

ADDITIVE MANUFACTURING TECHNICIAN CERTIFICATE

Award: Certificate

No. of credits required: 15

For more information: Contact David Antol, Coordinator for Applied Technology at 443-412-2472, dantol@harford.edu; or Admissions, 443-412-2109.

Program Description

This certificate prepares students for employment in advanced manufacturing, including additive manufacturing (3D printing) and a variety of other industries that use technicians or technology specialists to support engineering staff. A strong emphasis is placed on applications, problem solving, critical thinking, and communication skills. Upon graduation, students will be able to use these skills to organize, and carry out engineering technology projects. Graduates of this certificate will demonstrate knowledge of CADD, electronics, hydraulics, pneumatics, blueprint reading, and mechanics. Engineering and science courses are important parts of this program.

Program Goals

Upon successful completion of this certificate students will be able to:

1. Apply appropriate communications skills to work independently and collaboratively within an organization to promote the goals and objectives of the work unit.
2. Recognize how to facilitate successful completion of technical projects.
3. Demonstrate competency in using technical tools, technology, methods, and processes.
4. Recognize professional and ethical behavior.
5. Apply problem solving skills to technical problems.

Employment Information

Data illustrates a significant demand for well-educated and highly-skilled additive manufacturing workers in Harford County and in the State of Maryland. In 2015 Maryland's 3,680 manufacturing businesses generated \$20.2 billion in gross state product and employed more than 109,000 persons. The state supports numerous 21st century manufacturing industries including defense electronics, aeronautics, systems engineering, medical diagnostics, specialty chemicals, software and aircraft engines. Sixty percent of these manufacturers are advanced, producing a profound multiplier effect on Maryland's economy. High-technology manufacturers in Maryland generate almost two additional jobs for each new manufacturing job created.

Certificate Requirements

Students earning a certificate from HCC must complete or demonstrate exemption from the following courses: ENG 003 Reading and Understanding College Textbooks and ENG 012 Basic Writing, or ENG 018 Integrated Reading and Writing, and MATH 020 Pre-Algebra I. See graduation requirement details in this catalog for further information.

Required Courses

Code	Title	Credits
ENGT 106	Introduction to Additive Manufacturing	3
ENGT 110	3D Printing in Additive Manufacturing	3
ENGT 115	Optimizing Print Files	3
ENGT 225	Quality Control & Metrology for Additive Manufacturing	3
ENGT 230	Additive Manufacturing Capstone	3
Total Credits		15