



South Central College
Program Design

DIP3525/2263 Welding and Machining Technology

Program Information

Instructional Level Technical Diploma

Career Cluster Engineering, Manufacturing & Technology

Description

The Welding and Machining diploma consists of both the Welding and Right Skills Now Certificates. Both these entry level certificates give the students the foundational skills for a broadened manufacturing career pathway. During this diploma, learners will have the opportunity to receive national credentials from the American Welding Society (AWS) and the National Institute for Metalworking Skills (NIMS).

Program Student Learning Outcomes

- 1 Use appropriate shop safety practices
- 2 Identify blueprint symbols and geometric dimensioning and tolerancing (GD&T)
- 3 Set up various types of welding equipment for the material being welded
- 4 Set up various types of conventional and CNC machines for the material being machined

Program Configurations

Full Time Schedule MTT Start

Credits

Technical Course 33

Total Credits 33

Semester One

Course #	Course Title	Credits	Function
MTT 1110	CNC Milling Level I	5	Technical Course
MTT 1120	CNC Turning Level I	5	Technical Course
MTT 1130	Job Planning, Benchwork and Layout Level I	3	Technical Course
MTT 1140	Measurement, Materials and Safety Level I	3	Technical Course

MTT 1150	Machining Computations	1	Technical Course
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Semester Two

Course #	Course Title	Credits	Function
WELD 1007	Blueprint Reading for Welding	2	Technical Course
WELD 1011	Welding Safety	1	Technical Course
WELD 1035	Introduction to Gas Metal Arc Welding (GMAW)	2	Technical Course
WELD 1045	Introduction to Gas Tungsten Arc Welding	3	Technical Course
WELD 1055	Cutting and Brazing	3	Technical Course
WELD 1075	Advanced Welding Lab	4	Technical Course
WELD 1025	Introduction to Shielded Metal Arc Welding (SMAW)	1	Technical Course

Full Time Schedule Welding Start

Semester 1

Course #	Course Title	Credits	Function
WELD 1007	Blueprint Reading for Welding	2	
WELD 1011	Welding Safety	1	
WELD 1025	Introduction to Shielded Metal Arc Welding (SMAW)	1	
WELD 1035	Introduction to Gas Metal Arc Welding (GMAW)	2	
WELD 1045	Introduction to Gas Tungsten Arc Welding	3	
WELD 1055	Cutting and Brazing	3	
WELD 1075	Advanced Welding Lab	4	

Semester 2

Course #	Course Title	Credits	Function
MTT 1110	CNC Milling Level I	5	
MTT 1120	CNC Turning Level I	5	
MTT 1130	Job Planning, Benchwork and Layout Level I	3	
MTT 1140	Measurement, Materials and Safety Level I	3	
MTT 1150	Machining Computations	1	

Part Time Schedule MTT Start

Semester 1

Course #	Course Title	Credits	Function
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MTT 1130	Job Planning, Benchwork and Layout Level I	3	
MTT 1140	Measurement, Materials and Safety Level I	3	
MTT 1150	Machining Computations	1	

Semester 2

Course #	Course Title	Credits	Function
MTT 1110	CNC Milling Level I	5	
MTT 1120	CNC Turning Level I	5	

Semester 3

Course #	Course Title	Credits	Function
WELD 1007	Blueprint Reading for Welding	2	
WELD 1011	Welding Safety	1	
WELD 1055	Cutting and Brazing	3	

Semester 4

Course #	Course Title	Credits	Function
WELD 1075	Advanced Welding Lab	4	
WELD 1045	Introduction to Gas Tungsten Arc Welding	3	
WELD 1035	Introduction to Gas Metal Arc Welding (GMAW)	2	
WELD 1025	Introduction to Shielded Metal Arc Welding (SMAW)	1	

Part Time Schedule Welding Start

Semester 1

Course #	Course Title	Credits	Function
WELD 1007	Blueprint Reading for Welding	2	
WELD 1011	Welding Safety	1	
WELD 1025	Introduction to Shielded Metal Arc Welding (SMAW)	1	
WELD 1055	Cutting and Brazing	3	

Semester 2

Course #	Course Title	Credits	Function
WELD 1075	Advanced Welding Lab	4	
WELD 1045	Introduction to Gas Tungsten Arc Welding	3	
WELD 1035	Introduction to Gas Metal Arc Welding (GMAW)	2	

Semester 3

Course #	Course Title	Credits	Function
MTT 1130	Job Planning, Benchwork and Layout Level I	3	
MTT 1140	Measurement, Materials and Safety Level I	3	
MTT 1150	Machining Computations	1	

Semester 4

Course #	Course Title	Credits	Function
MTT 1110	CNC Milling Level I	5	
MTT 1120	CNC Turning Level I	5	

Program Course List

Number	Title	Credits	Pre/Corequisites
MTT 1110	CNC Milling Level I	5	Declare MTT as a major.
MTT 1120	CNC Turning Level I	5	Declare MTT as a major.
MTT 1130	Job Planning, Benchwork and Layout Level I	3	Declare MTT as a major.
MTT 1140	Measurement, Materials and Safety Level I	3	Declare MTT as a major.
MTT 1150	Machining Computations	1	Declare MTT as a major.
WELD 1007	Blueprint Reading for Welding	2	None
WELD 1011	Welding Safety	1	None
WELD 1025	Introduction to Shielded Metal Arc Welding (SMAW)	1	None
WELD 1035	Introduction to Gas Metal Arc Welding (GMAW)	2	None
WELD 1045	Introduction to Gas Tungsten Arc Welding	3	None
WELD 1055	Cutting and Brazing	3	None
WELD 1075	Advanced Welding Lab	4	WELD 1011