

Maintenance Mechanic—Industrial Certificate

(Maintenance Technology – Associate Degree path)

This certificate program is designed to equip students with the foundational skills and knowledge necessary to gain an entry level position as an industrial maintenance mechanic. Through a blend of classroom lecture and hands-on experience, students will learn mechanics, electrical theory, principles of refrigeration, sheet metal layout, pneumatics, and hydraulics. Foundational areas, including applied mathematics, blueprint reading, and welding, will also be covered.

This program is designed to prepare students for success as a maintenance mechanic in an industrial setting. As manufacturing continues to expand and evolve, the associated machinery and technology will become more complex. Skilled maintenance mechanics will be in demand to perform routine preventative maintenance and repair machines and mechanical equipment. This program is a good fit for individuals who enjoy being active and working with their hands, with an emphasis on mechanical reasoning, troubleshooting, and problem solving. Those who graduate with this certificate have the well-rounded skillset necessary to be an effective and efficient industrial maintenance mechanic.

A certificate will be awarded to students who successfully complete the following courses:

Career Preparation and Related Courses		SUGGESTED SEQUENCE	CREDIT HOURS	CONTACT HOURS
ATAM 1350	Arithmetic & Introductory Algebra for Electrical & Allied Crafts	■ □ □ □	2	32
ATMT 1650	Millwright Theory 1	■ □ □ □	2	32
ATDD 1900	Machine Tool Blueprint Reading	■ □ □ □	2	32
ATWD 1110	Fundamentals of Gas & Arc Welding	■ □ □ □	2	32
ATAM 1360	Electrical Circuitry—Algebra & Trigonometry	□ ■ □ □	2	32
ATMT 1660	Millwright Theory 2	□ ■ □ □	2	32
ELEC 1300	Electrical Equipment & Introduction to Machine Circuits	□ ■ □ □	2	32
CLCT 1200	Fundamentals of Air Conditioning & Refrigeration	□ ■ □ □	3	64
ATAM 2350	A.C. Circuitry—Trigonometry & Vectors	□ □ ■ □	2	32
MECT 1640	Introduction to Programmable Controllers—Allen Bradley PLC	□ □ ■ □	3	48
CLCT 1600	Duct Layout & Fabrication	□ □ ■ □	3	64
ATPP 1100	Plumbing Fundamentals	□ □ ■ □	2	32
ATMT 1150	Machine Tool Laboratory 1	□ □ □ ■	3	48
MECT 1320	Industrial Hydraulic Fundamentals	□ □ □ ■	3	64
MECT 1310	Pneumatics Technology Fundamentals	□ □ □ ■	3	64
Total			36	640

In cases where prior training or education is documented, specific courses may be substituted for one or more of the above courses as conditions warrant. Suggested alternate courses, which may also be used as electives toward an associate degree, are listed below for consideration. Contact the Applied Technology and Apprenticeship department for details.

Suggested Alternative/Elective Courses:

