

WELDING

ONE-YEAR CERTIFICATE: WELDING – 51 CREDITS

CAREER DESCRIPTION

The welding program focuses on skills sets required to meet or exceed industry standards and the American Welding Society (AWS). Graduates will have basic knowledge and skills that are required to achieve entry-level positions as welders, welder operators, and fabricators. Basic tools and PPE for fabrication and welding are required, a list of tools are available from the welding instructors. The Welding Department seeks to maximize the ability of its students to compete in the job market by offering relevant and up to date courses in welding technology.

To achieve this goal, the department emphasizes current technology trends in both the welding shop and classroom environment. Welding courses are offered during the day and in the evening. In addition, courses are adapted to meet the diverse needs of the student, potential employers, and respond to changes and advancements in the welding industry.

The UCC Welding program is an Educational Institutional Member of the American Welding Society, and offers AWS - SENSE curriculum and certificates.

PROGRAM OUTCOMES

Students who successfully complete the Welding Certificate will:

1. Apply fundamentals of welding, including the basics of common joining processes, cutting and gouging, measurement, fabrication, repair, material identification, and visual acceptance criteria.
2. Interpret and apply basic elements of blueprints such as line type identification, symbols, notes, 2D and 3D interpretation, dimensioning and measurement.
3. Exhibit “soft skills” such as: timeframe awareness, follow-through and completion of work, positive interactions with fellow classmates, good communication, positive attitude, and good work ethics.
4. Demonstrate a knowledge and understanding of safe working conditions, as well as, safety in handling materials, equipment, and personal protective equipment.
5. Identify basic components of welding systems and welding processes, proper machine setup, and demonstrate troubleshooting when visual acceptance criteria of a weldment has not been met.
6. Apply knowledge of Weld Procedure Specifications or WPS's as they relate to material identification, thermal and electrical properties, applications, as well as, understanding which materials will need special procedures for preheat and post heating, filler metal selection, process selection, and other essential variables involved in the fabrication of a weldment.
7. Apply knowledge of national standards and guidelines set forth by AWS, ASME, API, OSHA, and other governing organizations that will affect their work.

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51 Credits — Recommended Sequence for Students (Students should see an advisor to customize their educational plan.)

SEQUENCE	Fall	Welding Processes & Applications WLD 101 4 CR	Shielded Arc Metal Welding WLD 111 4 CR	Basic Metallurgy WLD 131 3 CR	Introduction to Algebra for the Trades MTH 052 (OR HIGHER) 4 CR	Starrett: PMI - Precision Measurement Instruments MFG 108 2 CR	CREDITS 17
	Winter	Blueprint Reading and Sketching WLD 140 3 CR	Shielded Arc Metal Welding: Mild Steel I WLD 112 3 CR	Shielded Arc Metal Welding: Mild Steel II WLD 113 3 CR	Shielded Arc Metal Welding: Mild Steel III WLD 114 3 CR	Introduction to Expository Writing WR 115 4 CR	CREDITS 16
	Spring	Gas Metal Arc Welding WLD 121 3 CR	Gas Metal Arc Welding – Pulse WLD 122 3 CR	Flux-Cored Arc Welding I (Gas Shielded) WLD 141 3 CR	Flux-Cored Arc Welding II (Self Shielded) WLD 142 3 CR	GTAW I - Gas Tungsten Arc Welding WLD 150 3 CR	Listening SP 105 3 CR CREDITS 18

NOTES

Scheduling requirements may prevent all courses from being offered every term. Consultation with an advisor is critical to student's selection of courses.

Please see an advisor for a degree planning worksheet for this program.