

AEROSPACE COMPOSITE FABRICATION (BTC)

Basic Technical Certificate

Career-Technical Program

Interest Areas:

Manufacturing and Trades

This program prepares students for entry level employment in the aerospace composites manufacturing industries. The curriculum provides students with the skills necessary to work in various phases of the composite fabrication and repair, and teaches industry recognized quality assurance procedures. Students receive hands-on working knowledge from a qualified instructor in a lab setting where the focus is on the manufacturing methods and techniques used in aerospace industry composite components. Coursework includes safety requirements, blueprint reading, composite fabrication and repair, geometric dimensioning and tolerance, shop math and projects specific to industry standards.

Students will participate in a blended learning environment. Some courses are delivered in an online delivery format. Prospective students should have solid math skills and demonstrate mechanical aptitude. Computer and keyboarding skills are recommended.

Program Website (https://www.nic.edu/programs/viewProgram.aspx?program_id=93)

Program Requirements

Code	Title	Credits
AERO-110	Safety/OSHA	1
AERO-111	Blueprint Reading	2
AERO-120	Introduction to Composites	3
AERO-121	Composite Fabrication Methods/Applications	2
AERO-122	Composite Finish Trim	1
AERO-123	Composite Assembly	2
AERO-130	Disassembly and Damage Removal Techniques	1
Total Credits		12

Course Key



GEM



WCHE



AAS



Gateway



Milestone

Institutionally
Designated

Program Outcomes

Upon completion of the program, students will be able to:

- Students will be able to fabricate composites using industry recognized techniques.
- Students will demonstrate the skills and knowledge necessary to work in an entry level position for the composite fabrication industry.

- Operate tools and equipment safely. This includes personal and aircraft safety standards related to shop layout , equipment use, and the handling and storage of materials.
- Read and correctly interpret blueprints.
- Demonstrate an understanding of, and define and utilize composite terminology.
- Consistently display precision manufacturing processes such as measuring, drilling, and fabricating components.
- Demonstrate appropriate use of cutting tools.
- Attach fasteners, metal components, brackets, and fittings to composite materials with precision and proper care of materials.
- Use of basic communication skills to meet the needs of the workplace.