# Advanced Materials Technology Course No. 38010 Credit: 1.0

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

Pathways and CIP Codes: **Construction & Design (46.0000) - Construction Strand**; Manufacturing (48.0000) - Production Strand

Course Description: A progressive **application level** course furthering the study of CNC equipment, materials, and the processes involved with fabricating goods with these technologies (i.e. composite panel products, veneering, etc.). (Construction Prerequisites: 17007/Woodworking Principals & 38007/Furniture & Cabinetry Fabrication. Manufacturing Prerequisites: 39052/Production Methods II or 39208/Welding Processes II).

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 0: The following competencies are to be taught within ALL application level courses offered in your school's approved pathway.

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 0.1 | Demonstrate an understanding of industry standards for personal safety including the safe use of tools, equipment, and hazardous materials. |  |
| 0.2 | Demonstrate time management skills. |  |
| 0.3 | Create and utilize employment documents including a resume and portfolio. |  |
| 0.4 | Demonstrate job seeking and interview skills. |  |
| 0.5 | Understand and respond to performance reviews. |  |

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

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Research and apply composite materials fabrication. |  |
| 1.2 | Research and apply overlay/veneer materials fabrication (for woods based courses). |  |
| 1.3 | Research and apply appropriate tooling methods for chosen materials. |  |
| 1.4 | Research and apply appropriate methods of assembly for materials and applications (adhesives, welds, etc.). |  |
| 1.5 | Research and apply appropriate finishes and proper finish procedure of chosen materials. |  |
| 1.6 | Design and engineer a product using CAD and/or CAM software systems. |  |
| 1.7 | Understand and demonstrate operations of advanced technology systems. |  |
| 1.8 | Demonstrate effective techniques to manage and organize production flow. |  |
| 1.9 | Research and understand related career fields and postsecondary training opportunities. |  |
| 1.10 | Implement and manage a safety program for procedures and hazardous materials. |  |

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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