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.

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Sugg. Term	Seq #	Course ID	Course Title	Cr	Term Offered	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CNC 111	Computer Numerical Control I	4	F, Sp	Co: MTH 052, Placement, or Instructor Permission	
	3	MTT 101	Blueprints	4	F	Co: MTH 052, Placement, or Instructor Permission	
	4	MTT 111	Machining I	4	F, SP	Co: MTH 052, Placement, or Instructor Permission	
	5	MTH 104	Introduction to Applied Mathematics	4	F, Sp, Su	MTH 050, 050A or Placement	
1st Spring	6	CNC 112	Computer Numerical Control II	4	F, Sp	CNC 111, or Instructor Permission Co: MTH 104, Placement, or Instructor Permission	
	7	DFT 258	AutoCAD	4	F, Sp, Su		
	8	MTT 112	Machining II	4	Sp	MTT 111, or Instructor Permission Co: MTH 104, Placement, or Instructor Permission	
	9	MTH 108	Mathematics for TechnologiesI	4	F, Sp, Su	MTH 104 or Placement	
2nd Fall	10	CNC 213	Computer Numerical Control III	4	F	CNC 112	
	11	MTT 207	Tool Design	3	F	MTT 111 and CNC 111	
	12	MTT 201	Inspection	3	F	MTT 101	
	13	Elective	Restricted Elective	4	F, Sp, Su		See List
	14	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
2nd Spring	15	ENG 162	Technical Communication	3	F, Sp, Su	ENGL 161	
	16	DFT 112	Introduction to Design, Materials, and Processing	3	F, Sp		
	17	MTT 202	Maintenance	3	Sp	MTT 111	
	18	Elective	Restricted Elective	4	F, Sp, Su		See List
	19	Elective	Social Science Elective	3	F, Sp, Su		Page 27 Column III
Total Program Credits				66			JRM

Restricted Electives:
DFT 266 3D Solid Modeling I
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.)