



Monroe Community College

STATE UNIVERSITY OF NEW YORK

Inspiring every day.



SCHOOL OF APPLIED SCIENCES & TECHNOLOGIES

Precision Machining A.A.S.

GAIN HANDS-ON TRAINING, JOB-READY SKILLS, AND LIFELONG PROFESSIONAL OPPORTUNITIES. MCC has one of the best-equipped college machining programs in New York State. You'll get first-hand experience in the most current techniques and technology while learning directly from journeyman machinists with years of professional experience. Our Precision Machining associate degree program prepares you for immediate employment (about 90 percent of our students work part-time while they're in the program), and you'll develop the potential to advance into quality control, engineering, and supervisory positions. Or you can continue studying toward a bachelor's degree, thanks to MCC's unique transfer agreement with SUNY IT at Utica.

PROGRAM DESCRIPTION

This program will prepare you for employment in the precision metal working industry. You'll master the hands-on skills that employers require, while gaining an understanding of advanced manufacturing techniques to make you a more valuable employee—and a better candidate for promotion. The Precision Machining associate degree program will prepare you for careers in such fields as mold making, machine building, tool making, die making, CNC machining, and other manufacturing areas.

Students interested in this program may also be interested in the Apprenticeship Training & Machine Trades program.

A STRONG START—ACADEMICALLY AND FINANCIALLY!

MCC's low tuition plus financial aid opportunities help make a high-quality education affordable. You could qualify for federal grants, workforce grants, scholarships, and more. Visit www.monroecc.edu/go/finaid or call 585.292.2050.

APPLY TODAY!

To learn more about MCC, visit us on the web at www.monroecc.edu. Apply today at admissions.monroecc.edu or contact the Admissions Office at 585.292.2200 to schedule a visit.



GET THE LATEST ON CAREERS IN OUR AREA, INCLUDING EMPLOYMENT PROJECTIONS, EARNINGS, AND JOB OPENINGS AT CAREERCOACH.MONROECC.EDU

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WHERE WILL YOU GO?

Start your career with employers like these:

- DP Tool and Machine
- MWI, Inc.
- Brinkman Precision
- Optimax Systems
- CooperVision
- Rochester Precision Optics
- Randstad
- Enpro Industries
- Seneca Foods Corp
- Baldwin Richardson Foods

Your job title could be:

- Computer-Controlled Machine Tool Operator— Metal and Plastic
- Machinist—Aircraft, Automotive, or Optical
- Industrial Machinery Mechanic
- First-Line Supervisor of Production and Operating Workers
- Lathe and Turning Machine Tool Setter

“When I get a resume from an MCC graduate, it goes to the top of the pile.”

– Jim Sidor, Sidor Optics

CURRICULUM OVERVIEW

PRECISION MACHINING A.A.S.

Distribution Requirements	Credit Hours
Precision Machining, A.A.S. Degree, Precision Machining Track	
FIRST SEMESTER: 15 Credit Hours	
TAM 101 Machine Shop Theory I	3
TAM 105 Machine Project Laboratory	3
TAM 121 Mathematics for Machinists I	3
TAM 131 Machine Shop Print Reading I	3
TAM 141 Machine Shop Laboratory	3
Total	15
SECOND SEMESTER: 17 Credit Hours	
ENG 101 College Composition OR ENG 200 Advanced Composition	3
TAM 123 Mathematics for Machinists II	3
TAM 132 Machine Shop Print Reading II	3
TAM 139 CNC Vertical Machine Tool Programming I	3
TAM 142 CNC Mill Setup OR TAM 143 CNC Lathe Setup	3
TAM 205 CNC Machine Project Laboratory OR TOOLING & MACHINING ELECTIVE	2
Total	17
THIRD SEMESTER: 15 Credit Hours	
MATHEMATICS ELECTIVE*	3
SOCIAL SCIENCE ELECTIVE	3
SPC 141 Interpersonal Speech Communication OR SPC 143 Small Group Communication	3
TAM 245 Computer Aided Manufacturing	3
TAM 255 Computer Aided Manufacturing Project Laboratory* OR TOOLING & MACHINING ELECTIVE	3
Total	15
FOURTH SEMESTER: 17 Credit Hours	
ECO 101 Introduction to Economics	3
NATURAL SCIENCE ELECTIVE	3
MATHEMATICS* OR NATURAL SCIENCE ELECTIVE	3
TAM 155 Tool and Fixture Design	3
TAM 241 Advanced Machine Shop Laboratory	3
PHYSICAL/HEALTH EDUCATION ELECTIVE	2
Total	17
TOTAL CREDITS	64
TOOLING & MACHINING ELECTIVES	
CRC 101 Practical Computer Literacy (1, 2)	3
TAM 115 Principles of Metallurgy (2)	3
TAM 138 Dimensional Metrology (1, 2)	3
TAM 142 CNC Mill Setup (1, 2)	3
TAM 143 CNC Lathe Setup (2)	3
TAM 151 Geometric Dimensioning and Tolerancing for Machinists (1, 2)	3
TAM 242 Machine Shop Practice IV (1, 2)	3
TAM 246 Computer Aided Manufacturing (1, 2)	3

