

Industrial Welding Technology

Holland code family: Doers

About the Program

Upon completion of this three-term certificate program, students will be qualified to test for certification to the American Welding Society (AWS) D1.1-06 Structural Steel and the AWS D1.3-08 Sheet Steel Welding Codes. Additionally, students will have a good foundation in structural steel fitting/layout, the basics of pipefitting, and the basics of sheet metal pattern development. Students will also be prepared with mathematics and communication skills, and be knowledgeable about the human relations necessary to become valuable employees in the industrial welding trades.

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 industrial welding programs are:

- Show a serious commitment to a culture of safety in all college and work environments.
- Produce industry quality weldments on carbon steel plate in various joint and groove configurations.
- Processes include oxy fuel cutting, plasma arc cutting, SMAW, GMAW and FCAW.
- Produce industry-quality welds using GTAW, GMAW and FCAW on stainless steel and aluminum plate.
- Produce industry-quality welds on various diameters of carbon steel pipe in the 5g and 6g positions using SMAW electrodes E6010 and E7018.
- Develop a logical sequence of steps to foresee, troubleshoot, and resolve mechanical and process issues that may arise in the workplace.
- Interpret and create mechanical blueprints to industry standards.
- Layout and fabricate industry-quality fabrication projects using shearing and forming equipment.
- Demonstrate a commitment to the professional standards of the industry.

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 policies. In order to ensure that coursework is current, program courses over three years old must be reviewed and approved by the appropriate department chair before being accepted toward core requirements. College Now credit will be accepted in accordance with current agreement. Verified industry experience may be substituted for some coursework in accordance with college policy and the department chair's approval.

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.

Graduation Requirements

Students must complete all courses in this program with a grade of "C" or better to receive their certificates. 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
BT113	Business English I or WR115 Introduction to Expository Writing or higher level composition ^{1,2}	3-4
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. ¹	0-4
MEC102	Basic Hand Tools	3
MTH63	Applied Algebra I or MTH60 Fundamentals of Algebra I or higher level math	4
Total Prerequisite Credits		10-15



Required Courses

Course No.	Course Title	Credits
First Term		
HE112	Emergency First Aid	1
MEC114	Safety for Industry	3
MET101	Mechanical Drafting	3
WLD111	Technology of Industrial Welding I	6
		13
Second Term		
BT101	Human Relations in Organizations or PSY101 Psychology of Human Relations	3
WLD104	Blueprint Reading - Mechanical	3
WLD112	Technology of Industrial Welding II	6
WLD221	Welding Codes, Procedures and Inspections	3
		15
Third Term		
WLD113	Technology of Industrial Welding III	6
WLD121	Fabrication and Repair Practices I	5
—	Approved program elective	3-4
		14-15

TOTAL PROGRAM CREDITS

42-43

Approved Program Electives

(3-4 credits required)

Course No.	Course Title	Credits
BA109	Ready, Set, Work: Techniques for Landing a Job	2
EET101	Introduction to Electronics	3
GS104	Physical Science with lab	4
MEC103	Industrial Safety	1
MEC116	Quality Practices and Measurements	3
MET121	Computer Aided Drafting I: Mechanical (SolidWorks)	3
MET122	Computer Aided Drafting II: Mechanical (SolidWorks)	3
MET123	Computer Aided Drafting III: Mechanical (SolidWorks)	3
MET160	Materials and Metallurgy	3

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MFG121	Manufacturing Processes I	4
MFG122	Manufacturing Processes II	4
MFG123	Manufacturing Processes III	4
WLD160	American Welding Society (AWS) Certification Seminar: Plate	1
WLD250	Selected Topics in Welding	variable
WLD260	American Welding Society (AWS) Certification Seminar: Pipe	1

¹ Required for graduation.

² Students who have successfully completed the 3-credit version of BT113 will have met the writing prerequisite.

For more information contact the Industrial Welding Department:

Grants Pass or Medford 541-245-7809
Toll free in Oregon800-411-6508, Ext. 7809
emailwelding@rogucecc.edu
Web address www.rogucecc.edu/welding
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.

