| 3.5 | Identify arrhythmias (sinus, atrial, ventricular, junctional, heart blocks) from the EKG tracing. |  |
| 3.6 | Recognize pacemaker spikes on an EKG tracing. |  |
| 3.7 | Identify ischemia, injury, and infarction on the EKG tracing. |  |
| 3.8 | Take appropriate action when life-threatening arrhythmias are identified. |  |

I certify that the student has received training in the areas indicated.

Instructor Signature:

For more information, contact:

CTE Pathways Help Desk

(785) 296-4908

pathwayshelpdesk@ksde.org



900 S.W. Jackson Street, Suite 102

Topeka, Kansas 66612-1212

[https://www.ksde.org](https://www.ksde.org/)

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