

**Machining Technology (A50300)**

Official Program Description registered with the NC Community College System:

The Machining Technology curriculum is designed to develop skills in the theory and safe use of hand tools, power machinery, computerized equipment and sophisticated precision inspection instruments.

Students will learn to interpret blueprints, set up manual and CNC machines, perform basic and advanced machining operations and make decisions to insure that work quality is maintained.

Employment opportunities for machining technicians exist in manufacturing industries, public institutions, governmental agencies and in a wide range of specialty machining job shops.

**Program Learning Outcomes**

Upon completion of the Machining Technology program, the student will be able to:

- Demonstrate the ability to read and interpret a mechanical working drawing.
- Safely and competently perform in the following areas of study: Precision measurement, Layout, Drilling, Sawing, Turning, Milling, and Precision Grinding.
- Demonstrate the ability to perform calculations needed in the shop, and use good communication skills.
- Demonstrate the skill to program, operate, and setup, a computer numerical control (CNC) turning centers.
- Demonstrate the skill to program, operate, and setup, a computer numerical control (CNC) machining centers.
- Anticipate, choose and troubleshoot the proper tooling based on manufacturing requirements.
- Demonstrate competency in defining geometry, program development, and code generation of a complex part using CAM software.
- Manufacture a complex assemblies to specification.

**Degree Awarded**

The Associate in Applied Science Degree-Machining Technology is awarded by the College upon completion of this program.

**Note**

Students are required to purchase a few specific tools. Costs are available by calling a Machining Technology instructor at (919) 735-5151, ext. 357, 712, or 716.

**For More Information**

The Machining Technology program is in the Applied Technology Division. For more information, call (919) 735-5151, ext. 357, 712, or 716 or visit us at our web site at [www.waynecc.edu](http://www.waynecc.edu).

**Admissions**

- A high school diploma or equivalent is required.
- A placement test in English, mathematics, reading and computer skills is required to determine entry-level courses that match individual needs.

**First Step to Enroll**

Call the Admissions and Records Office at (919) 735-5151, ext. 238.

	Contact Hours	Semester Credit Hours
<b>FIRST SEMESTER</b>		
ACA 111 College Student Success.....	1	1
BPR 111 Blueprint Reading .....	3	2
ENG 111 Expository Writing .....	3	3
MAC 111 Machining Technology I .....	14	6
MAC 124 CNC Milling .....	4	2
MAC 151 Machining Calculations .....	3	2
		16

**SECOND SEMESTER**

BPR 121 Blueprint Reading: Mech .....	3	2
MAC 112 Machining Technology II .....	14	6
MAC 122 CNC Turning .....	4	2
MAC 247 Production Tooling .....	2	2
MAT 120 Geometry and Trigonometry ....	4	3
OR		
MAT 121 Algebra/Trigonometry I .....	4	3
		15

**SUMMER TERM \***

MAC 222 Advanced CNC Turning .....	4	2
MAC 224 Advanced CNC Milling .....	4	2
		4

**THIRD SEMESTER**

DFT 151 CAD I .....	5	3
MAC 113 Machining Technology III .....	14	6
MEC 231 Comp-Aided Manufacturing I ...	5	3
Humanities/Fine Arts Elective ..	3	3
		15

**FOURTH SEMESTER**

ENG 114 Professional Research & Reporting .....	3	3
MAC 214 Machining Technology IV .....	14	6
MEC 232 Comp-Aided Manufacturing II .....	5	3
Social/Behavioral Science Elective .....	3	3
**Professional Elective.....	2-20	2-3
		17-18

Total Credit Hours 67-68

\* Students have an option of exiting the program after the second semester upon the completion of MAC 113 and a Professional Elective to receive a diploma in Machining Technology.

\*\*Professional Electives may be taken after the second semester upon consulting with his/her academic advisor.

COE 111 Co-op Work Experience I.....	10	1
COE 112 Co-op Work Experience I.....	20	2
COE 121 Co-op Work Experience II.....	10	1
DFT 152 CAD II .....	5	3
MAC 114 Intro to Metrology .....	2	2