

# MACHINE TOOL TECHNOLOGY

## MTT – Machine Tool Technology

### MTT 101 Introduction to Machine Tool 1 - 3 - 2

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

### MTT 105 Machine Tool Math Applications 3 - 0 - 3

**Prerequisites:** MAT 170

**Corequisites:** MTT 112, MTT 130, MTT 141

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

### MTT 106 Machine Tool Computer App 3 - 0 - 3

This course is a study of basic computer applications that are used in machining industries. Topics will include word processing, ASCII text editing, spreadsheets, locating information on the internet and serial communcal concepts.

### MTT 111 Machine Tool Theory & Prac I 1 - 12 - 5

This course is an introduction to the basic operation of machine shop equipment.

### MTT 112 Machine Tool Theory & Prac II 1 - 12 - 5

**Prerequisites:** MTT 101 and MTT 111

**Corequisites:** MTT 105, MTT 130, MTT 141

This course is a combination of the basic theory and operation of machine shop equipment.

### MTT 113 Machine Tool Theory & Prac III 1 - 12 - 5

**Prerequisites:** MTT 101 and MTT 112

**Corequisites:** MTT 255

This advanced course is a combination of theory and practice to produce complex metal parts. This course will include advanced machining and grinding procedures required to complete all machining applications.

### MTT 120 Machine Tool Print Reading 3 - 0 - 3

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

### MTT 130 Fund of Geometric Dim & Tole 2 - 0 - 2

**Prerequisites:** MTT 120

**Corequisites:** MTT 105, MTT 112, MTT 141

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

### MTT 141 Metals & Heat Treatment 3 - 0 - 3

**Prerequisites:** MTT 101

**Corequisites:** MTT 105, MTT 112, MTT 130

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

### MTT 171 Industrial Quality Control 1 - 3 - 2

**Prerequisites:** MTT 112

**Corequisites:** MTT 241, MTT 249, MTT 250

This course covers the methods and procedures of quality control.

### MTT 241 Jigs and Fixtures I 1 - 3 - 2

**Prerequisites:** MTT 101

**Corequisites:** MTT 171, MTT 249, MTT 250

This course includes the theory necessary to design working prints of simple jigs and fixtures.

### MTT 249 Introduction to CAM 2 - 3 - 3

**Prerequisites:** MTT 112 and MTT 106

**Corequisites:** MTT 171, MTT 241, MTT 250

This course covers the basic commands necessary to create a simple part program for CNC machines using a graphics programming software.

### MTT 250 Principles of CNC 2 - 3 - 3

**Prerequisites:** MTT 112

**Corequisites:** MTT 171, MTT 241, MTT 249

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

### MTT 251 CNC Operations 2 - 3 - 3

**Prerequisites:** MTT 250

**Corequisites:** EGR 275, MTT 253, MTT 252, WLD 116

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

### MTT 252 CNC Setup and Operations 1 - 9 - 4

**Prerequisites:** MTT 250

**Corequisites:** EGR 275, MTT 251, MTT 253, WLD 116

This course covers CNC setup and operations.

### MTT 253 CNC Programming & Oper 1 - 6 - 3

**Prerequisites:** MTT 250

**Corequisites:** EGR 275, MTT 251, MTT 252, WLD 116

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

**MTT 254 CNC Programming I** 1-6-3

**Prerequisites:** *EGR 275*

**Corequisites:** *MTT 113, MTT 255*

This course is a study of CNC programming, including machine language and computer assisted programming.

**MTT 255 CNC Programming II** 2-3-3

**Corequisites:** *MTT 254, MTT 113*

This course includes CNC programming with simulated production conditions.