

## Millwright 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 millwright position. Through a blend of classroom lecture and hands-on experience, students will learn welding, mechanics, sheet metal layout, electrical theory, pneumatics and hydraulics. Foundational areas, including applied mathematics, blueprint reading and safety procedures, will also be covered.

This program is designed to prepare students for success in the millwright profession. As manufacturing, construction and related industries continue to expand and evolve, qualified millwrights will be in demand to install, maintain, move and reassemble machinery in factories, power plants, and construction sites. 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 a foundational knowledge of the tools and methods used to move, install and maintain a wide range of industrial machines.

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 1150	Shop Arithmetic	■	□	□	□	2	32
ATMT 1650	Millwright Theory 1	■	□	□	□	2	32
ATDD 1900	Machine Tool Blueprint Reading	■	□	□	□	2	32
ATTR 1600	Industrial Safety – Skilled Trades	■	□	□	□	2	32
ATAM 1160	Algebra	□	■	□	□	2	32
ATMT 1660	Millwright Theory 2	□	■	□	□	2	32
ATWD 1110	Fundamentals of Gas & Arc Welding	□	■	□	□	2	32
MECT 1320	Industrial Hydraulic Fundamentals	□	■	□	□	3	64
ATAM 1170	Geometry	□	□	■	□	2	32
ELEC 1300	Electric Theory-Electrical Equipment & Introduction to Machine Circuits	□	□	■	□	2	32
ATWD 1130	Shielded Metal Arc Welding (SMAW)	□	□	■	□	2	32
ATMT 1300	Metallurgy—Characteristics of Ferrous Metals	□	□	■	□	2	32
ATMT 1310	Metallurgy—Characteristics of Non-ferrous Metals	□	□	□	■	2	32
CLCT 1600	Duct Layout & Fabrication	□	□	□	■	3	64
MECT 1310	Pneumatics Technology Fundamentals	□	□	□	■	3	64
Total						33	576

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:

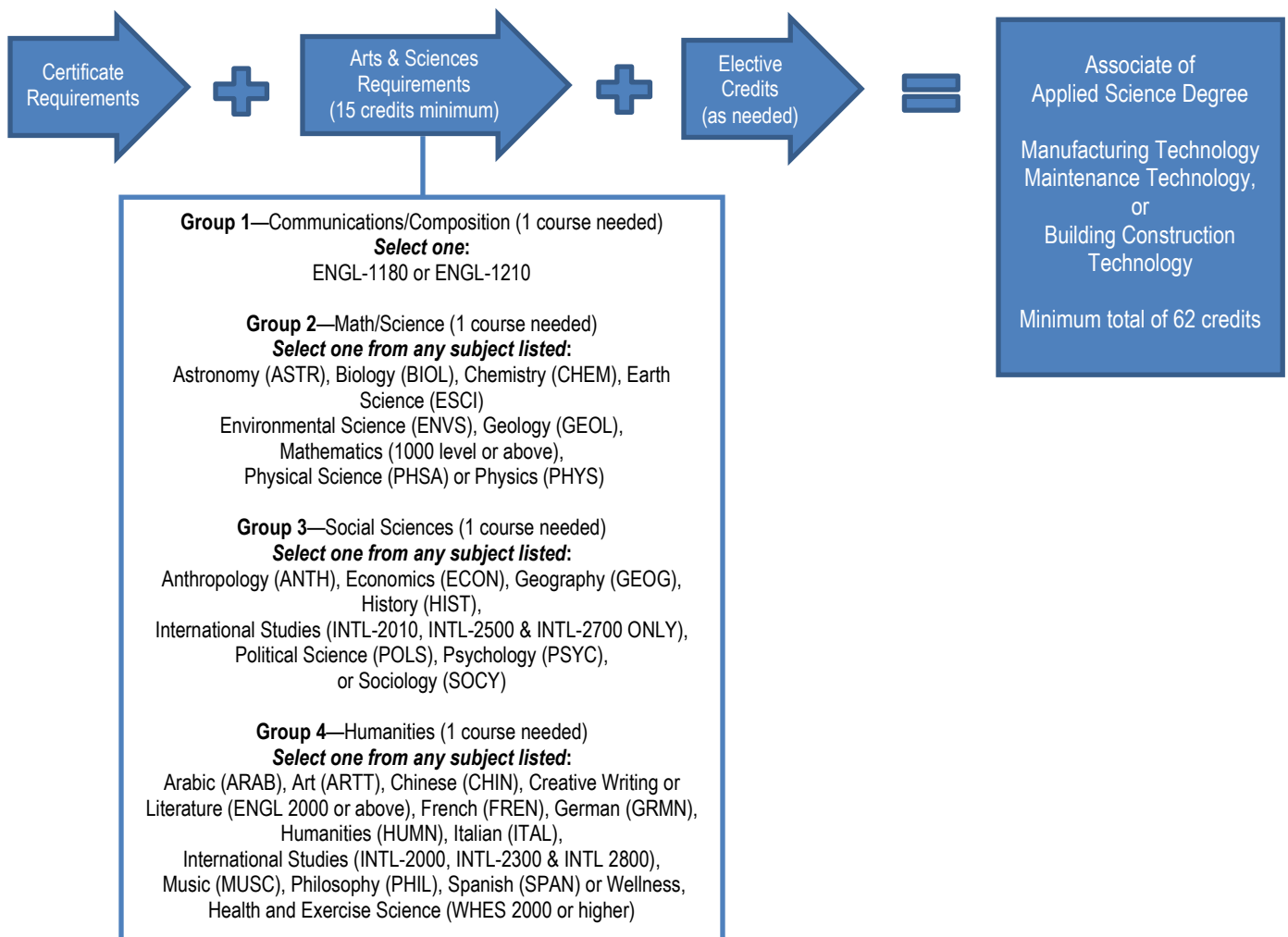
ATAM 2150	Trigonometry	MECT 1330	Electro-Hydraulics Fundamentals
ATMT 1950	Science-Physics 1: Mechanics	ATPP 1100	Plumbing Fundamentals
ATDD 1950	Drafting Essentials	ATWD 1100	Welding Metallurgy
ATDD 1960	Conventions & Symbols	ATWD 1150	Gas Tungsten Arc Welding (TIG)
ATDD 1970	Three Dimensional Shape Interpretation	ATWD 1140	Gas Metal Arc Welding (MIG)
ATDD 1620	Drafting—Structural Drawing	ATDD 1630	Drafting—Conveyors
ATDD 1640	Drafting—Plant Layout & Equipment	ATAM 2190	Gearing

**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](http://www.macomb.edu) for the most current information.\*\*

For more information on the Millwright Certificate Program at Macomb, contact the Applied Technology and Apprenticeship Department at 586.445.7438 or [apprenticeship@macomb.edu](mailto:apprenticeship@macomb.edu).