

METAL FABRICATION/ WELDING

Overview

Metal Fabrication/Welding Technical Diploma

Program Code: 31-457-1

For more information: wctc.edu/metal-fab (<http://www.wctc.edu/metal-fab/>)

Metal fabrication involves preparing and manipulating materials, while welding fuses parts together. In this program, learn to read prints; create the shape of a part for cutting, fabrication and welding; and produce quality parts. Develop skills to program/operate computer-controlled press brakes/shears, plasma arc cutting machines and microprocessor-based power sources.

The minimum required course grades and program grade point average (GPA) for students under this catalog are:

Core Courses = C

General Studies Courses = C-

Program GPA = 2.0

Build your degree along a career pathway. Start with a couple of courses or an entry-level credential to enter the job market in your area of interest, then continue with higher credentials on your educational path for job advancement and higher wages.

Career Pathway

1. Welding Technician 19
2. Metal Fabrication/Welding 33
3. Metal Fabrication/Welding - Advanced 60

Related certificates that can be earned along the way.

- GMAW/Fabricator Technical Certificate (<https://catalog.wctc.edu/programs/gmaw-fabricator/>)
- Industrial Laser Operator Technical Certificate (<https://catalog.wctc.edu/programs/industrial-laser-operator/>)

Learning Outcomes

Program Outcomes

1. Demonstrate industry recognized safety practices.
2. Form materials to detailed drawings.
3. Cut materials to detailed drawings.
4. Join materials to detailed drawings.
5. Layout components/assemblies.
6. Inspect product.

Critical Life Skills

To help our students prepare for success in a workplace and society that is **increasingly global, multicultural and collaborative**, we provide curricular and co-curricular opportunities to develop critical life skills. WCTC is committed to teaching all students the following skills:

- **Communication:** Demonstrate appropriate communication.
- **Critical Thinking/Problem Solving:** Demonstrate critical thinking skills to analyze situations and solve problems.
- **Relationships:** Demonstrate effective interpersonal skills.
- **Self-management:** Demonstrate responsible and respectful behavior.

Required Courses

Listed below are the required courses for the program. To view the recommended sequence for taking courses click on the plan of study tab(s) above. Work with your Academic Advisor to design a program plan!

View your **Program Matrix** to find out when each course will be offered (term and time of day).

Code	Title	Credits
Core Courses		
422-103	Metals Technology/Fabricators	1
442-151	Gas Metal Arc Welding 1	2
Approved Substitute: 442-150		
442-152	Gas Metal Arc Welding 2	2
Approved Substitute: 442-150		
442-171	Flux Core Arc Welding 1	2
Approved Substitutes: 442-170 OR 442-180 OR 442-181		
442-172	Flux Core Arc Welding 2	2
Approved Substitutes: 442-170 OR 442-180 OR 442-182		
457-110	Blueprint Reading - Fab	2
457-121	Automated Cutting Processes 1	2
457-125	Manual Thermal Cutting Process	1
457-161	Intro to Metal Fabrication	2
Approved Substitute: 457-160		
457-162	Metal Fabrication 1	3
Approved Substitute: 457-160		
457-163	Metal Fabrication 2	2
Approved Substitute: 457-165		
457-164	Advanced Metal Fabrication	3
Approved Substitute: 457-165		
General Studies		
801-196	Oral/Interpersonal Comm	3
Approved Substitute: 801-198		
804-107	College Mathematics	3
Approved Substitutes: 804-115 OR 804-116 OR 804-118 OR 804-195 OR 804-198 OR (804-304 AND 804-305)		
809-199	Psychology of Human Relations	3
Approved Substitute: 809-198		
Total Credits		33

Full-time Plan

First Year		
Fall Term 1		Credits
442-151	Gas Metal Arc Welding 1	2
457-110	Blueprint Reading - Fab	2
804-107	College Mathematics	3
Credits		7

Fall Term 2

422-103	Metals Technology/Fabricators	1
442-152	Gas Metal Arc Welding 2	2
457-161	Intro to Metal Fabrication	2
Credits		5

Winter Interim

801-196	Oral/Interpersonal Comm	3
Credits		3

Spring Term 1

457-125	Manual Thermal Cutting Process	1
457-162	Metal Fabrication 1	3
809-199	Psychology of Human Relations	3
Credits		7

Spring Term 2

442-171	Flux Core Arc Welding 1	2
457-121	Automated Cutting Processes 1	2
457-163	Metal Fabrication 2	2
Credits		6

Second Year**Summer Term**

442-172	Flux Core Arc Welding 2	2
457-164	Advanced Metal Fabrication	3
Credits		5
Total Credits		33