



CAREER PATHWAYS FOR SUCCESS

TRI-COUNTY TECHNICAL COLLEGE



A DUAL ENROLLMENT CAREER PATHWAY FOR
WELDING TECHNOLOGY

About the Program

- Students studying this major learn how to use hand-held or remotely controlled equipment to join, repair, or cut metal parts and products. Students learn to weld steel, stainless steel, aluminum, pipe, and to perform other welding skills needed in the workplace.
- As part of the Technical Career Pathway, students have the opportunity to earn a nationally recognized AWS (American Welding Society) certification upon passing Practical Weld Test. Upon entry into the associate degree program, students can earn up to 3 additional national certifications upon passing Practical Weld Tests.
- Created with employer input, Tri-County's Welding program produces graduates in high demand for great paying jobs in companies that are using the latest technologies for competing in the global marketplace.

- Students build a competitive and marketable resume for a variety of employment opportunities, primarily in advanced manufacturing, construction, and metalworking.

About the Pathway

- Welding Technology is a **Technical Career Pathway** in which courses and textbooks are **at no cost** to students planning to enter the career field after high school.
- High school students take dual enrollment classes at the TCTC Industrial Technology Center in Sandy Springs, Monday through Thursday, in the afternoon.
- After high school, students seamlessly transition into the Associate in Applied Science degree Welding Technology program at the TCTC Industrial Technology Center.

CONNECT WITH US

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Welding Technology CAREER PATHWAY

IN HIGH SCHOOL

11th or 12th Grade:
(COURSES OFFERED IN AFTERNOON)

- WLD 111 (Fall)
- WLD 115 (Spring)

Students who begin this pathway in 11th grade may take courses in 12th grade with regular college students in morning classes.

**High School Graduation +
SMAW Structural Welding
Certificate**

AFTER HIGH SCHOOL

**Welding Technology
Associate in Applied Science
Degree**

SUMMER

- WLD 109
- WLD 204

FALL

- WLD132
- WLD 154
- MAT 170
- Social Science Requirement
- General Elective

SPRING

- WLD 113
- WLD 225
- WLD 235
- EGT 103
- EGT 114

SUMMER

- WLD 208
- WLD 160
- ENG 165

FALL

- Humanities Requirement
- General Elective
- General Elective
- General Education Courses



SC Mean Annual Wages
\$43,260

WELDING TECHNOLOGY

COURSE DESCRIPTIONS

The Welding Technology program prepares students for a variety of employment opportunities in construction, manufacturing, and metal working. The Welding Technology program offers an associate degree option and certificate options. Credit for courses in the certificates can be applied toward the associate degree.

EGT 103 - PRINT READING

Class Hours: 2 Lab Hours: 0 Credit Hours: 2

This course is an introduction to basic print reading and interpretation, including layout, projection, and dimensioning.

EGT 114 - WELDING PRINT BASICS

Class Hours: 1 Lab Hours: 3 Credit Hours: 2

This course covers the fundamentals of print reading for welding applications.

Prerequisites: EGT 103 .

ENG 165 - PROFESSIONAL COMMUNICATION

Class Hours: 3 Lab Hours: 0 Credit Hours: 3

This course develops practical written and oral communication skills.

Prerequisites: Satisfactory COMPASS placement scores in both Reading and Writing.

Note: This course cannot be used for an AA or AS degree.

MAT 170 - ALGEBRA, GEOMETRY AND TRIGONOMETRY I

Class Hours: 3 Lab Hours: 0 Credit Hours: 3

This course includes the following topics: elementary algebra, geometry, trigonometry and applications.

Prerequisites: Satisfactory math placement scores, or MAT 032 with a grade of C or better.

Note: This course cannot be used for an AA or AS degree.

WLD 109 - GAS METAL ARC WELDING II

Class Hours: 1 Lab Hours: 6 Credit Hours: 3

This course covers all position welding and advanced techniques for welding ferrous and nonferrous metals.

Prerequisites: WLD 111 .

WLD 111 - ARC WELDING I

Class Hours: 1 Lab Hours: 9 Credit Hours: 4

This course covers the safety, equipment, and skills used in the shielded metal arc welding process. Fillet welds are made to visual criteria in several positions.

Corequisite: WLD 115 .

WLD 113 - ARC WELDING II

Class Hours: 1 Lab Hours: 9 Credit Hours: 4

This course is a study of arc welding of ferrous and/or nonferrous metals.

Prerequisites: WLD 111 .

WLD 115 - ARC WELDING III

Class Hours: 1 Lab Hours: 9 Credit Hours: 4

This course covers the techniques used in preparation for structural plate testing according to appropriate standards.

Corequisite: WLD 111 .

WLD 132 - INERT GAS WELDING FERROUS

Class Hours: 1 Lab Hours: 9 Credit Hours: 4

This course covers setup and adjustment of equipment and fundamental techniques for welding ferrous metals.

Prerequisites: WLD 111 .

WLD 154 - PIPE FITTING AND WELDING

Class Hours: 1 Lab Hours: 9 Credit Hours: 4

This is a basic course in fitting and welding pipe joints, either ferrous or non-ferrous, using standard processes.

Prerequisites: WLD 132 .

WLD 160 - FABRICATION WELDING

Class Hours: 1 Lab Hours: 6 Credit Hours: 3

This course covers the layout and fabrication procedures as they pertain to sheet metal and structural steel shapes. The course also includes shop safety and hand and power tools.

Prerequisites: WLD 109, WLD 111 , and WLD 132 .

WLD 204 - METALLURGY

Class Hours: 3 Lab Hours: 0 Credit Hours: 3

This course covers the characteristics of ferrous and non-ferrous metals.

Prerequisites: WLD 111.

WLD 208 - ADVANCED PIPE WELDING

Class Hours: 1 Lab Hours: 6 Credit Hours: 3

This course is a study of advanced pipe welding. It also covers the processes to fit and weld ferrous and non-ferrous metals.

Prerequisites: WLD 154

WLD 225 - ARC WELDING PIPE I

Class Hours: 1 Lab Hours: 9 Credit Hours: 4

This course covers the techniques used in shielded metal arc welding of groove welds on pipe.

WLD 235 - ROBOTIC WELDING I

Class Hours: 1 Lab Hours: 3 Credit Hours: 2

This course covers basic theory and practice for robotic welding.

Prerequisites: WLD 109 .

