

Welding Technology

A50420 (Associate Degree) D50420 (Diploma) C50420A (Certificate) C50420B (Certificate)

This curriculum provides students with a sound understanding of the science, technology, and applications essential for successful employment in the welding and metal industry.

Instruction includes consumable and non-consumable electrode welding and cutting processes. Courses in math, blueprint reading, metallurgy, welding inspection, and destructive and non-destructive testing provides the student with industry-standard skills developed through classroom training and practical application.

Successful graduates of the Welding Technology curriculum may be employed as entry-level technicians in welding and metalworking industries. Career opportunities also exist in construction, manufacturing, fabrication, sales, quality control, supervision, and welding-related self-employment.

In addition to the courses listed below, students may be required to take developmental classes based on their placement test scores. These classes do not count toward hours required for graduation.

Associate Degree Program

Title Class/Lab/Clinical/WorkCredit

I. General Education Courses

COM	120	Interpersonal Communications	3	0	3
ENG	111	Writing and Inquiry	3	0	3
MAT	121	Algebra and Trigonometry I	2	2	3

Select one course each from Humanities/Fine Arts and Social/Behavioral Sciences on page 79.

II. Major Courses

WLD	110	Cutting Processes	1	3	2
WLD	112	Basic Welding	1	3	2
WLD	115	SMAW (Stick) Plate	2	9	5
WLD	116	SMAW (Stick) Plate/Pipe	1	9	4
WLD	121	GMAW (MIG) FCAW/Plate	2	6	4
WLD	131	GTAW (TIG) Plate	2	6	4
WLD	141	Symbols & Specifications	2	2	3
WLD	143	Welding Metallurgy	1	2	2
WLD	151	Fabrication I	2	6	4

III. Other Major Courses (Must be selected from identified prefixes)

Take 8 credits

ISC	112	Industrial Safety	2	0	2
MAC	151	Machining Calculations	1	2	2
MEC	142	Physical Metallurgy	1	2	2
WLD	261	Certification Practices	1	3	2
WBL	111	Work-Based Learning I	0	10	1
WBL	112	Work-Based Learning I	0	20	2
WBL	113	Work-Based Learning I	0	30	3

WBL	114	Work-Based Learning I	0	40	4
WBL	121	Work-Based Learning II	0	10	1
WBL	122	Work-Based Learning II	0	20	2
WBL	123	Work-Based Learning II	0	30	3
WBL	124	Work-Based Learning II	0	40	4
WBL	131	Work-Based Learning III	0	10	1
WBL	132	Work-Based Learning III	0	20	2
WBL	133	Work-Based Learning III	0	30	3
WBL	134	Work-Based Learning III	0	40	4
WBL	211	Work-Based Learning IV	0	10	1
WBL	212	Work-Based Learning IV	0	20	2
WBL	213	Work-Based Learning IV	0	30	3
WBL	214	Work-Based Learning IV	0	40	4

Take 11 credits

BPR	111	Print Reading	1	2	2
CIS	110	Introduction to Computers	2	2	3
MAC	121	Intro to CNC	2	0	2
MAC	122	CNC Turning	1	3	2
MAC	124	CNC Milling	1	3	2

IV. Other Required Courses

ACA	115	Success and Study Skills	0	2	1
ACA	220	Professional Transition	1	0	1

Total Credits: 66

Recommended Semester Schedule

First Year-Fall

ACA	115	Success and Study Skills	0	2	1
WLD	112	Basic Welding	1	3	2
WLD	141	Symbols & Specifications	2	2	3
BPR	111	Print Reading	1	2	2
MAC	121	Intro to CNC	2	0	2
ISC	112	Industrial Safety	2	0	2
MAC	151	Machining Calculations	1	2	2

First Year-Spring

WLD	110	Cutting Processes	1	3	2
WLD	115	SMAW (Stick) Plate	2	9	5
WLD	131	GTAW (TIG) Plate	2	6	4
MAC	122	CNC Turning	1	3	2

First Year-Summer

ENG	111	Writing and Inquiry	3	0	3
MAT	121	Algebra and Trigonometry I	2	2	3
Humanities		Student Choice	3	0	3

Social Science	Student Choice	3	0	3
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Second Year-Fall

CIS	110	Introduction to Computers	2	2	3
MEC	142	Physical Metallurgy	1	2	2
WLD	116	SMAW (Stick) Plate/Pipe	1	9	4
WLD	121	GMAW (MIG) FCAW/Plate	2	6	4

