Robotics, AAS
School of Technology

Program Description

A Robotics AAS graduate will function as a skilled technician who can work with modules and components in a complex automated system. This would include analysis of these systems as a whole. The program is designed to provide students with the knowledge they need to assist manufacturing, mechanical and electrical engineers in all phases of design, development, production, testing and operations. Graduates will have the knowledge and skills required to manage, investigate, repair and troubleshoot automated systems with the aim of operational efficiency. Robotics graduates would usually carry out their work at production facilities, workshops, or service sites.

Career Opportunities

Advanced manufacturing and robotics is a blend of mechanical, electrical, electronics, and computerized technologies that together form complex automated systems. The need for skilled individuals to support these systems is ongoing. Graduates of the Robotics AAS may accept positions such as industrial technician, process specialist, and automation technician.

Program Learning Outcomes

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

- Describe what an advanced manufacturing and robotics system is and the inter-relationships of components and modules within a system.
- Explain the role of mechanical components and electrical devices in automated systems, modules and subsystems.
- Describe the basic components and operation of a programmable logic controller.
- Describe the basic components and operation of industrial robotics.
- Apply various techniques to analyze and troubleshoot automated systems including industrial robotics.
- Explain the role of electronic devices in complex automated systems.
- Work effectively as part of a technology team.
- Perform as part of a team to complete a complex automated systems project.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
	3	ELC 106	Circuit Analysis I	4	Co: MTH 104	
	4	RBT 121	Mechanical Components & Electric Motors	4	Co: MTH 104	
	5	RBT 135	Industrial Robotics	4		
1st Spring	6	RBT 130	Electro-Pneumatic & Hydraulic Control Circuits	4		
	7	RBT 140	Digital Fund & Programmable Logic Controllers	4	ELC 106	
	8	RBT 225	Industrial Electronics in Advanced Manufacturing	4	ELC 106	
	9	DFT 258	AutoCAD	4		
2nd Fall	10	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	11	RBT 230	Automated Systems	4	RBT 140	
	12	RBT 235	Industrial Robotics II	4	RBT 135	
	13	RBT 240	Motor Control	4	ELC 106 and RBT 121	
2nd Spring	14	ENG 162	Technical Communication	3	ENG 161	
	15	RBT 221	Process Control Technology	4	ELC 106	
	16	RBT 245	Robotics Control Systems	4	ELC 106, RBT 140	
	17	RBT 265	Robotics and Automation	4	RBT 135; Co: RBT 245	
	18	Elective	Social Science Elective	3	Varies	Page 42 Column III
Minimum Program Credits				66		ROB