# Robotics II Course No. 39009 Credit: 0.5

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

Pathways and CIP Codes**:Automation Engineering Pathway (15.0406)**

Course Description: This course examines types, applications and troubleshooting of industrial robots and subsystems. Topics include robot fundamentals, robot classifications, power sources, robot applications in the workplace, robot control techniques, path control, end of arm tooling, robot operations, robot controllers, robotic language programming and human interface issues.

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.

****Prerequisite:** 21009 – Robotics I**

## Benchmark 1: Application and Troubleshooting Skills

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Apply proper techniques and practices in the assembly, repair, installation, and integration of robotic equipment |  |
| 1.2 | Program and operate robotic equipment |  |
| 1.3 | Apply problem solving and critical thinking skills to troubleshoot robotic equipment |  |
| 1.4 | Demonstrate the ability to apply proper techniques and practices in identification, assembly, and interfacing of IoT components. |  |
| 1.5 | Demonstrate basic robotic programming skills. |  |
| 1.6 | Demonstrate basic and advanced programming skills for basic robotic equipment |  |
| 1.7 | Demonstrate problem solving and critical thinking skills to troubleshoot robotic equipment |  |
| 1.8 | Demonstrate the ability to program and manage Programmable Logic Controls for robotic manufacturing processes and advanced work cell integration |  |
| 1.9 | Demonstrate maintenance and support techniques for robotics equipment |  |

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/)

The Kansas State Department of Education does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities and provides equal access to any group officially affiliated with the Boy Scouts of America and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: KSDE General Counsel, Office of General Counsel, KSDE, Landon State Office Building, 900 S.W. Jackson, Suite 102, Topeka, KS 66612, (785) 296-3201.