

Computer Numerical Controlled (CNC) Machining

Program

Advanced Manufacturing

Degree Type

Associate in Applied Science (AAS)

The Associate in Applied Science in Advanced Manufacturing with a concentration in Computer Numerical Control (CNC) Machining is designed to prepare individuals for employment in the industry as a CNC machinist. CNC Machinists produce precision metal parts, using machine tools such as lathes, drill presses, and milling machines. Also, machinists and tool programmers set up and operate a wide variety of machine tools, using their knowledge of the working properties of metals. They plan and carry out the operations needed to make machined products that meet precise specifications. Students in the Advanced Machining program manufacture, assemble, and repair metal parts, subassemblies, and complete machines. Increasingly machines used to produce metal parts are computer numerically controlled (CNC) with 3, 4 and 5 axis programming. Students in this program are required to participate in 3rd party credentialing such as NIMS and NOCTI activities prior to graduation. This concentration area has a series of stackable short term certificates focused on specific skill sets an individual can earn as they progress toward an Associate degree or take in order to develop their skills in a particular area of demand.

First Term

Item #	Title	Credits
ADM 291	MSSC SAFETY	3
MSP 104	BASIC MACHINING CALCULATIONS	2
MSP 121	BASIC BLUEPRINT READING FOR MACHINISTS	2
MSP 125	INTRODUCTION TO MACHINING TECHNOLOGY	3
	MTH 100 or MTH 110	3

Second Term

Item #	Title	Credits
ADM 292	MSSC QUALITY PRACTICES AND MEASUREMENT	3
MSP 105	LATHES	3
MSP 107	MILLING MACHINES	3
MTT 127	METROLOGY	3
ENG 101	ENGLISH COMPOSITION I	3

Third Term

Item #	Title	Credits
ADM 293	MSSC MANUFACTURING PROCESSES AND PRODUCTION	3
MSP 112	BASIC COMPUTER NUMERICAL CONTROL TURNING	3
MTT 140	BASIC COMPUTER NUMERICAL CONTROL TURNING PROGRAMMING I	3
MTT 243	CNC TURNING LAB I	3
	Natural Science or Mathematics Elective	3

Fourth Term

Item #	Title	Credits
ADM 294	MSSC MAINTENANCE AWARENESS	3
MSP 111	INTRODUCTION TO COMPUTER NUMERICAL CONTROL	2
MSP 212	COMPUTER NUMERICAL CONTROL LAB	3
MTT 109	ORIENTATION TO COMPUTER ASSISTED MANUFACTURING	3
	Humanities and Fine Arts Elective	3

Fifth Term

Item #	Title	Credits
MSP 113	BASIC COMPUTER NUMERICAL CONTROL MILLING	3
MTT 128	GEOMETRIC DIMENSIONING AND TOLERANCE I	3
CNC 213	ADVANCED COMPUTER NUMERICAL CONTROL MILLING	3
CNC 223	COMPUTER NUMERICAL CONTROL GRAPHICS PROGRAMMING: MILLING	3
	Social and Behavioral Sciences Elective	3
	Total Credits	72