# Journeyman Machining Technology, AAS
## School of Technology

This program prepares students for employment, advancement and certification in both the manual and computer numerical control (CNC) machining industries. Students will learn to read and interpret prints, use common hand tools, set up and operate metal cutting machines including mills, lathes and grinders and use precision measuring equipment. Students will also learn to create machine code programs for CNC equipment, and load, troubleshoot and execute the programs on CNC equipment including three-, four- and five-axis mills and two- and three- axis lathes. Students will fulfill the required classroom training hours for the Pennsylvania Journeyman Certificate, which may be obtained by completing the required shop experience hours from an associated machine shop.

### Career Opportunities

Graduates of this program can expect to be employed as machinists, tool and die makers, metalworkers, CNC programmers and CNC operators. This program can also benefit those desiring to become managers and designers.

### Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Select appropriate materials and processes to produce parts
- Interpret conventional and GD&T blueprints.
- Utilize mathematics in the layout and production of parts.
- Design parts and fixtures using CAD drafting software.
- Produce G-code machine programs using CAM software.
- Effectively plan and sequence work operations.
- Produce quality parts and fixtures using various materials.
- Inspect parts based on tolerance specifications.
- Analyze and solve hardware and production problems.
- Communicate effectively and appropriately.

| Sugg. Term | Seq # | Course ID | Course Title | Cr. | Term Offered | Prereq(s) | Options Available |
|---|---|---|---|---|---|---|---|
| 1st Fall | 1 | PDV 101 | First Year Seminar | 1 | F, Sp, Su | | |
| | 2 | CNC 111 | Computer Numerical Control I | 4 | F, Sp | | |
| | 3 | MTT 101 | Blueprints | 4 | F | | |
| | 4 | MTT 111 | Machining I | 4 | F | | |
| | 5 | MTH 108 | Mathematics for Technologies I | 4 | F, Sp, Su | MTH 052, 052A or Placement | |
| 1st Spring | 6 | CNC 112 | Computer Numerical Control II | 4 | F, Sp | CNC 111 | |
| | 7 | DFT 258 | AutoCAD | 4 | F, Sp | | |
| | 9 | MTT 112 | Machining II | 4 | Sp | MTT 111 | |
| | 10 | MTH 109 | Mathematics for Technologies II | 4 | F, Sp, Su | MTH 108 or Placement | |
| 2nd Fall | 11 | CNC 213 | Computer Numerical Control III | 4 | F | CNC 112 | |
| | 12 | MTT 207 | Tool Design | 3 | F | | |
| | 13 | MTT 201 | Inspection | 3 | F | MTT 101 | |
| | 14 | Elective | Restricted Elective | 4 | F, Sp, Su | | See List |
| | 15 | ENG 161 | College Writing | 3 | F, Sp, Su | ENG 085 or Placement | |
| 2nd Spring | 16 | ENG 162 | Technical Communication | 3 | F, Sp, Su | ENGL 161 | |
| | 17 | DFT 112 | Introduction to Design, Materials, and Processing | 3 | F, Sp | | |
| | 18 | MTT 202 | Maintenance | 3 | Sp | MTT 111 | |
| | 19 | Elective | Restricted Elective | 4 | F, Sp, Su | | See List |
| | 20 | Elective | Social Science Elective | 3 | F, Sp, Su | | Page 49 Column III |

**Total Program Credits** **66**

Restricted Electives:
DFT 266 Inventor
CNC 214 Computer Numerical Control IV
MTT 213 Machining III
MTT 214 Machining IV
WEL 125 Introduction to Welding
Courses with prefix: DFT, RBT, ELC, EGR, HAC, MET, PHY, WEL (Prefix courses must be approved and meet credit requirements.)