TAM 251 Statistical Process Control (SPC) for Machinists (1)	3
Precision Machining, A.A.S. Degree, Optical Fabrication Track	
FIRST SEMESTER: 15 Credit Hours	
TAM 101 Machine Shop Theory I	3
TAM 105 Machine Project Laboratory	3
TAM 121 Mathematics for Machinists I	3
TAM 131 Machine Shop Print Reading I	3
OPT 110 Introduction to Optical Technology	3
Total	15
SECOND SEMESTER: 17 Credit Hours	
ENG 101 College Composition OR ENG 200 Advanced Composition	3
TAM 123 Mathematics for Machinists II	3
TAM 139 CNC Vertical Machine Tool Programming I	3
OPT 135 Measurement and Analysis OR TAM 138 Dimensional Metrology	3-4
TAM 205 CNC Machine Project Laboratory OR OPTICAL ELECTIVE	2
Total	14-15
THIRD SEMESTER: 15 Credit Hours	
MATHEMATICS ELECTIVE*	3
SOCIAL SCIENCE ELECTIVE	3
SPC 141 Interpersonal Speech Communication OR SPC 143 Small Group Communication	3
OPT 131 Optical Elements and Ray Optics	4
PHYSICAL/HEALTH EDUCATION ELECTIVE	2
Total	15
FOURTH SEMESTER: 16 Credit Hours	
ECO 101 Introduction to Economics	3
NATURAL SCIENCE ELECTIVE	3
MATHEMATICS* OR NATURAL SCIENCE ELECTIVE	3
TAM 155 Tool and Fixture Design	3
OPT 151 Optical Instruments and Testing	4
Total	16
TOTAL CREDITS	60-61
OPT ELECTIVES	
CRC 101 Practical Computer Literacy (1, 2)	3
OPT 135 Measurement and Analysis (1, 2)	4
OPT 201 Photo Science (2)	4
OPT 211 Wave Optics and Applications (1)	4
OPT 213 Optical Processes (1)	4
OPT 215 Electro-Optical Devices and Systems (2)	5
OPT 235 Advanced Optical Manufacturing (2)	3
TAM 138 Dimensional Metrology (1,2)	3

NOTE: (1)-Fall Course Offering; (2)-Spring Course Offering
Students currently working in the precision machining industry may substitute a TAM/OPT elective for TAM 105, based on work experience and approval of

a faculty advisor.

*Mathematics elective should be selected with guidance from faculty advisor. MTH 104, MTH 140, MTH 141, or MTH 160 or higher will be accepted. Those contemplating a higher level degree should seek advisement for transfer information.

NOTE: All students enrolled in the program should take the MCC placement exam for advisement prior to registration. It is recommended that students have a minimum of 2 years of high school math or place MTH 104 or higher on the placement exam prior to enrolling in this program. Please seek advisement from the TAM Coordinator or faculty prior to registration. Call 585-292-3725 for advisement times.