

Welding Technology



Why Welding?

The Welding Technology program at MCC provides you with the opportunity to learn a variety of technical skills and expand your knowledge of industry norms. Training is informed by theory and built on an academic foundation that includes mathematics and communication. As a graduate of this program you will be prepared for entry into the workforce by learning a number of welding processes and marketable skills.

Careercloud.com projects industry growth of 8% annually. In New Hampshire between 2024-2026, the NH Employment Security Economic and Labor Market Information Bureau predicts high demand for welders, cutters, solderers, brazers, machine setters, operators and tenders.

Degree & Certificate Options

This program offers one Associate of Applied Science degree and two certificates. Please see the information on the back.

Program Goals

Graduates of this program will be prepared with marketable skills in a variety of welding processes for entry into the workforce.

Acquired Skills

After earning your Welding degree you will be able to:

- Possess basic competency in the four major welding processes.
- Demonstrate basic concepts and practices of technical drawing and blueprint reading in accordance with industry standards.
- Articulate safety guidelines and use of machine tools.
- Produce drawings using Computer Aided Drafting (CAD) software.
- Refine skills to meet code requirements for heavy plate and pipe welding.
- Demonstrate knowledge of materials structures, heat treatment processes, the composition of ferrous and non-ferrous alloys, and the effects of heat-treatments on metals.
- Articulate industrial quality control procedures.
- Demonstrate fabrication techniques, cost estimation, principles of applied statics and strength of materials.

Potential Jobs

- Cutter
- Machine Setter
- Solderer and Brazer
- Machine Operator
- Machine Tenders
- Welder

Potential Salary*

There is a wide range of jobs in the welding industry. See below for the average annual salary range in central NH for a **Welder**.

ENTRY LEVEL	MID-RANGE	EXPERIENCED
\$38,529	\$55,692	\$85,984

*Career Coach, 2024, mccnh.lightcastcc.com

Admission Requirements

In addition to college-wide requirements, students must place into MATH111M or MATH111XM, Numerical Geometry or Numerical Geometry – Corequisite and ENGL110XM or ENGL110M, College Composition I with Corequisite or College Composition I.

Technical Standards

- Normal vision for reading instructions and for performing tasks.
- Manual dexterity with both hands; good hand and eye coordination.
- The physical strength to maneuver and/or lift heavy objects.
- Ability to stand for long periods of time while welding and/or torch cutting.
- Pacemaker wearers — Please note: High frequency welding may cause interference with pacemaker operation.

Transfer Opportunities

- Ferris State University
- Southern NH University
- ...and many more!

A wave of retirements nationwide have created a shortage of approximately 300,000 qualified welders.

Degree & Certificate Requirements

Welding Technology Degree

Degree Program - First Year

First Year	Fall Semester	TH	LAB	CR
WELD101M	Fundamentals of Welding	3	0	3
WELD111M	Gas/Arc Welding Lab	0	10	4
WELD112M	Gas/Arc Welding Theory	3	0	3
WELD113M	Technical Blueprint Reading	0	3	1
ENGL110XM or ENGL110M	College Composition I with Corequisite or College Composition I	4	0	4
FYE100M	MCC Essentials	1	0	1
Total		11	13	16
First Year	Spring Semester	TH	LAB	CR
WELD121M	MIG and TIG Welding Lab	0	10	4
WELD122M	MIG and TIG Welding Theory	3	0	3
WELD125M	Manufacturing and Repair Technology	0	3	1
WELD186M	Blueprint Reading for Welders	3	0	3
CAD113M	Applied CAD for Industry	1	3	2
MATH111M or MATH111XM	Numerical Geometry or Numerical Geometry - Corequisite	3	0	3
Total		10	16	16

Degree Program - Second Year

Second Year	Fall Semester	TH	LAB	CR
WELD211M	Structural Code Welding Lab	0	10	4
WELD212M	Code Welding Theory	3	0	3
WELD213M	Metallurgy	2	2	3
MATH135M	Numerical Algebra and Trigonometry	3	0	3
	Social Science Elective	3	0	3
Total		11	12	16
Second Year	Spring Semester	TH	LAB	CR
WELD220M	Fabrication Techniques and Estimating	2	2	3
WELD221M	Pipe Code Welding Lab	0	10	4
WELD224M	Intermediate GTAW of Pipe	0	4	2
	Science Elective	3	0	3
	Foreign Language/Humanities/Fine Arts Elective	3	0	3
Total		8	16	15
Total Credits - 63				

Welding Technology Professional Certificate

The Professional Certificate in Welding Technology meets entry-level employment objectives for non-code welding and includes the courses required for the first year of the degree program.

		TH	LAB	CR
WELD101M	Fundamentals of Welding	3	0	3
WELD111M	Gas and Arc Welding Lab	0	10	4
WELD112M	Gas and Arc Welding Theory	3	0	3
WELD113M	Technical Blueprint Reading	0	3	1
WELD121M	MIG and TIG Welding Lab	0	10	4
WELD122M	MIG and TIG Welding Theory	3	0	3
WELD125M	Manufacturing and Repair Technology	0	3	1
WELD186M	Blueprint Reading for Welders	3	0	3
CAD113M	Applied CAD for Industry	1	3	2
ENGL110XM or ENGL110M	College Composition I with Corequisite or College Composition I	4	0	4
MATH111M or MATH111XM	Numerical Geometry or Numerical Geometry - Corequisite	3	0	3
FYE100M	MCC Essentials	1	0	1
Total Credits - 32				

Welding Technology Certificate

Successful completion of this program gives you the necessary welding skills required for employment as a combination welder or welder's helper.

		TH	LAB	CR
WELD101M	Fundamentals of Welding	3	0	3
WELD111M	Gas and Arc Welding Lab	0	10	4
WELD112M	Gas and Arc Welding Theory	3	0	3
WELD113M	Technical Blueprint Reading	0	3	1
WELD121M	MIG and TIG Welding Lab	0	10	4
WELD122M	MIG and TIG Welding Theory	3	0	3
WELD186M	Blueprint Reading for Welders	3	0	3
Total Credits - 21				

All courses and degree requirements are subject to change. For the most current information on MCC programs, see mccnh.edu/programs.