

Technology DIVISION
☐ NEW COURSE
☐ REVISION

Course Information Form

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Introduction to Robotics	3	Describe how robots are integrated into the manufacturing system.
History of Robotics	2	Discuss the invention and evolution of robots.
Justifying Robot Systems	3	Calculate the return on investment and payback period of a robot system.
Basic Systems	3	Describe the components of a robotic system and know the function of each one in the machine's operation.
Robot Classification	3	Divide all industrial robots into groups that identify and describe their unique characteristics.

Robot Specifications	3	Complete an internet search to find and compare specifications of various industrial robots.
Work Cell Sensors	3	Describe the various sensors used in a robot work cell.
End of Arm Tooling	3	Explain the similarities and difficulties of constructing "end of arm tooling" which can duplicate the actions of a human worker.
Robot Programming	4	Discuss the various methods used in programming a robot.
Industrial Uses	3	Discuss how robotics are actually used in various industries.
	30	

COURSE OUTCOMES*	At the successful completion of this course, students will be able to:
	<ul style="list-style-type: none"> • Identify the main configurations of robot arm geometry.
	<ul style="list-style-type: none"> • Summarize the two main methods of robot path control.
	<ul style="list-style-type: none"> • Program a point-to-point industrial robot.
	<ul style="list-style-type: none"> • Select the proper end of arm tooling for a particular robot system.
	<ul style="list-style-type: none"> • Interpret robot manufacturer's specification sheets.

* Course Outcomes will be used in the Assessment Software for Outcomes Assessment. Limit to 3 - 5.