

Robotics Program

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Chemeketa's Robotics program is designed to prepare students for industrial automation in applications and service type positions. The program provides training in topics such as assembling, installation, troubleshooting, and maintaining and operating industrial robotic systems. Students develop skills in industrial controls, programming, vision systems, fluid power, multi axis motion control, and automation integration, and use robotics with programmable controllers, as well as conventional control systems, to solve problems in an industrial flexible manufacturing environment. The Robotics program offers hands-on learning with modern equipment in classes taught by faculty who have spent their careers working in the field of electronics. Graduates of the Robotics program will be prepared to work as an automated equipment technician in almost any industry. Today, robots can be used in manufacturing, transportation, safety research, mass production, and even surgery. This field offers a wide range of employment opportunities to those who are properly qualified to work in robotics.

You may be interested in our Cooperative Work Experience program, which allows you to earn college credit for work relating to your program. With the approval of the program chair, you may enroll in ELT280B-L Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

Program outcomes

Students completing the Robotics degree should be able to:

- Use appropriate technology to design, construct, and troubleshoot robotic systems for both consumer and industrial use
- Apply scientific processes and critical thinking skills to issues in the high technology field of robotics
- Explain the ethical aspects of utilizing robotics in society

Getting started

The first step to entering this program is to take part in an assessment process, which includes taking the college's free placement test and meeting with Advising and Counseling Services. You may need to complete program entry requirements. Then your advisor will help you develop an

individualized program of study, which may include one or more of the following:

CA121	Keyboarding (if less than 25 wpm)	3
CIS101	Introduction to Microcomputer Applications	3
MTH070	Elementary Algebra.....	4
RD090	College Textbook Reading.....	3
WR115	Introduction to Composition.....	4

If you have questions about the program requirements, please contact program chair Charles Sekafetz at 503.399.6254 (charles.sekafetz@chemeketa.edu) or the office of the Dean of Applied Technologies, 503.399.5210.

Robotics Associate of Applied Science Degree

In addition to tuition, estimated costs for students who complete the entire program listed below are books, \$3,125; class fees, \$648; universal fee, \$1,428. Contact the Financial Aid Office at 503.399.5018 to find out if you qualify for help with these costs.

You may earn an associate of applied science degree by successfully completing the required 102 credit hours with a grade of "C" or better in all courses:

Course	Title	Credit Hours
Term 1		
CAM105	Precision Measurement	2
CAM115	Geometric Dimensioning and Tolerances	2
ELT100	Electronics Fundamentals for Non-Majors	4
ELT111	Electronics Orientation.....	1
MT105	Introduction to Robotics.....	3
MTH081	Technical Mathematics 1+	4
	or	
MTH111	College Algebra+	5
Term 2		
CAM110	Benchwork and Manual Fundamentals	4
DRF130	CAD1.....	3
ELT151	Digital Fundamentals	4
MTH082	Technical Mathematics 2	4
	or	
MTH112	Trigonometry.....	5
WR121	The College Essay+.....	4
Term 3		
CAM120	Manual Milling Processes	4
DRF210	Parametric Design with Solidworks	3
FE205B	Resumes and Job Search Correspondence	1
MT211	Sensors and Control Elements 1	2
MT231	Programmable Logic Controllers 1	3
WR227	Technical Writing.....	4



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Term 4

ELT121	Programming Concepts 1	4
MT212	Sensors and Control Elements 2	3
MT232	Programmable Logic Controllers 2	2
PH121	Applied Physics	4
WLD105	Introduction to Welding	3

Term 5

COMM111	Fundamentals of Public Speaking	4
MT130	Motors, Pumps, and Generators	2
MT227A	Pneumatics and Hydraulics Fundamentals.....	3
MT260	Factory Floor Networks.....	3
MT291	Robotic Capstone Preparation	1
PH122	Applied Physics	4

Term 6

ELT293	Flexible Manufacturing Systems and Processes....	3
MT216	Statistical Process Control	2
MT235	Human Machine Interfaces.....	2
MT292	Robotic Capstone.....	6
PSY104	Workplace Psychology+	4

+Meets related instruction requirement, see page 50. For subject areas, see page 56.