

Mechatronics: Mechatronics Specialist

Holland code family: Doers

Certificate of Completion

www.roguecc.edu/Counseling/HollandCodes/test

About the Program

Today's manufacturing industry uses robots and other advanced fabrication and assembly equipment to produce a wide variety of products. All of these systems rely on digital controls including programmable logic controllers. Mechatronics technicians calibrate, troubleshoot, and repair both the equipment and the controllers. Mechatronic technicians in southern Oregon are needed by manufacturers in the food processing, wood products, and metal fabrication industries.

The Mechatronics Specialist three-term certificate prepares students for entry-level positions in today's fast-paced manufacturing environment. Typical positions for graduates of the certificate program include maintenance technician and mechatronics assistant. Completion of the certificate also completes the first three terms of the Mechatronics AAS degree. Certificate completion can also lead to entry into apprenticeship training.

Foundational skills in math, technical writing, safety, workplace survival, and workplace expectations are combined with welding, hydraulics, and other applied courses. Most of the courses in the program are hands-on, open-lab courses supported by online instruction providing students exceptional flexibility when working around family, employment, or other commitments.

Program Learning Outcomes

The curriculum in RCC courses is derived from a set of identified learning outcomes that are relevant to the discipline. Program learning outcomes for mechatronics programs are:

Install, troubleshoot, maintain and repair mechatronic systems using industry-standard tools, practices and procedures.

Assist in design and rebuilding projects.

Follow, develop, and troubleshoot manufacturing processes and procedures.

Organize, interpret, and use technical information and documentation.

Promote energy efficiency and industrial sustainability.

Demonstrate the ability to adhere to personal and industry safety standards.

Communicate effectively across a variety of audiences: technicians, engineers, management, and customers.

Demonstrate life-long learning towards professional growth.

Entry Requirements

Students are required to complete the Placement Process to determine skill level and readiness in math, reading, and writing. As part of their training program, students must begin with the courses within their skill level as determined through the Placement Process. In addition, students may also be required to enroll in classes that would increase their employability and success.

Advanced Standing

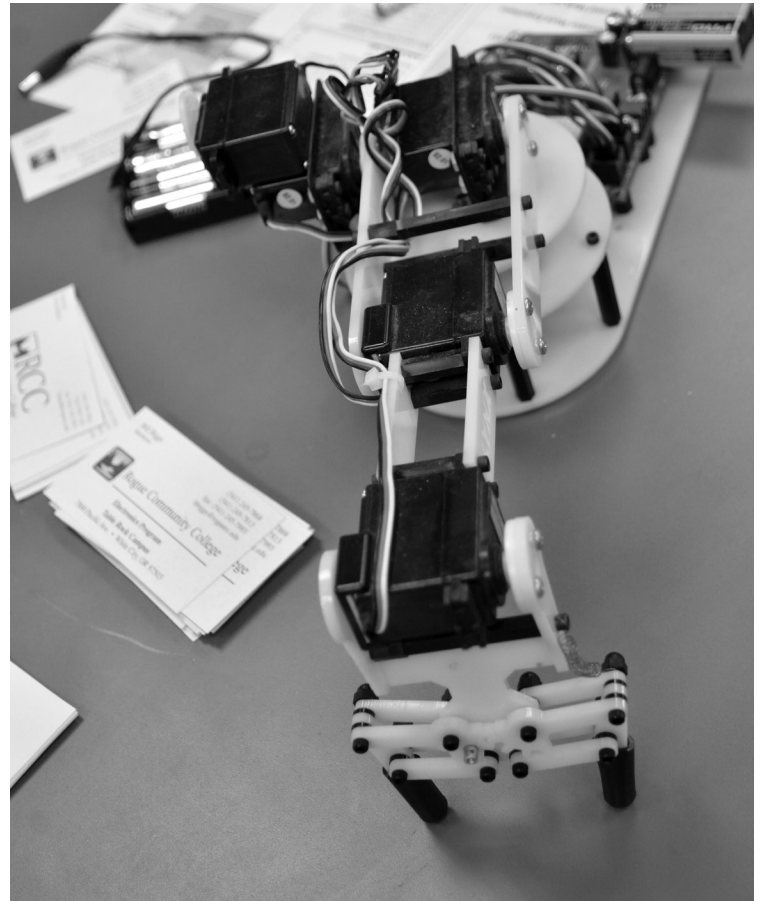
Coursework from accredited colleges and universities will be accepted in accordance with college registration policies and with the Manufacturing/Engineering Technology Department chair's recommendation. In order to ensure that coursework is current, program courses over 10 years old must be reviewed and approved by the appropriate department chair before being accepted toward core requirements. Students must complete coursework in their major at a "C" or better level before proceeding to advanced coursework. Each College Now credit student must meet with the department chair to determine placement.

Graduation Requirements

Students are required to complete all courses in this program with a grade of "C" or better to receive their degrees. Certain required courses are graded on a pass/no pass basis only. A grade of "P" for these courses indicates a student earned the equivalent of a "C" or better grade.

Prerequisites

Course No.	Course Title	Credits
CCS/CIS	Approved 3-4 credit Computer Science or Computer Information Science class, CS120/CIS120 or above, or documented proficiency within the past ten years. ¹	0-4
MEC102	Basic Hand Tools or demonstrated proficiency	0-3
MTH63	Applied Algebra I or higher level math ¹	4
WR115	Introduction to Expository Writing or BT113 Business English I or higher level composition ¹	<u>3-4</u>
Total Prerequisite Credits		7-15



First Year Required Courses

Course No.	Course Title	Credits
First Term		
EET104	Fundamentals of Manufacturing Electronics	4
MEC103	Industrial Safety	1
MEC110	AC/DC Electrical Systems for Manufacturing	3
MEC125	Pneumatics I	3
MET105	Blueprint Reading – Mechanical	3
MFG116	Metrology	<u>2</u>
Second Term		
MEC115	Electronic Control Systems	3
MEC124	Hoisting and Rigging	3
MFG121	Manufacturing Processes I	4
WLD111	Technology of Industrial Welding I or WLD101 Welding Fundamentals I and WLD102 Welding Fundamentals II	<u>6</u>
		16
Third Term		
BT101	Human Relations in Organizations or PSY101 Psychology of Human Relations	3
HE112	Emergency First Aid	1
MEC130	Hydraulics I	3
MEC135	Mechanical Drives I	4
MEC149	Electric Motor Control	<u>4</u>
		15
TOTAL PROGRAM CREDITS		47

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¹ Required for graduation.

For more information contact the Manufacturing and Engineering Technology Department:

Grants Pass or Medford 541-245-7902
Toll free in Oregon 800-411-6508, Ext. 7902
email manufacturing@rogucecc.edu
Web address www.rogucecc.edu/manufacturing
TTY Oregon Telecom Relay Service, 711

This advising guide is for advising purposes only. Please see current college catalog for additional information on specific college policies and graduation requirements.

RCC is an open institution and does not discriminate. For RCC's non-discrimination policy and a full list of regulatory specific contact persons visit the following webpage: www.rogucecc.edu/nondiscrimination.

