PROGRAM LEARNING OUTCOMES

Students completing the program will be able to:

1. Discuss the role of the industrial maintenance machinist/mechanic in shop and field maintenance safety.
2. Interpret blueprints and technical drawings for parts manufacturing and maintenance repair operations.
3. Grind high speed steel tool bits for general purpose turning and threading.
4. Cut multiple lead and acme threads on a lathe.
5. Use the vertical milling machine to drill holes, index, bore hole to a specified diameter and depth, mill surfaces and edges, and use an indicator to reference work.
6. Replace a single mechanical seal in a centrifugal pump.
7. Align a pump shaft to a motor to a specified tolerance.

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

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

6-1-2021

Careers in

- The manufacturing industry including industrial machinery mechanics, maintenance specialists or technicians, and machinery maintenance workers in industries including chemical, refinery, and public works.

Required

ENGTC 111 Mathematics for Technicians
ENGTC 119 Introduction to Technical Drawing
ENGTC 165 Machining and Manufacturing I
ENGTC 166 Machining and Manufacturing II
ENGTC 175 Hydraulic and Pneumatic Systems and Components
ENGTC 176 Mechanical Systems and Components
CONST 110 Occupational Safety
ELECT 110 Survey of Electricity
MATH 119 Beginning and Intermediate Algebra
MATH 121 Plane Trigonometry
MATH 191 Pre-Calculus
MATH 192 Analytic Geometry and Calculus I
MATH 193 Calculus II
MATH 195 Calculus III

PLUS at least 0-5 units from

ENGTC 167 Engineering Graphics
ENGTC 168 Mechatronics
ENGTC 170 Refrigeration and Air Conditioning
ENGTC 171 Automotive Systems
ENGTC 172 Electronics
ENGTC 173 Welding
ENGTC 174 Turbomachinery
ENGTC 177 Advanced Macchining and Manufacturing

Total minimum required units 19

Required

Elective

ENGTC mTECH Industrial Maintenance Machinist/Mechanic Certificate of Achievement