Macomb Community College
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Applied Technology & Apprenticeship

Quality Technology Fundamentals - Certificate

(Manufacturing Technology – Associate Degree path)

This certificate program is designed to equip students with the foundational skills and knowledge necessary to enter the field of quality inspection. Through a blend of classroom lecture and hands-on experience, students will learn blueprint reading, the proper use of dimensional inspection equipment and nomenclature instruments, and measurement tools and techniques. Advanced dimensional inspection equipment, statistical process control, commonly used quality standards and guidelines, and the interpretation of geometric dimensions and tolerances will also be covered.

This program is designed to prepare students for success in careers in quality inspection. As manufacturing and related industries continue to expand and evolve, quality inspectors will be in demand to examine, assess, and measure parts and products for conformance to prescribed specifications. This program is a good fit for individuals who enjoy working with their hands, with an emphasis on troubleshooting, problem solving, and mechanical reasoning. Those who graduate with this certificate have a foundational knowledge of the quality standards, guidelines and techniques used in modern industry.

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

Career Preparation and Related Courses		SUGGESTED SEQUENCE				CREDIT HOURS	CONTACT HOURS
ATQT 1000	Quality Inspection Fundamentals	■	☐	☐	☐	2	32
ATQT 1050	Quality Standards & Core Tools	■	☐	☐	☐	2	32
ATDD 1000	Drafting and Design for the Trades I	■	☐	☐	☐	4	64
ATTR 1600	Industrial Safety—Skilled Trades	■	☐	☐	☐	2	32
ATDD 2000	Drafting and Design for the Trades II	☐	■	☐	☐	2	32
ATQT 1030	Applied Statistical Process Control	☐	■	☐	☐	2	32
ATDD 1920	Geometric Dimensioning & Tolerancing Fundamentals	☐	■	☐	☐	2	32
ATQT 1010	Quality Inspection—Advanced Techniques	☐	■	☐	☐	2	32
ATQT 1060	Coordinate Measuring Machine (CMM) Introduction	☐	☐	■	☐	3	48
ATMT 1300	Metallurgy—Characteristics of Ferrous Metals	☐	☐	■	☐	2	32
ATMT 1310	Metallurgy—Characteristics of Non-Ferrous Metals	☐	☐	■	☐	2	32
ATTR 1150	Technical Report Writing	☐	☐	■	☐	2	32
					Total	27	432

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 Alternate / Elective Courses:

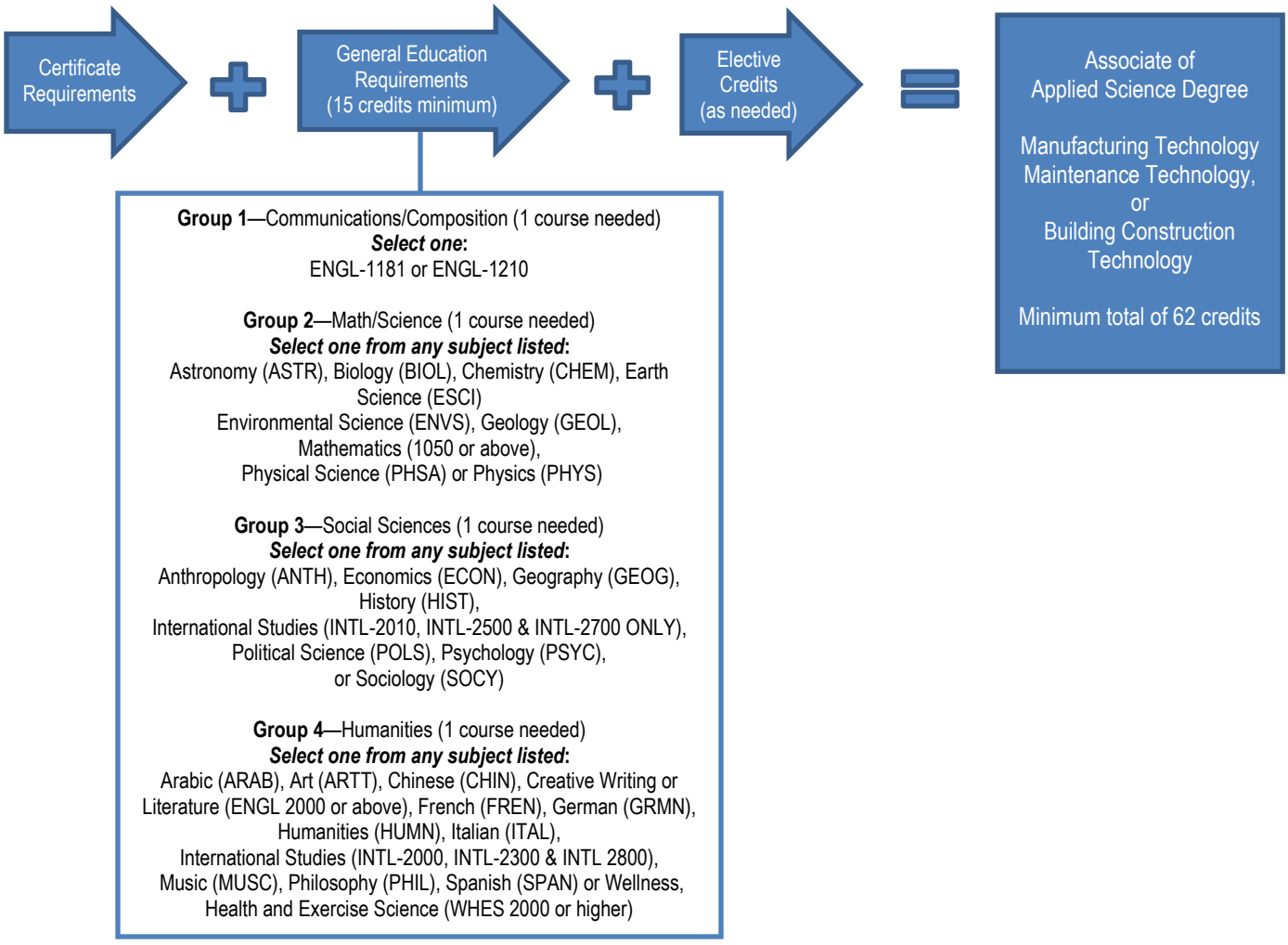
ATMT 1150	Machine Theory—Machine Tool Laboratory 1	ATMT 1700	Thermoplastic & Thermosetting Materials
ATAP 2380	Rapid Prototyping & Reverse Engineering	ATMT 1750	Plastic Product Design & Tooling
ATAP 1050	CNC Essentials	ATAP 2010	Drafting—2D CAD with MasterCAM

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 Quality Technology Fundamentals Certificate Program at Macomb, contact the Applied Technology and Apprenticeship Department at 586.445.7414 or apprenticeship@macomb.edu .