CNC MACHINING TECHNOLOGY, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Computer Numerical Control (CNC) machinists manufacture precision parts and products. They often complete many set-ups for short runs to meet just-in-time delivery demands. People who enter this field must be flexible and have basic knowledge of machine tool CNC.

Students program, edit, set up and operate CNC lathes and mills, as well as study quality control methods known as statistical process control. They also learn special quality control equipment, such as coordinate measuring machines, and advanced automated production methods.

Students can transfer credits from this program to UNI and work toward a B.A. in Technology Management and the University of Iowa and work towards a B.A. in Applied Studies.

Students are required to attain the following third party credentials as a a part of the two year AAS degree program: NIMS Level 1 Certifications.

Career Opportunities

- machinist
- mold builder
- salesperson
- job shop technician
- CNC programmer/operator
- quality control technician
- tool and die maker

Degree Requirements

Course	Title	Credit Hours
Term 1		
Fall		
MFG-128	Measurement, Materials, & Safety (nims)	2
MFG-129	Job Planning, Benchwork, and Layout (nims)	2
MFG-297	Milling Machine Operations (NIMS)	3
MFG-299	Turning Operations (Turning Between Centers - NIMS)	3
MFG-324	Turning Operations (Turning in a Chuck - NIMS)	3
MAT-735	Machinist Mathematics I	2
MFG-120	Machine Trade Printreading I	1
	Term Totals:	**16**
Term 2		
Spring		
MFG-173	CNC Mill Operator (NIMS)	2
MFG-174	CNC Lathe Operator (NIMS)	2
MFG-298	Surface Grinding Operations (NIMS)	2
MFG-332	CNC Mill Program and Setup (NIMS)	3
MFG-334	CNC Lathe Program & Setup (NIMS)	3
MAT-736	Machinist Mathematics II	1
MFG-130	Machine Trade Printreading II	1
IND-156	Microcomputers for the Trades	2
	Term Totals:	**16**
Term 3		
Summer		
MFG-281	CNC Punch Press Operations (NIMS)	3
MFG-287	Manual Press Brake Operator (NIMS)	3
MFG-339	CNC Press Brake Operator (NIMS)	2
MFG-420	Jig and Fixture Design	2
	Term Totals:	**10**
Term 4		
Fall		
CAD-237	Geometric Dimensioning and Tolerancing	3
CAD-300	AutoCAD for Applied Engineering	2
CAD-301	Inventor for Applied Engineering	2
MFG-342	CNC Lathe Operations (NIMS)	2
MFG-343	CNC Milling Operations (NIMS)	2
Communications Course		3
Humanities or History/Culture Course (https://creditcatalog.kirkwood.edu/aas-degree-humanities-requirement/)		3
	Term Totals:	**17**
Term 5		
Spring		
MFG-396	Alternative Manufacturing Processes	3
MFG-317	Automated Production Methods	5
MFG-348	EDM Wire Operations (NIMS)	1
Communications Course		3
MGT-145 or PSY-111	Human Relations in Management or Introduction to Psychology	3
	Term Totals:	**15**
	Program Totals:	**74**

Optional Courses

Code	Title	Credit Hours
MFG-924	Honors Project	1
MFG-928	Independent Study	1-3

CNC Machining Technology Tool Requirements

Students in the CNC Machining Technology program are required to have a tool set for lab activities. During the first or second week of classes, a tool vendor will offer products to students at a considerable discount off the list prices. Instructors provide students with a list of minimum tool requirements. The cost of tools is estimated to be around $2,500 and payment plans are arranged directly with manufacturers.