

Machine Shop Technology 309999 MWT
AOT Degree

Available: Shoals Campus
Advisors: T. Maupin (5247) tmaupin@nwscc.edu
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Students desiring to receive the AOT Award must complete all major certificate courses, one minor certificate course of study, and the required credit hours of general education courses in Areas I, II, III, and IV. Upon completion of all the courses listed, students are eligible to receive the Associate in Occupational Technology Degree. Students desiring to take general education courses for transfer to another institution should consult an advisor for proper general education course selection.

Core Degree Requirements for the Associate in Occupational Technology Degree

Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.

	Semester Hours
Area I: Written Composition 3 English Composition I and/or Technical Writing	3
Area II: Humanities and Fine Arts 3	3
Area III: Natural Science and Mathematics 9 A minimum of 3 hours in degree creditable mathematics is required. The additional 6 hours of degree creditable coursework may be taken from disciplines of math, biology, chemistry, physical science, physics, environmental technology and computer science.	9
Area IV: History, Social and Behavioral Sciences 3 Courses may be taken from the disciplines of history, economics, geography, political science, psychology, and sociology.	3

Minimum General Requirements 18

Major Requirements Semester Hours

MSP 101 Basic Machining Technology 5	5
MSP 102 Intermediate Machining Technology 5	5
MSP 103 Advanced Machining Technology 5	5
MSP 104 Basic Machining Calculations 2	2
MSP 105 Lathes 3	3
MSP 107 Milling Machines 3	3
MSP 115 Advanced Milling Machines 5	5
MSP 121 Basic Blueprint Reading for Machinists 2	2
MSP 131 Introduction to Metrology 2	2
MSP 142 Advanced Machining Calculations 2	2
MSP 181 Special Topics 2	2
MSP 221 Advanced Blueprint Reading 2	2
MSP Electives 7	7
Total Major Requirements 45	45

Minor Requirements

Welding

WDT 108 SMAW Fillet/OFC 3	3
WDT 109 SMAW Fillet/PAC/CAC 3	3
WDT 122 SMAW Fillet/OFC Lab 3	3
WDT 123 SMAW Fillet/PAC/CAC Lab 3	3
Total Minor Requirements 12	12

General Requirements 18

Total Requirements for AOT Degree 75

*Computer competency skills are embedded within one or more courses required in this curriculum.

Machine Shop/ 480503 MSP
Computer Numerical Control (CNC)
Career Certificate

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This certificate is designed to prepare students to enter the machine tool industry. Students entering this plan should have good manual dexterity to operate equipment, spatial comprehension, and math skills to interpret part shape and size from blueprints and a good mechanical aptitude. No high school diploma or GED is required, but students must be at least 16 years of age to enroll. Students without GED's are encouraged to use the College facilities to obtain a diploma while in the program.

The five-semester day plan (nine semester extended plan) exposes the student to most machine shop equipment. The student will operate drills, lathes, milling machines, and grinders. During the fourth semester, the student has the opportunity to learn the basics of CNC (Computer Numerical Control) programming, setup, and operation. An extensive study of CAM (Computer Aided Machining) is available through an elective course.

Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.

	Semester		
	Theory	Lab	Hours
COM 100 Introductory Technical English I or ENG 101 English Composition I	3	0	3
MAH 101 Introductory Mathematics or MTH 100 College Mathematics	3	0	3
MSP 101 Basic Machining Technology	1	11	5
MSP 102 Intermediate Machining Tech.	1	11	5
MSP 103 Adv. Machining Technology	1	11	5
MSP 104 Basic Machining Calculations	1	2	2
MSP 105 Lathes	1	4	3
MSP 107 Milling Machines	1	6	3
MSP 111 Introduction to Computer Numerical Control	1	3	2
MSP 112 Basic CNC Turning	1	6	3
MSP 113 Basic CNC Milling	1	6	3
MSP 115 Advanced Milling Machines	2	9	5
MSP 121 Basic Blueprint Reading for Machinists	1	2	2
MSP 127 CAM	2	12	6
MSP 131 Introduction to Metrology	1	2	2
MSP 142 Adv. Machining Calculations	1	2	2
MSP 181 Special Topics	1	2	2
MSP 221 Advanced Blueprint Reading	1	2	2
MSP Elective	X	X	1

Total Semester Credit Hours 59

**A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

*** Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.