

Advanced Technology and Manufacturing Academy

1st Year Program of Studies 6 courses with total of 19 credit hours

Fall Semester	Credit
TECM 1303 Technical Calculations <i>Specific mathematical calculations required by business and industry. Includes whole numbers, fractions, mixed numbers, decimals, %, ratios, and proportions. Also, covers converting to different units of measure (standard and/or metric).</i>	3
MCHN 1320 Precision Tools & Measurements* <i>*10-Hour OSHA Introduction to modern science of dimensional metrology.</i>	3
MCHN 1270 MSSC* <i>*MSSC Safety Certification Manufacturing Skill Standards Council Certified production Technician Safety & Quality Modules.</i>	2
Fall Semester Total	8
Spring Semester	Credit
MCHN 1302 Print Reading for Machine Trade <i>A review of applied math models and study of different blueprints, with emphasis on machine blueprints and the application of each.</i>	3
MCHN 1438 Basic Machine Shop I <i>An introduction course that assists the student in understanding the machinist occupation in industry.</i>	4
Spring Semester Total	7
Summer Semester	Credit
MCHN 2486 Internship: Machine Tool Technology/Machinist <i>Practical, general workplace training supported by an individualized learning plan.</i>	4
Summer Total	4
Year 1 Program Total	19

2nd Year Program of Studies 5 courses with total of 15 credit hours

Fall Semester	Credit
INMT 2303 Pumps, Compressors & Mechanical Drives 3 <i>A study of the theory and operations of various types of pumps and compressors.</i>	3
ELPT 1319 Fundamentals of Electricity I <i>A study of the inspection & repair of composite, Fiberglass, honeycomb, and laminated structural materials.</i>	3
QCTC 1243 Quality Assurance* <i>*MSSC Quality Certification Principles & application designed to introduce quality assurance.</i>	2
Fall Semester Total	8
Spring Semester	Credit
MCHN 1426 Introduction to Computer-Aided Manufacturing (CAM) <i>A study of Computer Assisted Manufacturing (CAM) Systems. Software is used to develop applications for manufacturing.</i>	4
RBTC 1305 Robotic Fundamentals <i>An introduction to flexible automation.</i>	3
Spring Semester Total	7
Year 2 Program Total	15

**Level I Certificate of Completion
Manufacturing Skills Trade Helper**

**Level I Certificate of Completion
Production Tool Operator/Maintenance Assistant**

Two Year Program of Studies: 11 Courses totaling 34 credit hours

Advanced Technology and Manufacturing Academy

Level I Certificate of Completion Manufacturing Skills Trade Helper

Level I Certificate of Completion Tool Operator/Maintenance Assistant

ASSOCIATE OF APPLIED SCIENCES

Manufacturing Operations Technician

Semester 1	Credit
MCHN 1438 Basic Machine Shop I	4
MCHN 1320 Precision Tools & Measurement	3
MATH 1333 Contemporary Mathematics II or other*	3
INMT 2303 Pumps, Compression & Mechanical Drives	3
ITSC 2303 Introduction to Computers I or other*	3
1st Semester Total	16
Semester 2	Credit
ENGL 1301 Composition I or other*	3
ELPT 1319 Fundamentals of Electricity I	3
ELMT 1305 Basic Fluid Power	3
PHYS 1305 Introductory Physics I Lecture or other*	3
RBTC 1305 Robotic Fundamentals	3
2nd Semester Total	15
Semester 3	Credit
RBTC 2347 Computer Integrated Manufacturing	3
WLDG 1425 Intro to Oxy-Fuel Welding & Cutting	4
RBTC 1347 Electromechanical Devices	3
ECON 1301 Introduction to Economics or other*	3
3rd Semester Total	13
Semester 4	Credit
MCHN 1302 Print Reading for Machining Trade	3
ELPT 2419 Programmable Logic Controllers I	4
ELPT 1441 Motor Control	4
MUSI 1306 Music Appreciation or other*	3
MCHN 2266 Practicum (or field experience) Machine Tool Technology/Machinist	2
4th Semester Total	16
Program Total	60

ASSOCIATE OF APPLIED SCIENCES

CNC Manufacturing Technician

Semester 1	Credit
MCHN 1302 Print Reading for Machining Trade	3
MCHN 1438 Basic Machine Shop I	4
MATH 1332 Contemporary Math I or other*	3
MCHN1320 Precision Tools & Measurement	3
ITSC 1301 Introduction to Computers or other*	3
1st Semester Total	16
Semester 2	Credit
ENGL 1301 Composition I or other*	3
MCHN 2303 Fundamentals of Computer Numerical Controlled (CNC) Machine Controls	3
QCTC 1243 Quality Assurance	2
PHYS 1305 Introductory to Physics I Lecture or other*	3
MCHN 1426 Intro to Computer-Aided Manufacturing (CAM)	4
2nd Semester Total	15
Semester 3	Credit
ECON 1301 Introduction to Economics or other*	3
MCHN 2431 Operation of CNC Turning Centers	4
MCHN 2434 Operation of CNC Machining Centers	4
MCHN 1330 Statistical Process Control for Machinist	3
MUSI 1306 Music Appreciation or other*	3
3rd Semester Total	17
Semester 4	Credit
MCHN 2435 Advanced CNC Machining	4
MCHN 1352 Intermediate Machining I	3
RBTC 1305 Robotic Fundamentals	3
MCHN 2266 Prac cum (or field experience) Machine Tool Technology/Machinist	2
4th Semester Total	12
Program Total	60

DC/AA: 21

Total AAS Hours: 60

Hours needed Post DC/AA: 39

General Academics: 18

Specific Hours: 21

DC/AA: 21

Total AAS Hours: 60

Hours needed Post DC/AA: 39

General Academics: 18

Specific Hours: 21