

WELDING, ASSOCIATE OF APPLIED SCIENCE

Program Description

The Two Year AAS Welding Degree program is designed to provide study in the areas of welding, fabrication, production, and piping to prepare students for employment in the welding industries that are required to meet specifications and standards. Related specifications and standards for this degree would include; AWS D1.1, D1.2, D1.6, API 1104, ASME Section IX.

Program Outcomes

Students who successfully complete the Associate of Applied Science in Welding will be able to:

1. Identify basic components of welding systems and welding processes, proper machine setup, and demonstrate trouble shooting when visual acceptance criteria of a weldment has not been met
2. Interpret and apply basic elements of blueprints such as line type identification, symbols, notes, 2D and 3D interpretation, dimensioning and measurement
3. Exhibit "soft skills" such as; timeframe awareness, follow-through and completion of work, positive interactions with fellow classmates, good communication, positive attitude, and good work ethics
4. Demonstrate a knowledge and understanding of safe working conditions, as well as, safety in handling materials, equipment, and personal protective equipment
5. Apply an understanding of Weld Procedure Specifications or WPS's as they relate to material identification, thermal and electrical properties, applications, as well as, understanding which materials will need special procedures for preheat and post heating, filler metal selection, process selection, and other essential variables involved in the fabrication of a weldment
6. Apply an understanding of national standards and guidelines set forth by AWS, ASME, API, OSHA, and other governing organizations that will affect their work

Career Considerations

Related occupations for this program would include: pipe welding and fitting, hydro-electrical and dam construction, waste & fresh water treatment plants, structural and bridge iron workers, aerospace & aviation, inspection & quality control.

Program Course Requirements

Course	Title	Credits
First Year		
First Term		
MFG 108	Starrett PMI	2
WLD 101	Welding Processes-Apps	4
WLD 111	Shielded Metal Arc Welding	4
WLD 131	Basic Metallurgy	3
MTH 102	Math for the Trades (or higher)	4
Credits		17
Second Term		
WLD 112	Shld Metal Arc Wldg:Mild Steel	3
WLD 113	Shld Metal Arc Wldg:Mld Stl II	3
WLD 114	Shld Metal Arc Wldg:MldStl III	3

WLD 140	Blueprint Reading	3
WR 117	Writing for Trades (WR 115 accepted)	4
Credits		16
Third Term		
WLD 121	Gas Metal Arc Welding	3
WLD 122	Gas Metal Arc Welding-Pulse	3
WLD 141	Flux-Core Arc Wldg(Gas Shld)	3
WLD 142	Flux-Core Arc Wldg II Slf Shld	3
WLD 150	GTAW I	3
Credits		15
Fourth Term		
COM 218Z	Interpersonal Communication	4
Credits		4
Second Year		
First Term		
WLD 123	Advanced Welding III	3
WLD 251	Gas Tungsten Arc Weld II	3
WLD 160	Aluminum Arc Welding I	3
WLD 261	Aluminum Arc Welding II	3
WLD 280	CWE: Welding	3
Credits		15
Second Term		
MFG 111	Machine Shop I	3
WLD 124	Advanced Welding IV	3
WLD 222	Pipe Welding-Fitting I	3
WLD 252	Gas Tungsten Arc Weld III	3
WLD 262	Aluminum Arc Welding III	3
Credits		15
Third Term		
MFG 112	Machine Shop II	3
WLD 161	Welding Problems	4
WLD 223	Pipe Welding-Fitting II	3
WLD 240	Blueprint Reading - II	3
WLD 280	CWE: Welding	3
Credits		16
Total Minimum Credits		98

Advising Notes

- See advisor to ensure you are following the correct pathway to meet your goals.

Program Entrance Requirements

- A construction background or prior welding experience are helpful but not a requirement.
- Students with a criminal record are strongly urged to research employability before entering the welding program. If students enter the program with a felony conviction, they should disclose this information to their welding advisor and any Cooperative Work Experience (CWE) employer.