

# CTE Carpentry Program

## Residential Construction (17003)

Grade Level 11<sup>th</sup> & 12<sup>th</sup> Grades  
Prerequisites: none

Length: year course  
1 hour and 40 minute period

Opdahl/Benshoof

### Course Description

Students will gain in depth knowledge of residential construction by

- Industry safety procedures
- Measurement and other Math skills
- Basic Blue print reading & survey techniques
- Wood building materials, fasteners, and adhesives
- Hand, power, and pneumatic tools safety and usage
- Foundation set up for building to be moved
- Framing of flooring systems, walls & ceilings, & roofing systems
- Installation of windows and exterior doors
- Exterior finishing
- Roofing application
- Thermal and moisture protection
- Drywall installation and finishing
- Interior finish work
- Cabinet Installation
- Stairs and rafter layout
- Basic residential electric and plumbing
- Career exploration (guest speakers & Field trips)

### Instructional Philosophy and Delivery Plan

**Expectation:** Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts and skills of each topic area. In order to pass the course students will need a minimum of 65%.

**Delivery Method:** Instruction will consist of individual hands on activities and projects, group work, lecture, discussion, reading, writing, self-assessment, and the use of technology.

**Community Involvement:** Guest speakers from industry will be brought in throughout the course. Learning field trips will be taken for various units in this course.

**Assessment:** Students will be graded on the following items: attendance, presentations, written reports, tests, daily work, group work, and daily participation points.

## Course Standards

Demonstrate the proper industry safety standards.

Understand and demonstrate basic measurement and other math skills

Demonstrate how to read a basic blue print

Demonstrate basic survey techniques and site layout.

Understand and demonstrate the use of wood building materials

Understand and demonstrate the use of fasteners and adhesives.

Demonstrate safe and proper use of hand tools.

Demonstrate safe and proper use of power tools.

Demonstrate safe and proper use of pneumatic tools.

Understand and demonstrate framing of flooring systems.

Understand and demonstrate framing of wall and ceiling systems.

Understand and demonstrate framing of a roofing systems.

Understand and demonstrate installation of windows.

Understand and demonstrate installation of exterior doors.

Understand and demonstrate installation of exterior finish.

Demonstrate installation of roofing materials.

Understand and demonstrate installation of thermal and moisture protection.

Understand and demonstrate drywall installation.

Understand and demonstrate drywall finishing

Understand and demonstrate interior finishing

Understand basic cabinet design and installation.

Understand and demonstrate installation of stairs.

Understand basic residential electric and plumbing applications.

Research career opportunities in the Architecture and Construction fields.

## Assessment Plan & Grading Scale

A	93-100%	Consistently demonstrates unexceptional level of quality and effort. Having all work in on time and completed to exceed expectations. Mastery in evaluating and applying the knowledge.
B	85-92%	Consistently demonstrates proficient knowledge with a good effort and quality of work. All assignments are complete and on time. Demonstrates the ability to evaluate, analyze and apply the principles of construction.
C	76-84%	Demonstrates proficient knowledge and the ability to apply knowledge. Work shows average effort. A few assignments may be missed or late.
D	65-75%	Work shows minimal effort and some assignments are late. Demonstrates a basic understanding of recalling or comprehending knowledge.
F	64-below	Understanding is below basic. Work is of poor quality and does not meet basic standards or expectations.