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 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 communical 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 241   Jigs and Fixtures I   1-3-2
Prerequisites: *MTT 101*
Corequisites: *CNC 206, MTT 249, MTT 250*

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

MTT 245   Rapid Prototype Setup & Op   1-6-3

This course is an introduction to the set-up, operation, prototyping of parts, maintenance, and safety of rapid prototyping equipment.

MTT 249   Introduction to CAM   2-3-3
Prerequisites: *MTT 112 and MTT 106*
Corequisites: *CNC 206, 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: *CNC 206, 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: *MTT 245, 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: *MTT 245, 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: *MTT 245, 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: *MTT 245*
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.