

2025 - 2026

Certificate of Achievement in Industrial Robotics Technician

Complete the following program of study (Major C.8393.CA). Major requirements (17 units minimum).

The Industrial Robotics Technician Certificate of Achievement prepares students for entry-level roles as industrial automation technicians with a focus on robotics. This program offers comprehensive training in designing, operating, and maintaining robotic systems used in industries such as manufacturing, food production, and logistics. Students will gain a foundation in robotics, including safety procedures, effective robot operation, program creation and management, and troubleshooting. The curriculum also covers interfacing robots with PLCs and Ethernet networks for system integration. The program emphasizes hands-on learning through project-based assignments and laboratory work, enabling students to apply their knowledge in practical settings.

Name: _____ Student ID: _____ Date: _____

Course Overview and Selection

Required Core Course (17 units):

Course	Course Description	Units	Completed	In Progress	Planned
ARM 3	Electricity and Electronics (AC & DC)	4			
ARM 5	Programmable Logic Controllers (PLCs)	3			
ARM 35	Industrial Communications Networks	3			
ARM 45	Industrial Automation Systems	3			
ARM 51	Introduction to Industrial Robotics	2			
ARM 52	Industrial Robotics Systems	2			

Program Learning Outcomes:

Upon completion of this program, students will be able to:

1. Apply Fundamental Robotics Concepts: Define and describe essential robotics concepts, components, and advantages, emphasizing their impact on industrial efficiency and productivity.
2. Ensure Safety and Proper Operation in Robotics: Implement safety procedures and operate industrial robots using teach pendants, ensuring both safe practices and effective robot handling.
3. Develop and Manage Robot Programs: Create, manage, and troubleshoot robot programs, demonstrating proficiency in interpreting commands and maintaining operational reliability.
4. Interface and Integrate Robotics with Other Systems: Connect robots with PLCs and Ethernet networks and develop programs for specific tasks to ensure seamless functionality and communication within industrial systems.
5. Utilize Industrial Robotics Programming and Integration Techniques: Apply Industrial programming techniques and integrate robotic workcells, focusing on optimizing efficiency, safety, and performance in specialized applications.