



South Central College
Program Design

DIP 3665 Machine Tool Technology 1-Year Diploma

Program Information

Instructional Level Technical Diploma

Career Cluster Engineering, Manufacturing & Technology

Description

The diploma program consists of opportunities for students to work with multiple aspects of Machine Tool Technology including working with engineering drawings, CNC programming, lathe turning, vertical milling, grinding, and jig and fixtures. During this diploma program, learners will have the opportunity to receive national credentials from the National Institute for Metalworking Skills (NIMS).

Program Student Learning Outcomes

- 1 Operate industry-specific computer software
- 2 Demonstrate computer machining skills
- 3 Demonstrate safe machining practices
- 4 Produce quality machined parts
- 5 Evaluate the quality of machined parts against industry standards

Program Configurations

Full Time Schedule

Credits

Technical Course 31

Total Credits 31

Semester 1

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

Semester 2

Course #	Course Title	Credits	Function
MTT 1210	Concept Engineering I	4	Technical Course
MTT 1220	CNC Programming I	4	Technical Course
MTT 1230	Quality Assurance I	2	Technical Course
MTT 1240	Applications I	3	Technical Course
CMAE 1528	Career Success Skills	1	Technical Course

Part Time Schedule

Semester 1

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 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
CMAE 1528	Career Success Skills	1	
MTT 1230	Quality Assurance I	2	
MTT 1210	Concept Engineering I	4	

Semester 4

Course #	Course Title	Credits	Function
MTT 1240	Applications I	3	
MTT 1220	CNC Programming I	4	

Program Course List

Number	Title	Credits	Pre/Corequisites
CMAE 1528	Career Success Skills	1	None
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.
MTT 1210	Concept Engineering I	4	MTT 1130 and MTT 1140
MTT 1220	CNC Programming I	4	MTT 1110 and MTT 1120
MTT 1230	Quality Assurance I	2	MTT 1130 and MTT 1140
MTT 1240	Applications I	3	MTT 1110 and MTT 1120