# Composites II Course No. 40650 Credit: 1.0

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| **Student name:**  |  | **Graduation Date:** |  |

Pathways and CIP Codes: Aviation Production (15.0000) - Production Strand

Course Description: An **application level** course designed to teach students composite assembly and repair. (Prerequisite: Composites I.)

Directions:The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

**RATING SCALE:**

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.

3. Proficient Achievement:Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.

2. Limited Achievement:Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.

1. Inadequate Achievement:Student lacks knowledge, skills or professional attitude.

0. No Instruction/Training:Student has not received instruction or training in this area.

## Benchmark 1: Click or tap here to enter text.

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Apply safety standards associated with the aviation and/or advanced manufacturing composite industry. |  |
| 1.2 | Understand the use of blueprints and picture sheets used in aerospace and/or advanced manufacturing. |  |
| 1.3 | Utilize the planning paper/engineering drawing to determine type of makeup of part materials (Kevlar, fiberglass, carbon fiber, or hybrid). |  |
| 1.4 | Perform layout techniques. |  |
| 1.5 | Demonstrate correct methods for drilling holes. |  |
| 1.6 | Identify fastener types – inserts, threaded fasteners. |  |
| 1.17 | Apply co-bonding/co- curing process. |  |
| 1.18 | Demonstrate countersinking with composites. |  |
| 1.9 | Employ a non-structural secondary bonding techniques. |  |
| 1.10 | Recommend procedures for quality assurance inspection. |  |
| 1.11 | Demonstrate structural secondary bonding techniques. |  |
| 1.12 | Apply composite fabrication skills and techniques to industry-based projects. |  |
| 1.13 | Describe the inspection process in composite repair. |  |
| 1.14 | Perform basic NDI skills. |  |
| 1.15 | Apply industry standards to damage assessment. |  |
| 1.16 | Demonstrate structural repairs using both wet layup and pre-preg materials. |  |
| 1.17 | Employ composite documentation skills. |  |
| 1.18 | Utilize disassembly techniques in the composite repair problem. |  |
| 1.19 | Practice damage removal procedures in the composite repair process. |  |
| 1.20 | Perform core removal and replacement procedures in the repair process. |  |
| 1.21 | Describe laser layout and ply locating in composite fabrication. |  |
| 1.22 | Describe automated fiber placement in composite fabrication. |  |

I certify that the student has received training in the areas indicated.

Instructor Signature:

For more information, contact:

CTE Pathways Help Desk

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