Machining for Mechanical Engineering Technology Certificate of Achievement

**PROGRAM LEARNING OUTCOMES**

Students completing the program will be able to:

1. Read the drawing for an object and visualize the geometry.
2. Choose the correct manufacturing method for the object.
3. Manufacture an object from a given drawing using machine tools.
4. Use algebra, spreadsheets and measurement data to produce QC statistics.
5. Verify that products meet the design criteria.
6. Design and prototype mechanical parts under the supervision of engineers.
7. Use computer integrated manufacturing (CIM) and computer numerical control (CNC) software for automation of manufacturing.

**Careers in**

- Students will be prepared for careers that are highly in demand for aerospace, medical, electronic, high tech, and automotive and transport industries.
- Graduates of this program will be well equipped to continue their career advancement as engineers, product developers, prototype/model builders, production machinist, or electro-mechanical maintenance and repair specialists.

You need to see a Counselor for specific recommendations about courses that will best meet your educational goals. Not all courses on the map are offered every term. Consult the Catalog and the Schedule of Classes for more details.

For information about transferring, see: [https://www.dvc.edu/enrollment/transfer/index.html](https://www.dvc.edu/enrollment/transfer/index.html)

For information on careers in this field see: [https://www.dvc.edu/enrollment/career-employment/index.html](https://www.dvc.edu/enrollment/career-employment/index.html)

1-28-2021

**REQUIRED**

- ENGTC 119 Introduction to Technical Drawing
- ENGTC 129 Product Design I Using Solid Works
- ENGTC 162 Geometric Dimensioning and Tolerancing
- ENGTC 166 Machining and Manufacturing II
- ENGTC 126 Computer Aided Design and Drafting-AutoCAD
- ENGTC 160 Introduction to Industrial and Manufacturing Engineering
- ENGTC 165 Machining and Manufacturing I
- ENGTC 168 Introduction to Computer Numerical Control

**Please see required MATH prerequisites PLUS at least 3 units from**

- ENGTC 111 Mathematics for Technicians
- MATH 191 Pre-Calculus
- MATH 192 Analytic Geometry and Calculus I
- MATH 119 Beginning and Intermediate Algebra
- MATH 121 Plane Trigonometry

**total minimum required units 25**