WELDING AND METALS FABRICATION - ASSOCIATE OF APPLIED SCIENCE DEGREE (AAS)

Explore More About This Program: https://cwi.edu/program/welding-and-metals-fabrication

Degree Quick Facts

- **Instructional School:** Industry, Engineering, and Trades
- **Department:** Manufacturing and Welding
- **Program Code:** WEMF.AAS
- **Program Type:** Career and Technical Education
- **Available Fully Online:** No
- **Eligible for Federal Financial Aid:** Yes

NOTE: Courses required for this program *may* have an additional fee; more information can be found on the Special Course Fees web page.

Degree Requirements

Course	Course Title	Min Credits
General Education Requirements		
GEM 1 - Written Communication course		3
GEM 2 - Oral Communication course		3
GEM 3 - Mathematical Ways of Knowing course		3
GEM 6 - Social & Behavioral Ways of Knowing course		3
GE Elective course		3
Major Requirements		
WEMF 111	Safety and Leadership I	1
WEMF 112	Safety and Leadership II	1
WEMF 125	Blueprint Reading for Welders I	1
WEMF 126	Blueprint Reading for Welders II	1
WEMF 127	Blueprint Reading for Welders III	1
WEMF 128	Blueprint Reading for Welders IV	1
WEMF 135	Gas Metal Arc Welding (GMAW) Practical	4
WEMF 155	Welding Theory I	1
WEMF 156	Welding Theory II	1
WEMF 157	Welding Theory III	1
WEMF 158	Welding Theory IV	1
WEMF 175	Shielded Metal Arc Welding (SMAW) Practical	4
WEMF 180	Production Welding	4
WEMF 185	Gas Tungsten Arc Welding (GTAW) Practical	4
WEMF 225	Blueprint Reading and Layout V	2
WEMF 226	Blueprint Reading and Layout VI	2
WEMF 227	Blueprint Reading and Layout VII	2
WEMF 228	Blueprint Reading and Layout VIII	2
WEMF 255	Welding and Fabrication Workshop I	4
WEMF 256	Welding and Fabrication Workshop II	4
WEMF 257	Welding and Fabrication Workshop III	4
WEMF 258	Welding and Fabrication Workshop IV	4
Minimum Credit Hours Required		**65**

Degree Plan

The course sequence listed below is strongly recommended in order to complete your program requirements. Many Career and Technical Education (CTE) courses have prerequisites and/or corequisites that have been accounted for within this course sequence plan. Please register for your major requirements each semester as shown below using the Student Planning tool in myCWI. Consult your advisor for any questions regarding this plan.

NOTE: The required general education courses may be completed during any semester the student prefers, including summer semesters.

ADVISING NOTE ON COURSE SEQUENCING: Welding and Metals Fabrication (WEMF) courses are offered in 8-week sessions. Majors may begin taking their WEMF courses at the start of any 8-week session during which they are offered but will need to complete each 8-week course session in the order listed below.

First Year		
Fall		**Credit Hours**
First 8-Week Course Session		
WEMF 111	Safety and Leadership I	1
WEMF 125	Blueprint Reading for Welders I	1
WEMF 135	Gas Metal Arc Welding (GMAW) Practical	4
WEMF 155	Welding Theory I	1
Second 8-Week Course Session		
WEMF 112	Safety and Leadership II	1
WEMF 126	Blueprint Reading for Welders II	1
WEMF 156	Welding Theory II	1
WEMF 175	Shielded Metal Arc Welding (SMAW) Practical	4
Full 16-Week Course Session		
GEM 3 - Mathematical Ways of Knowing course		3
	Total Semester Credit Hours	**17**
Spring		
Third 8-Week Course Session		
WEMF 127	Blueprint Reading for Welders III	1
WEMF 157	Welding Theory III	1
WEMF 180	Production Welding	4
Fourth 8-Week Course Session		
WEMF 128	Blueprint Reading for Welders IV	1
WEMF 158	Welding Theory IV	1
WEMF 185	Gas Tungsten Arc Welding (GTAW) Practical	4
Full 16-Week Course Session		
GEM 2 - Oral Communication course		3
	Total Semester Credit Hours	**15**
Second Year		
Fall		
Fifth 8-Week Course Session		
WEMF 225	Blueprint Reading and Layout V	2
WEMF 255	Welding and Fabrication Workshop I	4
Sixth 8-Week Course Session		
WEMF 226	Blueprint Reading and Layout VI	2
WEMF 256	Welding and Fabrication Workshop II	4
Full 16-Week Course Session		
GEM 1 - Written Communication course		3
GEM 6 - Social & Behavioral Ways of Knowing course		3
	Total Semester Credit Hours	**18**
Spring		
Seventh 8-Week Course Session		
WEMF 227	Blueprint Reading and Layout VII	2
WEMF 257	Welding and Fabrication Workshop III	4
Eighth 8-Week Course Session		
WEMF 228	Blueprint Reading and Layout VIII	2
WEMF 258	Welding and Fabrication Workshop IV	4
Full 16-Week Course Session		

GE Elective course		3
	Total Semester Credit Hours	**15**
	Minimum Credit Hours Required	**65**

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate knowledge/understanding of, and compliance with, all health and safety related concerns within the welding industry.
- Understand and be able to interpret blueprints, drawings, and schematics from our allied industries and be able to produce assembled parts from them to the expected tolerances and form.
- Demonstrate an underpinning knowledge of correct welding practice, the equipment required for its practice, and its setup and effective operation.
- Understand the industry standards (Codes) and correctly interpret, extract pertinent information from, and apply these standards to given tasks.
- Show competency in the correct and safe use of a range of the fabrication equipment used in associated industries; demonstrate correct use of this equipment in the production of assigned project work.
- Successfully pass at least two advanced certifications (All Position) against a Coded standard from the American Welding Society (AWS).