State-Approved (Chapter 74)
Program Overview

Advanced Manufacturing Technology

Highly skilled technicians work with computers and robotics to produce precision equipment used in aerospace, medical, automotive, defense, and product manufacturing.

What Students Learn & Do

Advanced Manufacturing provides students with opportunities to create, using both traditional tools and exciting new technologies. The machinery and instruments students will use are the same ones used in industries that include aerospace, medical, automotive, defense, and product manufacturing.

Typically, students start by learning to use hand operated tools such as drills, engravers and presses to work with materials such as metal, wood, and plastics. They progress to more complex technologies such as 3-D printers, computer assisted design (CAD) software, and programmable manufacturing equipment. Subjects covered include industrial safety, blueprint reading, design fundamentals, inspection methods, computer modeling, robotics, and automation.

Students in Advanced Manufacturing programs are required to meet the same high academic standards as peers in other high school programs. These standards are set by the State of Massachusetts. In addition, Advanced Manufacturing training offers additional reinforcement of mathematics, physics, and engineering.

Licenses & Certifications

Students will be able to complete one or more industry-recognized credentials before they graduate from high school. Examples:

- OSHA 10 hour - General
- MACWIC (applied manufacturing technology)
- NIMS (metalworking)
- NC3 (manufacturing)

Options After High School

Here are some career options that may be available for graduates of Advanced Manufacturing programs.

High School Diploma	Trade School or Associate Degree	Bachelor's Degree (4 Years of College)
• Machine Tool Operator • Computer Numerical Control Operator	• Automotive Technician • Welder Apprentice	• Mechanical Engineer • Robotics Engineer • Industrial Designer

Questions to ask a program you are considering

1. **What workplace experiences do you offer to students?**
2. **What are some common next steps for graduates of this program and how do you support them to get there?**

Learn about the differences between State-Approved and Local programs
http://www.doe.mass.edu/ccte/cvte/cte-families/state-vs-local.html

Massachusetts Department of Elementary and Secondary Education

Federation for Children with Special Needs