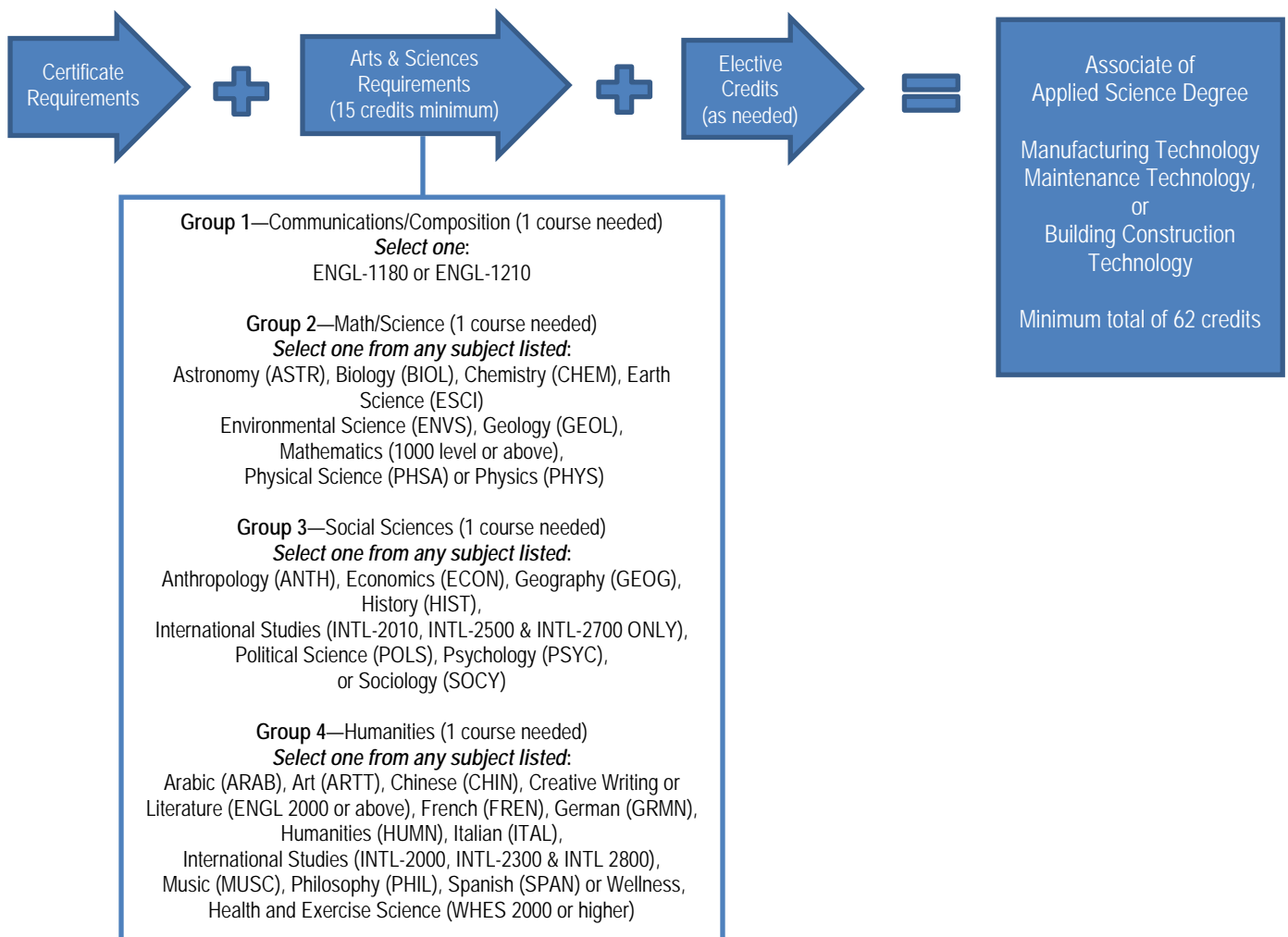
ELEC 1310	Basic Direct & Alternating Current Motor Control Circuits	ATFP 1120	Fluid Power—Pumps
ATDD 1950	Drafting Essentials	ATFP 1140	Fluid Power—Basic Circuits
ATDD 1960	Conventions & Symbols	ATPP 1120	Plumbing—Heating
ATEM 1350	Mechanical Blueprint Reading	ROBO 1110	Robot Operations
ATQT 1000	Quality Inspection Fundamentals	ATMT 1300	Metallurgy – Characteristics of Ferrous Metals

SEE SECOND PAGE/REVERSE SIDE FOR ASSOCIATE DEGREE REQUIREMENTS

Associate of Applied Science Degree Requirements (Minimum 62 credit hours)

An Associate of Applied Science Degree is offered for those enrolled in or completing an Apprenticeship, Employee-In-Training, or General Certificate Program. Other College requirements apply, including the completion of the arts and sciences (general education) requirements as well as attaining a minimum overall total of 62 credit hours. See Apprentice Coordinator or Advisor for details.

Students may graduate with an Associate of Applied Science Degree in Manufacturing Technology, Maintenance Technology, or Building Construction Technology, depending on the Apprenticeship, Employee-In-Training or General Certificate Program area of specialty.



Information is subject to change. Please visit www.macomb.edu for the most current information.

For more information on the Maintenance Mechanic – Industrial Certificate Program at Macomb, contact the Applied Technology and Apprenticeship Department at 586.445.7438 or apprenticeship@macomb.edu.