



WILLIAM D. FORD CAREER-TECHNICAL CENTER  
**CAREER • TECH**

36455 Marquette St., Westland, MI 48185

## Construction Technology 2

2024-2025

CIP Code: 46.000, PSN: 14204

**Instructors:** Jayden Wood & Patrick Dudek

**Teacher Assistants:** Louis Kelemen & Rob Wysong

**Phone Number:** (734) 419-2100   **Fax Number:** (734) 595-2127

**Email:** [woodje@wwcsd.net](mailto:woodje@wwcsd.net)   **Website:** [www.wwcsd.net](http://www.wwcsd.net)

**Prerequisites:** Completion of Construction Technology 1 with a C or better

**Course Code:** \*YR2 V0620

**Credit:** This class is valued as 3.0 credits over the course of one year. Successful completion of this CTE program may have credits counted as any of the following:

- Senior year math-related credit
- Visual, performing and applied arts credit requirement

### **Required Textbook:**

Title: Residential Construction Academy: Carpentry, 2<sup>nd</sup> Edition by Floyd Vogt (2008)

Title: Carpentry and Building Construction by McGraw-Hill (2016)

### **Supplemental Materials:**

Students in this course are responsible for supplying their own tools: Tool belt, Framing Hammer, Cats Paw, Speed Square, Tape Measure, Utility Knife, Chalk line, and Work boots. Safety glasses are provided. **All supplemental Materials are required in this course every day.**

### **Online Instruction:**

Google Classroom

- Some lessons will be linked to Google Classroom

## **Standards-based Grading Scale**

Grades in this class will be calculated on mastery of standards and competencies in a 4-point system.

### Site/ Lab Work Standards

These points are based on how a student performs and meets standards during class projects.

- 4 - Completes tasks and shows leadership skills
- 3 - Can complete tasks all by themselves
- 2 - Can complete tasks with help
- 1 - Exposed to material
- 0 - Not Exposed

## **Grading Outline**

- 40% Employability
- 50% Site/ Lab Work
- 10% Tests/Quizzes

## **Grade Distribution**

- 90% or higher = A
- 75-89% = B
- 50-74% = C
- 25-49% = D
- Under 25% = E

## **What We Do**

In this course, students will actually build a house from the ground up. Students will be responsible for every aspect of the construction process of a house. Class will be on a job site every day to develop the skills needed to be effective in any trade associated with construction. Students will be doing all the framing from floor joists to trusses and work along trades doing; electrical, plumbing, HVAC, concrete work, brick, drywall, siding, and roofing.

## **A Day in the Life**

This is not an in-class course, students will arrive at William D. Ford and then get on a bus to go to the job site. It is very important to be on time and ready for the bus when it arrives, if a student misses the bus they will be marked absent for the day.

- Boots, tool belt, safety glasses, and all other course materials are ready when the bus arrives (5-10 minutes after the bell)

- Arrive on site and set up for the day
- A recap on the day before and what we will be doing that day
- Work on house and clean up before bus arrives back at the site

### **Student Leadership**

All students will apply their knowledge and leadership skills through classroom competitions. The goal of these competitions is for students to develop workplace competencies, such as teamwork, leadership, communication, critical thinking, and academic proficiency that are aligned with industry standards and expectations. Leadership skills are fostered by encouraging students to develop and participate in the planning and decision-making, as well as run for elected positions within the classroom. All projects are developed and evaluated by people in the industry. Students may also participate in individual contests with other Career Tech Centers and post-secondary institutions.

### **Student Credentials/Certification**

As suggested by the Construction Industry, students will have the opportunity to take OSHA-30 in their second year in the program. Students will also receive a 60-Hour builders Per-license for qualifying students. **For students to be eligible for receiving a 60-Hour Building Pre-license will have to meet the following requirements:**

- Have a C or higher throughout the year
- Do not miss more than 20 days throughout the school year. **This includes suspensions, but not school-related absences.**
- Pass the practice test with an 80% or higher

### **Employability**

Attendance is critical to success in this class. One can not learn how to build a home by not showing up. Building a house is built on teamwork and when a student fails to show up they are only hurting the team. Students are expected to be in class before class starts at 7:25 A.M. and 11:10 A.M. This is very important because a bus is taken to our site every day. If a student is late, they will miss the bus and be marked absent for the day. School transportation issues will be considered to be exceptions.

**Students must arrive on-site via school transportation.**

If absent, students may not receive full credit for employability expectations. Students are graded on building a house and if a student is not here they will be graded accordingly.

**\*\*\*\*\*If you are going to be absent make sure to email me at: woodje@wwcsd.net**

Letting your boss know you will be absent is an employable practice and will gain back some employability points.

