

WELDING TECHNOLOGY I & II

ENGINEERING, MANUFACTURING AND INDUSTRIAL TECHNOLOGY



Course Overview:

Program Location: Lansing Community College (LCC) West Campus

Sessions Offered: AM/PM

Average Lecture Days/Week: 0-1 Day

Average Lab Days/Week: 4-5 Days

Academic Rigor: 3 out of 5

Homework: Rarely

Required Reading: College-level textbooks; less than 25 pages a week

Course Description

Welding Technology is open to juniors and seniors and can be a one or two-year program.

Students learn the basics of gas welding and arc welding processes. Students are prepared to set up and pass a qualification test according to the American Welding Society.

Students also receive a basic introduction to machining.

Interested students can continue with Welding Technology II during their senior year.

Student Leadership Opportunities

Students have the opportunity for leadership, competition, and community service through membership in SkillsUSA.

Success Indicators

- Focused and hardworking
- Able to stand for two hours
- Heavy lifting
- Good hand/eye coordination
- Detail-oriented
- Willing to learn
- Understands measurements

Learning outcomes include, but are not limited to:

- Oxygen and acetylene use and safety factors
- Evaluating the likeness and differences between oxidizing and neutral and carburizing flames
- Troubleshooting welding equipment malfunctions.
- Understanding and using various welding terms and descriptions and the steel designation system
- Understanding the fundamentals of alternating current and direct current, as well as the application and principles of polarity
- Determine the correct amperage and voltage used, and the variables of amperage for the different material thicknesses
- Basic knowledge of gas metal arc welding and flux cored arc welding
- Understanding the major transfers of wire, including short circuit, spray, globular, and pulsed
- Discuss position groove welds, open root, and closed root with backer plates

College Credits (18)

- TECH 100 - Industrial Safety (2) - Year One
- WELD 103 - Combination Welding (4) - Year One
- WELD 110 - Gas Metal Arc Welding (4) - Year One
- WELD 105 - Advanced Arc Welding (4) - Year Two
- WELD 111 - Gas Tungsten Arc Welding (4) - Year Two

Available Certifications:

- LCC Certificate of Completion
- OSHA 10
- First Aid/CPR

Updated 12/2025

FOR MORE INFO:
CONTACT YOUR COUNSELOR,
CALL 517.483.1596, OR
VISIT EATONRESA.ORG/CPC



WELDING TECHNOLOGY



PROFESSIONAL CAREERS

- Certified Welding Inspector
- Fabrication Shop Owner
- Military Welder
- NDE (Non-Destructive Evaluation) Technician
- Shop Manager
- Underwater Welder
- Welding Educator
- Welding Engineer

TECHNICAL CAREERS

- Certified Welder
- Fabricator
- Journeyman Level Iron Worker
- Journeyman Level Pipe Welder
- Maintenance Welder
- Robotic Weld Operator/Technician
- Structural Welder
- Tool & Die Welder

ENTRY-LEVEL CAREERS

- Apprentice Iron Worker
- Apprentice Pipe Welder
- MIG/TIG Entry-Level Welder
- Pipefitter
- Production Welder
- Sheet Metal Worker
- Skilled Trades Apprentice
- Welder/Welder Helper

ACADEMICS

PROFESSIONAL SKILLS

EXPERIENCES

PASSION

Education with Purpose.

CAREER-TREE®

Explore Your Future with Career Trees

Career Trees shows how what you learn today can grow into a future career. Each branch represents real jobs and opportunities connected to a specific field, from entry-level roles to advanced professions.

Use the Career Tree to explore your interests, learn what education or training is needed, and plan your next steps after high school. The more you explore, the more you'll see how skills learned now can lead to a strong, rewarding future.

Scan the QR code below to learn more and watch the program video.

**SCAN
ME!**



Capital Region Technical Early College (CRTEC)

Students enrolled in this program may choose to participate in the Capital Region Technical Early College (CRTEC) program. This is a high school-to-college program where students start in grade 11 and end their 13th year with a degree or certification. This program gives students relevant career related experiences.



**EXPLORE THE POSSIBILITIES.
FAST TRACK YOUR FUTURE.**