Macomb Community College
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Applied Technology & Apprenticeship

Fluid Power Technology Certificate

(Maintenance Technology – Associate Degree path)

This certificate program is designed to equip students with the basic skills necessary to enter the field of fluid power technology. Through a blend of classroom lecture and hands-on experience, students will learn fluid power theory and gain the knowledge needed to test and troubleshoot fluid power systems and applications. Blueprint reading, programmable logic controllers, motor control devices and wiring, fundamentals of pneumatic systems, and valves, actuators and bearing applications will also be covered.

This program is designed to prepare students for success in careers in fluid power technology. As manufacturing and related industries continue to expand and evolve, fluid power technicians will be needed to install, operate, maintain, troubleshoot and repair vital hydraulic and pneumatic systems and equipment. This program is a good fit for individuals who enjoy working with their hands, with an emphasis on mechanical reasoning. Those who graduate with this certificate have a foundational knowledge of the operation and maintenance of equipment used in modern industrial facilities.

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
OR				
ATAM 1350	Arithmetic & Introductory Algebra for Electrical & Allied Crafts	■ ☐ ☐ ☐	2	32
AND				
ATDD 1900	Machine Tool Blueprint Reading	■ ☐ ☐ ☐	2	32
ELEC 1300	Electrical Equipment & Introduction to Machine Circuits	■ ☐ ☐ ☐	2	32
MECT 1320	Industrial Hydraulic Fundamentals	■ ☐ ☐ ☐	3	64
ATAM 1160	Algebra	☐ ■ ☐ ☐	2	32
OR				
ATAM 1360	Electrical Circuitry—Algebra & Trigonometry	☐ ■ ☐ ☐	2	32
AND				
ATEM 1350	Electrical—Mechanical Blueprint Reading	☐ ■ ☐ ☐	2	32
ATPP 1100	Plumbing Fundamentals	☐ ■ ☐ ☐	2	32
MECT 1330	Electro-Hydraulics Technology	☐ ■ ☐ ☐	3	64
MECT 2645	PLC Basic Programming—Allen Bradley	☐ ☐ ☐ ■	4	96
MECT 1310	Pneumatics Technology Fundamentals	☐ ☐ ☐ ■	3	64
MECT 1340	Mobile Hydraulics Technology	☐ ☐ ☐ ■	3	64
		Total	31	544

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 Alternate / Elective Courses:

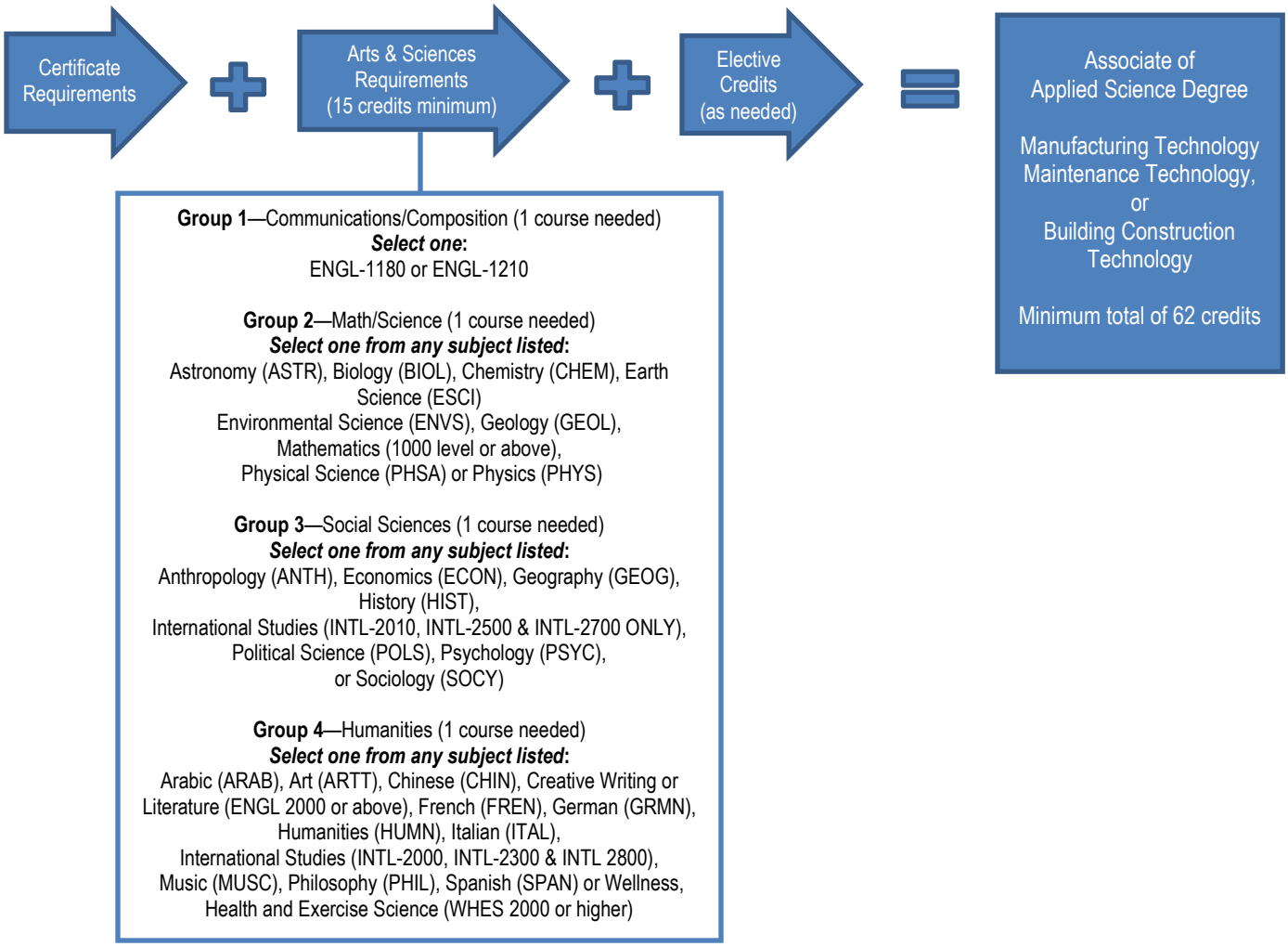
ELEC 1141	Basic Electronics	ATWD 1110	Fundamentals of Gas & Arc Welding
ELEC 1151	Test Equipment & Troubleshooting	ATWD 1130	Shielded Metal Arc Welding 1 (SMAW)
ELEC 1310	Basic Direct & Alternating Current Motor Control Circuits	ELEC 2550	Industrial Electronic Fundamentals
ATSS 1150	Steam—Heat Fundamentals	ATTR 1600	Industrial Safety—Skilled Trades
ATSS 1160	Steam Boilers (Low & High Pressure Operations)	MECT 2745	PLC Advanced Programming—Allen Bradley
MECT 2115	PLC Basic Programming	MECT 2215	PLC Advanced Programming

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 Fluid Power Technology Certificate Program at Macomb, contact the Applied Technology and Apprenticeship Department at 586.445.7438 or apprenticeship@macomb.edu .