### **Work-Based Learning**

Work-based learning is a valuable experience in which every student in Career and Technical Education is required to participate. All students will be given opportunities to attend a minimum of one field experience each school year. Those students who do not attend the scheduled experience(s) will be required to find a site related to that experience.

Students will also have the opportunity to find a job in the field of their interest where they can spend up to 4 days a week on said job working or learning (this can be paid or unpaid). The student will be required to get the teacher's signed permission, and the parent/guardian's signed permission, fill out a training agreement to be signed by the site supervisor and provide their own transportation to and from the site. Upon completion of the field experience, the student will turn in a question and answer assignment provided by the teacher regarding the experience

### **Tests, Quizzes, and Course Work**

\*If absent on the day of a test, you are required to take the test the following day. You are responsible for asking the teacher for the test when you return.

\*Deadlines are important in Construction.

### **Extra Help**

The instructor will be available for extra help. Feel free to schedule a time that's convenient for both you and your instructor. This could be before or after school.

Test/Quizzes may be read aloud and extended time may be permitted under certain circumstances. Seating arrangements may be adjusted based on student needs.

### **Standards**

- Safety
  - Review OSHA and Job site procedures
- Foundation

- Students will be able to identify parts of a foundation and explain the process of constructing.
- Students will be able to explain how to make the foundation energy efficient.
- Floor Framing
  - Students will be able to interpret blueprints to layout and install the entire floor system.
- Wall Framing
  - Students will be able to interpret blueprints to layout and install interior and exterior walls.
  - Students will be able to identify and explain green building techniques used in wall construction.
- Roof Framing
  - Students will be able to interpret truss layout and install the entire truss package.
  - Students will be able to build scaffolding and demonstrate safe elevated work practices.
- Shingle Installation
  - Students will be able to install architectural shingles on a roof system, utilizing ice guard, tar paper, ridge vent, step flashing, and valley flashing
- Insulation
  - Students will be able to insulate a home to meet current codes.
  - Students will be able to blow insulation into an attic space to increase R-Value to the current code.
- Drywall
  - Students will be able to hang drywall on walls and ceilings.
- Trim/Flooring
  - Students will be able to hang and trim a pre-hung door, bi-fold door, and pocket door.
  - Students will be able to install baseboard moldings, window sills, aprons, and casing.
  - Students will be able to install kitchen and bath cabinets.
- Paint
  - Students will be able to operate an airless sprayer to spray and backroll walls and ceilings.
  - Students will be able to identify the differences in paint types and sheens.
- Siding
  - Students will be able to install vinyl siding and accessories.
  - Students will be able to bend all aluminum trim coverings with an aluminum break and install.

### **Competencies Covered**

- Segment Z

- The second year of this program is devoted entirely to segment Z. During this time the students will build an entire home from the ground up. The project is completed in partnership with the City of Westland Community Development Department and utilizes federal home funds.

### **Post-Secondary Articulated Credit**

Students may be eligible to receive free college credit for successful completion of the Construction class. The qualifications and number of college credit hours vary by a post-secondary institution. This course has articulated credit agreements with Baker College, Davenport University, Ferris State University, Schoolcraft College, Washtenaw Community College and Wayne County Community College. Additional agreements may exist upon request with the advisor at the incoming institution.

# Student and Parent Acknowledgement

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**Attendance-** Daily attendance is critical as your work and employability can not be measured if you aren't here. Grades are taken by participation in building the house and a student will not get a favorable grade in the class if they are not here. Students are responsible for asking the instructor what they missed for the days they were absent.

**NOTE: Work on the job site can not be redone.**

**Technology-** Students will be on an actual job site where dangers are present at all times and therefore full attention to safety must be given at all times. Cell phones or earbuds are not allowed out during the building process of the house.

**Disciplinary Actions-** Safety is the number one priority in this course. Students will be removed from the class and not receive credit if they are not following the safety rules or procedures for the job site.

**Food-** Students are not allowed to eat outside food in any classroom at William D. Ford, including the Construction classroom. Students have time before the bell to eat food in the Commons area.

**Driving-** Students coming from different schools will have the option to apply for a driving pass if they would like to drive to William D. Ford ( Wayne students will have to ride the bus provided for them).

**With this pass students CAN NOT:**

- Drive other students to school
- Deliver food for students
- Be trady more than 5 times

If students cannot follow these rules then their driving pass will be revoked and will have to ride the bus to and from William D. Ford

I have read and understand the classroom policies for the Construction Technology 2 class. Please sign and date below and return to the instructor.

Student Name Printed \_\_\_\_\_

Student Signature \_\_\_\_\_

Date \_\_\_\_\_

Parent Signature \_\_\_\_\_

Date \_\_\_\_\_