

# Metal Fabrication/Welding Technology, A.A.S.

The Metal Fabrication/Welding Technology program offers two distinct career path options. The Structural option is designed to train students to operate welding equipment to weld structural metal components/members. The Manufacturing option is designed to train students to operate welding equipment to weld metal components in a manufacturing environment.

The student will be required to choose either the Structural or Manufacturing option for their third and fourth semester classes.

(Major Code 2460; State CIP Code 48.0508)

- Metal Fabrication Technology (<http://www.jccc.edu/welding>)

## Associate of Applied Science Degree

### First Semester

MFAB 180	Blueprint and Symbols Reading for Welders	2
MFAB 124	Introduction to Welding	3
MFAB 240	Metallurgy	2
MATH 130	Technical Mathematics I*	3
ENGL 121	Composition I*	3
MFAB 128	Basic Machine Tool Technology	3
Total Hours		16

### Second Semester

MFAB 131	Shielded Metal Arc Welding (SMAW) I*	3
MFAB 133	Gas Metal Arc Welding (GMAW) I*	3
MFAB 136	Gas Tungsten Arc Welding (GTAW) I*	3
ENGL 123	Technical Writing I*	3
HPER 200	First Aid and CPR	2
Social Science Elective ^		3
Total Hours		17

^ Social Science Elective (<http://catalog.jccc.edu/spring/degreecertificates/electives/social-sci-econ-aas>)

### Third Semester (Structural Option)

MFAB 205	Shielded Metal Arc Welding (SMAW) II*	3
MFAB 210	Gas Metal Arc Welding (GMAW) II*	3
MFAB 215	Fabrication Practices I*	3
INDT 155	Workplace Skills	1
MFAB 220	Flux Core Arc Welding (FCAW)*	3
INDT 125	Industrial Safety/OSHA 30	3
Total Hours		16

### Third Semester (Manufacturing Option)

MFAB 205	Shielded Metal Arc Welding (SMAW) II*	3
MFAB 210	Gas Metal Arc Welding (GMAW) II*	3
MFAB 255	Advanced Machine Tool Technology*	3
INDT 155	Workplace Skills	1
MFAB 241	Gas Tungsten Arc Welding (GTAW) II*	3
INDT 125	Industrial Safety/OSHA 30	3
Total Hours		16

## Fourth Semester (Structural Option)

Related Electives (see below)		6
Note: CET 150 is strongly recommended as an elective		
MFAB 259	Shielded Metal Arc Welding (SMAW) III*	3
MFAB 250	Fabrication Practices II*	3
Humanities Elective ^		3
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Total Hours		15

^ Humanities Elective (<http://catalog.jccc.edu/spring/degreecertificates/electives/humanities-aas>)

## Fourth Semester (Manufacturing Option)

Related Electives (see below)		6
Note: CET 150 is strongly recommended as an elective		
MFAB 152	Manufacturing Materials and Processes	3
MFAB 140	Maintenance Repair Welding*	3
Humanities Elective ^		3
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Total Hours		15

^ Humanities Elective (<http://catalog.jccc.edu/spring/degreecertificates/electives/humanities-aas>)

## Related Electives

AUTO 121	Small Engine Service	3
BUS 120	Management Attitudes and Motivation	3
BUS 140	Principles of Supervision	3
BUS 145	Small Business Management	3
ENTR 142	Fast Trac Business Plan	3
CET 105	Construction Methods	3
CET 150	Construction Safety	3
CIS 124	Introduction to Computer Concepts and Applications	3
ELEC 131	Introduction to Sensors and Actuators	3
ELEC 133	Programmable Controllers	3
HVAC 167	Sheet Metal Layout and Fabrication	3
MATH 131	Technical Mathematics II*	3
MFAB 140	Maintenance Repair Welding*	3
MFAB 152	Manufacturing Materials and Processes	3
MFAB 203	Introduction to Ornamental Iron*	3
MFAB 215	Fabrication Practices I*	3
MFAB 220	Flux Core Arc Welding (FCAW)*	3
MFAB 241	Gas Tungsten Arc Welding (GTAW) II*	3
MFAB 250	Fabrication Practices II*	3
MFAB 255	Advanced Machine Tool Technology*	3
MFAB 259	Shielded Metal Arc Welding (SMAW) III*	3
MFAB 271	Metal Fabrication Internship*	3

**Total Program Hours: 64**