

# Aerospace Composite Technician Certificate

## GENERAL INFORMATION

The Aerospace Composite Technician certificate is a two-quarter program designed to prepare students to fabricate, assemble, and repair composite materials on aircraft and in the composite industry. The knowledge and skills gained through this program are those required for entry-level positions as composite technicians. The certificate also provides an opportunity for existing aircraft mechanics and service technicians to expand their education in the field of composite assembly and repair.

## PROGRAM INFORMATION

The two-quarter program focuses on skills used in advanced composite manufacturing. The first quarter focuses on building a strong knowledge base of terminology, material handling and practices, and the foundational techniques used in industry. The second quarter builds upon the skills gained in the first quarter and adds in mold manufacturing techniques, CNC tooling construction, fastening, bonding and assembly operations, inspection and repair.

## PROGRAM ADVISOR

For specific guidance about this certificate, contact:

- ◆ Michael Patching, 425-388-9092, [mpatching@everettcc.edu](mailto:mpatching@everettcc.edu)

## GETTING STARTED AT EVCC

Our Enrollment Services Office provides information about application, advising, orientation and registration for new and continuing students. New student advising is available in the Counseling, Advising & Career Center. If students have questions about applying or getting started they may contact Enrollment Services. Contact:

- ◆ Enrollment Services, Parks Student Union, 425-388-9219  
[admissions@everettcc.edu](mailto:admissions@everettcc.edu)
- ◆ Advising Center, Rainier Hall Room 108, 425-388-9339  
[advising@everettcc.edu](mailto:advising@everettcc.edu)

**Approved by Instructional Council December 2016. Approved by SBCTC January 2017.**

## COURSE INFORMATION

### CT 102 Composite Technology I

Theory and application of composite manufacturing principles: knowledge of material types and resin systems; curing and cross linking of polymer resin systems; design considerations to construct laminates and sandwich core parts; knowledge and use of layup techniques. Use of both open and closed molding methods are reviewed, including: wet layup, filament winding, vacuum bagging, resin infusion process (VARTM), and light resin transfer modeling (LRTM). The use of core material properties; precision measurement tools to finish cured composites to print specifications; and understanding and demonstration of material handling and shop safety practices.

### CT 203 Composite Technology 2

Theory and application of advanced composite manufacturing principles are covered. Mold manufacturing techniques; tooling, bonding and fastener application; damage inspection and repair.

## PROGRAM OUTCOMES

- Solve technical mathematical problems (such as fiber resin ratio)
- Learn basic hand skills for the layup of composites materials using fiberglass, carbon fiber, epoxy and polyester resin
- Design molds and forms for the layup of fiberglass and carbon fiber materials
- Build and vacuum bag composite materials for room temperature cure and oven cure materials
- Create projects in composite materials showing how surface energy is increased and decreased
- Design for producibility and manufacturing ease
- Document technical activities in written and verbal reports
- Be prepared for successful employment

## Certificate: Aerospace Composite Technician (40 Credits)

This checklist is targeted at students with an interest in Composite Technology. Courses have prerequisites. Upon enrollment, this checklist should be submitted with a diploma application to the Enrollment Services Office.

Student: \_\_\_\_\_ Advisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Course Number	Course Title	Credits	Qtr Planned	Qtr Completed	Grade
CT 102	Composite Technology 1	20	_____	_____	_____
CT 203	Composite Technology 2	20	_____	_____	_____
<b>TOTAL:</b>		<b>40 credits</b>	<b>Minimum 2.0 minimum GPA</b>		