

Virtual Machining & Design I, II

(Hampton Campus) Course #8539/ 8540
Manufacturing Technology Cluster
One Year Program



College
Credit
Available



About the program:

A one-year program that introduces students to using precision tools and instruments to include the operation and setup of various types of general machinery such as drill presses, bandsaws, belt sanders, disk sanders, bench grinders, manual milling machines, and lathes. There is also a focus on computer numerical control program writing, setup, and operation for lathe and milling machines. Students who successfully complete the Virtual Machining and Design program will earn dual enrollment credits and is eligible for a Virginia Peninsula Community College (VPCC) Virtual Machining and Design Career Studies Certificate upon graduation.

Topics of study:

- Systems of Units & Technical Blueprint Reading
- Use of Hand Tools & Precision Measuring Instruments
- Machine Shop Safety
- Operation of Basic Shop Machinery
- Operation of Manual Milling Machines and Lathes
- Programming Computerized Numeric Control Machines & Metallurgy
- Quality Control & Inspection Techniques

Dual Enrollment Requirements:

- According to Virginia Peninsula Community College, the student must possess a minimum GPA of 3.0 to show English & Math proficiency in order to receive dual enrollment credit.
- Completion of Algebra II with a grade of "C" or better **or** completed Algebra I and Geometry with a "B" or better

Certifications:

- National Institute for Metalworking Skills (NIMS) Exam
- NOCTI – Machining

Career Pathways:

- Advanced Computer Programming
- Mechanical Engineering Technology
- Computer-Aided Drafting Design CADD