

MACHINE TOOL TECHNOLOGY (MTTC)

MTTC 2120 – Intro to Machine Tools**4 credit hours**

This course is an in-person course that will provide students with machine tool fundamentals to earn an industry-based certification for measurements, materials and safety. Students will be able to define machine tool technology, identify safety guidelines, use precision measuring tools (English and Metric systems), applied shop math, identify layout tools, identify metal composition and classification.

Flat Fee: 80**Co-requisite(s):** MTTC 2310, MTTC 2410**MTTC 2220 – Shaping and Forming****2 credit hours**

This course is an in-person course that provides basic instruction for common hand tools, engineering drawings, layout procedures, common semi-precision and precision layout tools, perform basic layout procedures.

Flat Fee: 80**Co-requisite(s):** MTTC 2120**MTTC 2310 – Basic Lathe****3 credit hours**

This course is an in-person course providing basic instruction for turning operations on an engine lathe, instruction is based on Machining Level 1 skill standards established by the National Institute for Metalworking Skills (NIMS).

Flat Fee: 80**Co-requisite(s):** MTTC 2120**MTTC 2330 – Advance Lathe****4 credit hours**

This course is an in-person course that provides advance instruction for turning operations on an engine lathe. Instruction is based on machining level II skill standards established by the National Institute for Metalworking Skills (NIMS). This course will provide the skills training that students need to be able to set up and operate an engine lathe and produce parts using advanced turning skills.

Flat Fee: 80**Pre-requisite(s):** MTTC 2310**MTTC 2350 – Survey Computer Aided Drafting****3 credit hours**

This course is an in-person course that provides Computer Aided Drafting instruction on various platforms. Students will learn to design parts for machining using Microsoft Fusion 360, SolidWorks and OnShape giving students experience with differing platforms used in business and industry. Students will be prepared to take the Autodesk Certified Professional in Design for Manufacturing at the completion of this course.

Schedule type: Lecture**MTTC 2410 – Basic Mill****3 credit hours**

This is an in-person course providing basic instruction for machining operations on a manual vertical milling machine. Instruction is based on Machining Level 1 skills standards established by the National Institute for Metalworking Skills (NIMS).

Flat Fee: 80**Co-requisite(s):** MTTC 2120**MTTC 2430 – Advanced Milling****4 credit hours**

This course is an in-person course that provides advance instruction for mill machining operations. Instruction is based on mill machining level II skills standards established by the National Institute of Metalworking Skills (NIMS).

Flat Fee: 80**Pre-requisite(s):** MTTC 2410**MTTC 2710 – CNC****4 credit hours**

This course is an in-person course that provides CNC instruction for CNC machining operations. Instruction is based on CNC Machining Level I Skills Standards established by the National Institute for Metalworking Skills (NIMS). The course will provide the skills training that students need to be able to set up and operate a CNC milling and a CNC lathe machines and produce parts using advance machining skills.

Flat Fee: 80**Pre-requisite(s):** MTTC 2310, MTTC 2410