

# Mechatronics: Maintenance Technician

Holland code family: Doers

## 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 manufacturing 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 Career Pathways two-term certificate program is designed to recognize students' accomplishments in manufacturing, welding, and/or electronics, and prepare them for entry-level work experiences in the mechatronics field. Students begin with applied mathematics, industrial safety and tool use, and can then select from electronics, mechanical technology, welding, and other electives to complete the pathways certificate. Credits from this certificate will transfer to the one-year Mechatronics Specialist Certificate and/or the Mechatronics Associate of Applied Science degree.

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.

Credits earned in the successful completion of Career Pathways certificates can be applied to other certificates and degrees in the Career Pathway. For more information, speak to a program advisor and review the roadmap at [www.roguecc.edu/Programs/CareerPathways](http://www.roguecc.edu/Programs/CareerPathways).



### Associate of Applied Science (AAS) — Mechatronics (90-108 credits)

- Mechanical Engineering Technician <sup>1</sup>
- Industrial Engineering Technician <sup>1</sup>
- Manufacturing Maintenance Technician <sup>1</sup>

<sup>1</sup> For current wage and gainful employment data, see the Jobs & Wages box within the specific program roadmap at [www.roguecc.edu/CareerPathways/](http://www.roguecc.edu/CareerPathways/)

## Completion 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
CS/CIS	Approved 3-4 credit Computer Science or Computer Information Science class, CS120/CIS120 or above, or documented computer proficiency within the past ten years.	0-4
MEC102	Basic Hand Tools or demonstrated proficiency	0-3
MTH63	Applied Algebra I or designated placement test score	0-4
RD90/WR90	College Reading/Fundamentals of Composition or WR91 Fundamentals of Academic Literacy (WR91 substitutes for both RD90 and WR90) or designated placement test score	0-8
<b>Total Prerequisite Credits</b>		<b>0-19</b>

## Approved Program Electives

(choose a minimum of 12 credits from the list)

Course No.	Course Title	Credits
EET104	Fundamentals of Manufacturing Electronics	4
EET129	Introduction to Embedded Systems	3
MET101	Mechanical Drafting	3
MET105	Blueprint Reading – Mechanical	3
WLD111	Technology of Industrial Welding or WLD101 Welding Fundamentals I and WLD102 Welding Fundamentals II	6

**TOTAL PROGRAM CREDITS 12-19**

### Career Pathways Certificate (CPC) — Mechatronics: Maintenance Technician (12-19 credits)

- Installation & Maintenance Helper <sup>1</sup>
- Machinist Helper <sup>1</sup>

### Certificate of Completion (CC) — Mechatronics Specialist (47 credits)

- Mechatronics Technician <sup>1</sup>
- Assembly Technician <sup>1</sup>
- Engineering Technician <sup>1</sup>
- Manufacturing Technician <sup>1</sup>
- Calibration Technician <sup>1</sup>

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.

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