# Composites I Course No. 40640 Credit: 1.0

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

Pathways and CIP Codes:Aviation Production (15.000) - Production Strand

Course Description: An **application level** course designed to teach students the fundamentals of composite theory, materials, equipment, and processes.

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 aviation composite industry |  |
| 1.2 | Understand the use of blueprints, picture sheets, and ply tables/maps used in aerospace and/or advanced manufacturing |  |
| 1.3 | Apply quality controls to the lab environment: appropriate documentation, material control concepts, and lean concepts |  |
| 1.4 | State the terminology commonly found in the composites industry. |  |
| 1.5 | Identify the materials- their properties and roles- commonly found in the composites industry. |  |
| 1.6 | Compare the tools and equipment commonly found in the composites industry. |  |
| 1.7 | Identify the role of documentation in the lay up process |  |
| 1.8 | Identify the roles of the tools/ materials commonly used in preparation for the layup process : tool/mold, release agent, tacky tape |  |
| 1.9 | Describe and discuss the process commonly associated with the aviation and/or advanced manufacturing composite industry |  |
| 1.10 | Demonstrate the proper processes commonly associated with the aviation and/or advanced manufacturing composite industr |  |
| 1.11 | Identify the concepts associated with material/fiber orientation |  |
| 1.12 | Practice layup skills associated with core pre preg materials |  |
| 1.13 | Practice layup skills associated with pre preg materials |  |
| 1.14 | Practice layup skills associated with wet layup |  |
| 1.15 | Employ appropriate handling of composite part techniques |  |
| 1.16 | Apply appropriate net trim techniques. |  |
| 1.17 | Perform surface preparation |  |
| 1.18 | Apply composite fabrication concepts to industry based projects |  |
| 1.19 | Define techniques and requirements in composite inspection |  |

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

Instructor Signature:

For more information, contact:

CTE Pathways Help Desk

(785) 296-4908

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