# Research & Design in Building Trades Course No. 17005 Credit: 1.0

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

Pathways and CIP Codes:Construction & Design (46.0000) - Construction Strand

Course Description: An advanced research and **application level** course covering specific topics in building construction to include management and principles of sustainability and innovation.

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.

**Prerequisites:** 17002 General Carpentry I

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

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Demonstrate an understanding of industry standards for personal safety including the safe use of tools, equipment, and hazardous materials. |  |
| 1.2 | Demonstrate time management and competitive advantage skills. |  |
| 1.3 | Create and utilize employment documents including a resume and portfolio. |  |
| 1.4 | Demonstrate job seeking and interview skills. |  |
| 1.5 | Understand and respond to performance reviews. |  |
| 1.6 | Be able to look for and respond to natural feedback and criticism. |  |

## Benchmark 1: construction management

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Draw or render a complete set of residential or a simple structure set of plans |  |
| 1.2 | Research building permits and codes and understand ADA code compliance.  |  |
| 1.3 | Research footings and foundations. |  |
| 1.4 | Research structural support systems. |  |
| 1.5 | Research prefabricated construction systems. |  |
| 1.6 | Research careers in building trades. |  |
| 1.7 | Research applications of sustainable construction and innovation. |  |
| 1.8 | Demonstrate knowledge of advanced roof systems, including TPO and standing seam roofs. |  |
| 1.9 | Demonstrate knowledge of advanced floor systems and floor coverings including applications for each. |  |
| 1.10 | Demonstrate knowledge of advanced wall systems including firewalls and sound control walls. |  |
| 1.11 | Demonstrate knowledge of advanced stair systems including stairs for commercial construction. |  |
| 1.12 | Research Modern & innovations in equipment, methods & techniques |  |
| 1.13 | Research Modern & innovations in material management |  |
| 1.14 | Utilize effective management techniques to organize workflow and produce a basic gantt or construction schedule for your project. |  |

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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