

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 1000 | Mathematics for the Trades I | ■ | □ | □ | □ | 4 | 64 |
| ATMT 1650 | Millwright Theory 1 | ■ | □ | □ | □ | 2 | 32 |
| ATDD 1900 | Machine Tool Blueprint Reading | ■ | □ | □ | □ | 2 | 32 |
| ATTR 1600 | Industrial Safety – Skilled Trades | ■ | □ | □ | □ | 2 | 32 |
| ATAM 2000 | Mathematics for the Trades II | □ | ■ | □ | □ | 2 | 32 |
| ATMT 1660 | Millwright Theory 2 | □ | ■ | □ | □ | 4 | 64 |
| ATWD 1110 | Fundamentals of Gas & Arc Welding | □ | ■ | □ | □ | 2 | 32 |
| MECT 1320 | Industrial Hydraulic Fundamentals | □ | ■ | □ | □ | 3 | 64 |
| ATPP 1250 | Introduction to Pipefitting | □ | □ | ■ | □ | 3 | 48 |
| ATEE 1000 | Introduction to Electrical | □ | □ | ■ | □ | 3 | 64 |
| 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 |
| MECT 1310 | Pneumatics Technology Fundamentals | □ | □ | □ | ■ | 3 | 64 |
| MECT 1320 | Industrial Hydraulic Fundamentals | □ | □ | □ | ■ | 3 | 64 |
| Total | | | | | | 39 | 688 |

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 with consent of the apprentice coordinator. Suggested alternate courses, which may also be used as electives toward an associate degree, are listed below for consideration.

Suggested Alternative/Elective Courses:

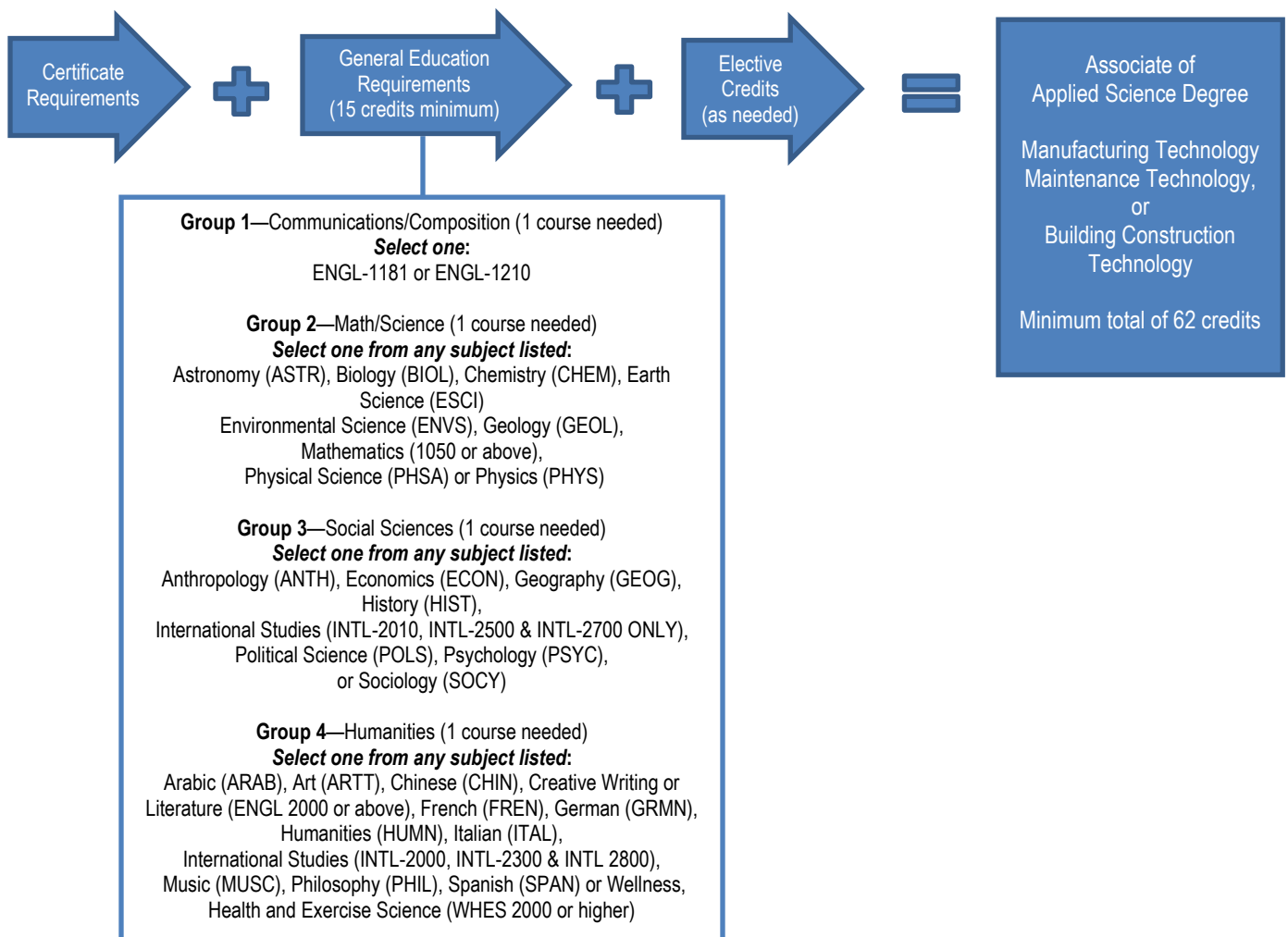
| | | | |
|-----------|---|-----------|--------------------------------------|
| ATEE 1100 | Introduction to Motors & Control Circuits | ATQT 1000 | Quality Inspection Fundamentals |
| CLCT 1600 | Duct Layout & Fabrication | ATPP 1200 | Introduction to Plumbing |
| ATEM 1350 | Electrical-Mechanical Blueprint Reading | ATWD 1150 | Gas Tungsten Arc Welding (TIG) |
| ATWD 1140 | Gas Metal Arc Welding (MIG) | ATDD 1000 | Drafting and Design for the Trades I |

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 Applied Technology General Certificate Program. Other College requirements apply, including the completion of the 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 Applied Technology 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 Millwright Certificate Program at Macomb, contact the Applied Technology and Apprenticeship Department at 586.445.7414 or apprenticeship@macomb.edu .