

MTT - MACHINE TOOL TECH (MTT)

MTT 101 Introduction to Machine Tool 2 SHC

This course covers the basics in measuring tools, layout tools, bench tools and basic operations of lathes, mills and drill presses.

Lecture Hours: 1

Lab/Clinical Hours: 3

MTT 105 Machine Tool Math Applications 3 SHC

This course is a study of shop math relevant to the machine tool trade.

Lecture Hours: 3

Lab/Clinical Hours: 0

MTT 120 Machine Tool Print Reading 3 SHC

This course is designed to develop the basic skills and terminology required for visualization and interpretation of common blueprints used in the machine tool trades.

Lecture Hours: 3

Lab/Clinical Hours: 0

MTT 121 Machine Tool Theory I 3 SHC

This course covers the principles involved in the production of precision metal parts.

Lecture Hours: 3

Lab/Clinical Hours: 0

MTT 122 Machine Tool Practice I 4 SHC

This course covers practical experiences using the principles in Machine Tool Theory I.

Lecture Hours: 0

Lab/Clinical Hours: 12

MTT 123 Machine Tool Theory II 3 SHC

This course covers the principles involved in machining parts using machine tools including lathes, mills, drill presses, jig bores and the attachments for each.

Lecture Hours: 3

Lab/Clinical Hours: 0

MTT 124 Machine Tool Practice II 4 SHC

This course covers the practical application of the principles taught in Machine Tool Theory II.

Prerequisites: MTT 122.

Lecture Hours: 0

Lab/Clinical Hours: 12

MTT 126 Machine Tool Practice III 4 SHC

This course covers the practical application of the Principles in Machine Tool Theory III.

Prerequisites: MTT 124.

Lecture Hours: 0

Lab/Clinical Hours: 12

MTT 130 Fundamentals of Geometric Dimensions and Tolerances 2 SHC

This course covers the basic uses and interpretation of geometric dimensions and tolerances as specified for machine trade prints.

Lecture Hours: 2

Lab/Clinical Hours: 0

MTT 141 Metals and Heat Treatment 3 SHC

This course is a study of the properties, characteristics and heat treatment procedures of metals.

Lecture Hours: 3

Lab/Clinical Hours: 0

MTT 143 Precision Measurements 2 SHC

This course is a study of precision measuring instruments.

Lecture Hours: 2

Lab/Clinical Hours: 0

MTT 161 Machine Tool Maintenance Theory 2 SHC

This course covers maintenance requirements necessary for the upkeep and operation of a machine shop.

Lecture Hours: 2

Lab/Clinical Hours: 0

MTT 162 Machine Tool Maintenance Practice 4 SHC

This course covers a variety of maintenance tasks necessary for the upkeep and operation of a machine shop.

Lecture Hours: 0

Lab/Clinical Hours: 12

MTT 175 Innovations in Machining Technology 3 SHC

This course covers changes in machining technologies, major advancements in the machine tool field or specialty training items.

Lecture Hours: 3

Lab/Clinical Hours: 0

MTT 221 Tool and Diemaking Theory I 3 SHC

This course covers the theory of a blanking and piercing die.

Lecture Hours: 3

Lab/Clinical Hours: 0

MTT 222 Tool and Diemaking Practice I 4 SHC

This course covers the manufacture of a simple cutting die or tools.

Prerequisites: MTT 126.

Lecture Hours: 0

Lab/Clinical Hours: 12

MTT 223 Tool and Diemaking Theory II 3 SHC

This course covers the theory applied to the construction of a compound and/or progressive die.

Lecture Hours: 3

Lab/Clinical Hours: 0

MTT 224 Tool and Diemaking Practice II 4 SHC

This course covers the construction of a compound and/or progressive die or tools.

Lecture Hours: 0

Lab/Clinical Hours: 12

MTT 243 Advanced Dimensional Metrology Machinists 3 SHC

This course is a study of higher levels of measurement, measuring instruments and measuring techniques. The course consists of a theoretical and practical study incorporating the metric system, geometric dimensioning/ tolerancing, sine bars/plates for compound angles and more.

Lecture Hours: 3

Lab/Clinical Hours: 0

**MTT 250 Principles of CNC 3 SHC**

This course is an introduction to the coding used in CNC programming.

Lecture Hours: 3

Lab/Clinical Hours: 0

MTT 251 CNC Operations 3 SHC

This course is a study of CNC machine controls, setting tools and machine limits and capabilities.

Lecture Hours: 2

Lab/Clinical Hours: 3

MTT 253 CNC Programming and Operations 3 SHC

This course is a study of the planning, programming and selecting tooling, determining speeds and feeds, setting up, operating and testing of CNC programs on CNC machines.

Lecture Hours: 2

Lab/Clinical Hours: 3

MTT 259 EDM Programming and Operation 5 SHC

This course covers basic programming and operations of the electrical discharge machine.

Lecture Hours: 4

Lab/Clinical Hours: 3

**MTT 270 Operation and Programming of Coordinate Measuring
Machines 3 SHC**

This course is a study of the operation, application and programming of coordinate measuring machines (CMM).

Lecture Hours: 3

Lab/Clinical Hours: 0