MACHINE TOOL TECHNOLOGY (AOS)

ALFRED STATE
COLLEGE OF TECHNOLOGY
STATE UNIVERSITY OF NEW YORK

Bradley Thompson, Interim Department Chair & Program Coordinator
ThompsBJ@AlfredState.edu **www.AlfredState.edu**

ADVANTAGES

The machine tool technology program features instruction in the safe operation of all basic machine tools, such as lathes, milling machines, drill presses, various saws, and grinding equipment, as well as proper measurement and inspection of parts. Interpreting engineering drawings and mathematical calculations required by all machinists is also presented. The second year includes shop math and CNC (Computer Numerical Controls) programming with an emphasis on hands-on skills using advanced machine tools. The program includes operation of CNC lathes (turning centers) and CNC milling machines (machining centers). This includes set-up, as well as operation of the machines. Interpreting engineering drawings and control documents will also be emphasized. The understanding of quality control and how to conduct appropriate measurements and inspection will be integrated into the course work. The intent is to graduate someone with overall advanced machine shop skills.

PROGRAM STUDENT LEARNING OUTCOMES

- Demonstrate and apply safe operation of all machine tools.
- Student will be proficient in basic lathe operation.
- Student will be proficient in basic milling operation.
- Demonstrate mathematical operations using accepted mathematical applications.
- Demonstrate ability to perform advanced procedures on assigned projects.
- Student will be proficient in writing CNC programs for lathe.
- Student will be proficient in writing CNC programs for milling machine.
- Student will be proficient and apply GDT to all projects.
- Student will demonstrate ability to operate CNC equipment.
- Students will demonstrate all knowledge in capstone project.

OCCUPATIONAL OPPORTUNITIES

CNC programmers
CNC machinists
CNC engineers
Tool and die makers
Machine setters and operators
Machinists
Mold makers

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Build on your associate degree to complete a bachelor's 100% online. Alfred State machine tool technology graduates may enter directly into the technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the BBA program in two additional years; others may complete the BBA program in two-and-one-half years.

TECHNICAL STANDARDS

- Must be able to perform safely in the shop.
- Must be able to lift 50 pounds up to eye level.
- Must be able to communicate effectively with a person six to 10 feet away in a shop environment.
- Must be able to visually decipher an oscilloscope monitor and digital/analog meter, and scan tool displays.
- Must be able to diagnose mechanical failures that are distinguished audibly.
- Must be able to understand and retain information in service repair manuals and use diagnostic flow charts.
- Must be able to stand for long periods of time.

Did you know the average salary for a machinist in industry today is ranked the seventh highest among all American professions (including doctors, lawyers, etc.), and this average salary is higher than the average salary for all four-year college graduates?

If earning a high salary is on your list for selecting occupational opportunities, you need to look at machine tool technology. More than 50 percent of all machinists in America today will retire in the next 10 to 15 years. This fact alone shows the tremendous opportunity that awaits the trained and well-qualified machinist.

NORTHLAND
WORKFORCE TRAINING CENTER
683 Northland Ave.
BUFFALO, NEW YORK

www.NorthlandWTC.org

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Get the Alfred State ADVANTAGE

As an Alfred State Pioneer, you are on track for success.

You want to move ahead, make things happen, reach your goals, and start your career.

Through hands-on experience and applied learning you gain a head start.

With the Alfred State Advantage, you're one step ahead and will **Hit the ground *running*®...**

PIONEER STUDENT QUOTE:
"With 20 students in one class, it gave the professor time to work with me in the lab. I had upwards of 1300 hours on machines by graduation." -Nick McMaster, '15

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Recommended: Algebra

APPLICATION PROCEDURES:
- ❒ Complete the SUNY application (www.SUNY.edu/attend); current high school seniors should also complete the SUNY Supplemental Application form
- ❒ Indicate the following:
  - ❍ Alfred State College code—91
  - ❍ Special Campus Project code—NORTH
- ❒ Forward the additional required documents to the Alfred State Admissions Office (10 Upper College Drive, Alfred, NY 14802):
  - ❍ Official high school transcript
  - ❍ GED/TASC scores and diploma
  - ❍ SUNY Supplemental Application or essay (topic of your choice although applicants are encouraged to share information on any related experience and/or reasons for interest in program)
  - ❍ Official college transcripts if college course work was taken after high school graduation

TYPICAL FOUR-SEMESTER PROGRAM

First			
MATT	1004	Basic Industrial Machining	4
MATT	1014	Industrial Machining I	4
MATT	1024	Industrial Machining II	4
MATT	1713	Reading Engineering Drawings	3
MATT	1913	Machinist Calculations I	3
			18
Second			
MATT	1234	Industrial Machining III	4
MATT	1244	Industrial Machining IV	4
MATT	1254	Industrial Machining V	4
MATT	1723	Reading Engineering Drwngs II	3
MATT	1923	Machinist Calculations II	3
			18
Third			
MATT	3005	Intro to CNC Machine Program	5
MATT	3015	CNC Industrial Machining I	5
MATT	3025	CNC Industrial Machining II	5
MATT	3003	Geometric Dimensioning & Toler	3
			18
Fourth			
MATT	4005	CNC Industrial Machining III	5
MATT	4015	CNC Industrial Machining IV	5
MATT	4025	CNC Industrial Machining V	5
MATT	4003	Senior Project	3
			18

GRADUATION REQUIREMENTS
A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative index of 2.0, which is equivalent to a "C" average.

Students are required to have earned a minimum grade of "C" in MACH CALC. I & II, and in the MATT 4003 senior project. (Articulation is available in MACH. CALC. area.)

Computerized Design & Manufacturing Dept.

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Admissions@AlfredState.edu | 1-800-4-ALFRED

Apply Now: www.SUNY.edu/attend

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