Second Year-Spring

ACA	220	Professional Transition	1	0	1
COM	120	Interpersonal Communications	3	0	3
MAC	124	CNC Milling	1	3	2
WLD	143	Welding Metallurgy	1	2	2
WLD	151	Fabrication I	2	6	4
WLD	261	Certification Practices	1	3	2

Welding Technology Diploma Program (D50420)

Title	Class/Lab/Credit		
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I. General Education Courses

ENG	101	Applied Communications I	3	0	3
MAT	110	Mathematical Measurement and Literacy	2	2	3

II. Major Courses

WLD	110	Cutting Processes	1	3	2
WLD	112	Basic Welding	1	3	2
WLD	115	SMAW (Stick) Plate	2	9	5
WLD	116	SMAW (Stick) Plate/Pipe	1	9	4
WLD	121	GMAW (MIG) FCAW/Plate	2	6	4
WLD	131	GTAW (TIG) Plate	2	6	4
WLD	141	Symbols & Specifications	2	2	3
WLD	143	Welding Metallurgy	1	2	2
WLD	151	Fabrication I	2	6	4

III. Other Major Courses (Must be selected from identified prefixes)

Take 7 credits

CIS	110	Introduction to Computers	2	2	3
ISC	112	Industrial Safety	2	0	2
WLD	261	Certification Practices	1	3	2
WBL	111	Work-Based Learning I	0	10	1
WBL	112	Work-Based Learning I	0	20	2
WBL	121	Work-Based Learning II	0	10	1
WBL	122	Work-Based Learning II	0	20	2
WBL	131	Work-Based Learning III	0	10	1
WBL	132	Work-Based Learning III	0	20	2
WBL	211	Work-Based Learning IV	0	10	1
WBL	212	Work-Based Learning IV	0	20	2

IV. Other Required Courses

ACA	115	Success and Study Skills	0	2	1
ACA	220	Professional Transition	1	0	1

Total Credits: 45

Recommended Semester Schedule

First Year-Fall

ACA	115	Success and Study Skills	0	2	1
WLD	112	Basic Welding	1	3	2
WLD	141	Symbols & Specifications	2	2	3
ISC	112	Industrial Safety	2	0	2

First Year-Spring

WLD	110	Cutting Processes	1	3	2
WLD	115	SMAW (Stick) Plate	2	9	5
WLD	131	GTAW (TIG) Plate	2	6	4

First Year-Summer

CIS	110	Introduction to Computers	2	2	3
MAT	110	Mathematical Measurement and Literacy	2	2	3

Second Year-Fall

WLD	116	SMAW (Stick) Plate/Pipe	1	9	4
WLD	121	GMAW (MIG) FCAW/Plate	2	6	4

Second Year-Spring

ACA	220	Professional Transition	1	0	1
ENG	101	Applied Communications I	3	0	3
WLD	143	Welding Metallurgy	1	2	2
WLD	151	Fabrication I	2	6	4
WLD	261	Certification Practices	1	3	2

Welding Technology Certificate Program (C50420A) Level I

Title Class/Lab/Credit

I. Major Courses

WLD	110	Cutting Processes	1	3	2
WLD	115	SMAW (Stick) Plate	2	9	5
WLD	131	GTAW (TIG) Plate	2	6	4
WLD	143	Welding Metallurgy	1	2	2

Total Credits: 13

*High School Articulation: Welding Technology I= WLD 110, Welding Technology I and II = WLD 110 and WLD 115

Recommended Semester Schedule

First Year-Spring

WLD	110	Cutting Processes	1	3	2
WLD	115	SMAW (Stick) Plate	2	9	5
WLD	131	GTAW (TIG) Plate	2	6	4
WLD	143	Welding Metallurgy	1	2	2

Welding Technology Certificate Program (C50420B) Level II

Title Class/Lab/Credit

I. Major Courses

WLD	110	Cutting Processes*	1	3	2
or					
WLD	112	Basic Welding Process	1	3	2
WLD	115	SMAW (Stick) Plate	2	9	5
WLD	121	GMAW (MIG) FCAW/Plate	2	6	4
WLD	131	GTAW (TIG) Plate	2	6	4
WLD	143	Welding Metallurgy	1	2	2

Total Credits: 17