ROBOTICS AND AUTOMATION ENGINEERING TECHNOLOGY

Overview

Robotics and Automation Engineering Technology Associate of Applied Science Degree

Program Code:10-664-5

For more information: wctc.edu/robotics (https://www.wctc.edu/WCTC/Academics/Program-List/Automation-Systems-Technology-Robotics/)

Automated systems have become standard in many industries to provide reliable ways to program and control machine movements. In this program, learn about robotics and programmable logic controllers, discover how automation principles apply to business/industry, and develop skills to work with complex computers and machinery in automated production lines.

The minimum required course grades and program grade point average (GPA) for students under this catalog are:

Core Courses = C
General Studies Courses = C-
Program GPA = 2.0

Related Certificates you can earn along the way.

- Automation - Industrial PLCs (https://catalog.wctc.edu/programs/automation-industrial-plcs/)
- Automation - Control and Interface (https://catalog.wctc.edu/programs/automation-control-and-interface/)

Learning Outcomes

Program Outcomes

1. Perform work safely.
2. Troubleshoot electrical and mechanical systems and devices.
3. Communicate technical information.
4. Integrate automation and mechanical control systems.
5. Assemble automated equipment.
6. Program automated equipment.

Critical Life Skills

To help our students prepare for success in a workplace and society that is **increasingly global, multi-cultural, and collaborative,** all students are given opportunities to develop and demonstrate Critical Life Skills, both in and out of the classroom. The following Critical Life Skills are learning outcomes for WCTC students.

Communication: Demonstrate appropriate communication.

Critical Thinking/Problem Solving: Demonstrate critical thinking skills to analyze situations and solve problems.

Relationships: Demonstrate effective interpersonal skills.

Self-management: Demonstrate responsible and respectful behavior.

Required Courses

Listed below are the required courses for the program. To view the recommended sequence for taking courses click on the plan of study tab(s) above. Work with your Academic Advisor to design a program plan!

View your **Program Matrix** to find out when each course will be offered (term and time of day).

Code	Title	Credits
Core Courses		
414-186	Industrial Electricity	2
462-151	Mechanical Power Trans 1	3
Approved Substitutes: 462-100 OR 462-350		
605-129	Elect Pwr Ctrl & Motors	3
605-138	SS Devices for Automation	2
605-139	Human Machine Interfaces	3
605-188	PLC 1	2
605-189	PLC 2	2
605-191	PLC 3	2
605-193	PLC - Siemens Controllers	2
605-196	Drives and Intro to Servos	2
605-197	Sensors and Process Control	2
606-153	Internship - Applied Tech	1
612-310	Industrial Hydraulic Systems	2
Approved Substitute: 612-104 OR 612-110		
612-315	Industrial Pneumatic Systems	2
Approved Substitute: 612-115		
664-160	Robotics and Servo Control	3
664-161	Automation Systems	3
664-162	Robotics Applications	3
664-165	Fabrication-Automation Systems	2
890-108	Employment Success	1
General Studies		
801-136	English Composition 1	3
Approved Substitute: 801-223		
801-196	Oral/Interpersonal Comm	3
Approved Substitute: 801-198		
804-107	College Mathematics	3
Approved Substitutes: 804-115 OR 804-116 OR 804-118 OR 804-195 OR 804-198 OR (804-304 AND 804-305)		
806-139	Survey of Physics	3
Approved Substitutes: 806-143 OR 806-187		
809-195	Economics	3
Approved Substitutes: 809-143 OR 809-287		
809-199	Psychology of Human Relations	3
Approved Substitute: 809-198		
Total Credits		**60**

Full-time Plan

First Year		
Fall Term 1		**Credits**
414-186	Industrial Electricity	2
605-188	PLC 1	2

804-107	College Mathematics	3
	Credits	**7**
Fall Term 2		
605-129	Elect Pwr Ctrl & Motors	3
605-189	PLC 2	2
801-136	English Composition 1	3
	Credits	**8**
Winter Interim		
890-108	Employment Success	1
	Credits	**1**
Spring Term 1		
605-139	Human Machine Interfaces	3
605-191	PLC 3	2
806-139	Survey of Physics	3
	Credits	**8**
Spring Term 2		
605-138	SS Devices for Automation	2
605-193	PLC - Siemens Controllers	2
612-310	Industrial Hydraulic Systems	2
	Credits	**6**
Second Year		
Summer Term		
606-153	Internship - Applied Tech	1
801-196	Oral/Interpersonal Comm	3
	Credits	**4**
Fall Term 1		
605-197	Sensors and Process Control	2
462-151	Mechanical Power Trans 1	3
664-165	Fabrication-Automation Systems	2
	Credits	**7**
Fall Term 2		
605-196	Drives and Intro to Servos	2
664-160	Robotics and Servo Control	3
	Credits	**5**
Spring Term 1		
664-161	Automation Systems This course will run 16 weeks.	3
664-162	Robotics Applications	3
809-195	Economics	3
	Credits	**9**
Spring Term 2		
612-315	Industrial Pneumatic Systems	2
809-199	Psychology of Human Relations	3
	Credits	**5**
	Total Credits	**60**