WILLIAM D. FORD CAREER-TECHNICAL CENTER
CAREER • TECH

**36455 Marquette St., Westland, MI 48185**

# Construction Technology

**2026 - 2027**

CIP Code: 46.000, PSN: 14204

**Instructors:** Mr. Grantham, Mr. Bryant
**Teacher Assistants:** Mr. Helka, Mr. Wysong
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**Prerequisites:** None
**Course Code:**
*V0510 Construction Technology 1 (1 year, 3 credits)
**Credit:** This class is valued at 3.0 credits over one year. Successful completion of this one-year CTE program may have credits counted as any of the following:

- Visual, performing, and applied arts credit requirement
- 2nd-year world language credit (counselor determination)
- 3rd-year science credit (counselor determination)

## Welcome to Construction Technology!

Congratulations on your decision to enroll in Construction Technology. The construction industry offers rewarding career opportunities, competitive wages, and the potential for entrepreneurship and self-employment. It is a profession built on skill, dedication, and pride in workmanship.

Throughout this course, you will develop practical, hands-on skills that are directly applicable to the real world. You will learn how buildings are constructed, how to work safely and effectively with tools and materials, and how to solve problems using the same techniques employed by industry professionals every day.

Construction Technology is different from many traditional classroom experiences. Here, learning extends beyond textbooks as you gain valuable technical knowledge, work with your hands, and participate in projects that reflect real industry practices. You are joining a community of skilled tradespeople whose work helps build and maintain the homes, businesses, and infrastructure that people depend on every day.

We are excited to have you as part of our program and look forward to helping you develop the knowledge, skills, and confidence needed for success in the construction trades.

**Welcome to the Team!**

## Required Textbook:

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

## Online Instruction:

Google Classroom

a) The classroom code to join our Google Classroom will be posted at the front of the classroom
b) The majority of lessons will be linked to Google Classroom
c) Parents and Guardians are welcome to join their students' Google Classroom

## What We Do

In Construction Technology, students gain hands-on experience with the skills and processes involved in residential construction. Working both independently and as part of a team, students will develop technical abilities while strengthening communication, problem-solving, and collaboration skills.

Throughout the course, students will participate in the construction process from the ground up. Instruction includes floor, wall, staircase, and roof framing, as well as an introduction to a variety of finishing trades. Students will learn industry-standard techniques for installing drywall, siding, roofing materials, windows, doors, trim, basic electrical systems, plumbing components, and more.

By combining classroom instruction with practical application, students will develop a strong foundation in construction principles and gain valuable experience that can be applied to future education, apprenticeship programs, or careers in the skilled trades.

## A Day in the Life

- Boots, tool belt, safety glasses, and all other course materials are ready approximately 5 minutes after the bell rings
- Most days, there will be a quick recap of the material, an introduction of new material, and a demonstration.
- The remainder of the time is spent out of your seat, in the shop, working on the assignment.
- Tests and writing will be assigned on occasion

## Basic Class Rules

1. Keep your hands, feet, and harsh commentary to yourself
2. Refrain from talking while the instructor has the floor
3. Disruptive behavior will not be tolerated
4. Give your full attention to each assignment and stay on task
5. Be on time and ready to work
6. **No phones or headphones in the classroom or lab**

## Leadership and Competitive Opportunities

Students will have opportunities to apply their technical knowledge and leadership skills through a variety of classroom activities and competitions. These experiences are designed to develop the workplace competencies that employers value, including teamwork, communication, problem-solving, critical thinking, professionalism, and technical proficiency.

Leadership development is an important component of the program. Students are encouraged to take an active role in classroom planning, decision-making, and leadership activities, including running for and serving in elected classroom positions.

Many projects and competitive events are developed, reviewed, or judged by industry professionals to ensure they reflect current industry standards and expectations. Students may also have opportunities to participate in individual and team competitions against other Career Technical Education programs and post-secondary institutions, allowing them to showcase their skills and gain valuable real-world experience.

## Student Credentials/Certification

As suggested by the Construction Industry, students will earn their OSHA-10 credentials. In addition, we also offer a 60-hour builders-per-license for qualifying students. **For students to be eligible to receive a 60-Hour building Pre-license, they will have to meet the following requirements:**

- Have a B or higher throughout the year
- You cannot miss more than 15 days throughout the year. **This includes suspensions, but not school-related absences.**
- Pass the Precision test with an 85% or higher

## Attendance

Attendance is essential to success in this class. If absent, you may not receive full credit for employability expectations. If absent, it is the student's responsibility to get the work from the instructor and make it up promptly.
*****If you are going to be absent make sure to email me at:** granthamt@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 Career Technical Education student is required to participate. All students will have the following opportunities fulfilled through visiting speakers with a hands-on demonstration or through field experiences throughout the school year. If a student is eighteen years old, they have an opportunity to work with a documented business instead of attending class for credit. The student will be required to get the teacher’s and parent/guardian’s permission, fill out a training agreement to be signed by the site supervisor, and provide transportation to and from the business.

## Late Work

Late work will be accepted up to one week late for full points

## Tests, Quizzes, and Course Work

*If absent on the day of a test, you must take the test the following day. You are responsible for asking the teacher for the test when you return.
*Deadlines are important in construction; therefore, prompt completion of assignments or projects is necessary.
*Students are responsible for completing projects as they work through the school year.

## Unemployment

If you show unsafe practices and disregard for classroom policies, you will no longer have the privilege of working in the lab environment for the semester. You will collect your work experience from the corresponding chapter in our course textbook.

## Competencies Covered

Semester 1

- Implement job site safety rules and regulations to maintain safe and healthy work conditions (A1)
- Describe the various industry operations associated with the construction trades field (A2)
- Demonstrate language arts, mathematics, and science knowledge and skills required for educational and career opportunities (A3)
- Develop a broad range of career and employability skills necessary for a career beyond high school career practices (A6)
- Develop a variety of communication skills necessary for employment (A4)
- Identify and describe a variety of building and project management methods needed to complete a construction project (A7)
- Describe and demonstrate leadership and teamwork skills necessary for employment (B2)
- Describe and implement a variety of problem-solving and critical thinking strategies as necessary techniques for successful employment (A5)
- Identify and demonstrate the use of hand, power, and construction-related machinery (B1)
- Identify and describe specific materials and methods associated with residential construction (B3)
- Identify and describe construction trends related to green practices and construction (C2)
- Understand and use necessary technology-related skill sets associated with career development and the field of construction trades (C3)
- Demonstrate and apply knowledge of specific materials and methods associated with residential construction (C1)

Semester 2

- Identify and describe the use of heavy equipment in construction trades (D1)

- Identify and describe knowledge of heavy/highway construction and civil projects, materials, and methods in the construction of different projects (D2)
- Identify, describe, and demonstrate the necessary elements in business and project management as aligned to the field of construction trades (D3)

## 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.

## Grades

**The Wayne Westland School District changed the grading methods at the beginning of the 2025-2026 school year; however, teachers have not received adequate training on the expectations for grades at this moment. Grades may be tabulated in total points earned (Traditional Grading Method) instead of standards-based grading. More information to follow.**

## Standards-based Grading Scale

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

| | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| Employability | Missing 4 variables | Missing 3 variables | Missing 2 variables | Missing 1 variables | Be Safe<br>Be Respectful<br>Be Responsible<br>Be Engaged |

What does it mean to be **safe**?
- Have work boots, safety glasses, and toolbelts on when working with tools
- There will be no playing games in this classroom
- Be aware of hazards and report any that you find

What does it mean to be **respectful**?
- Treat others how you want to be treated
- Willing to collaborate with peers
- No stealing of classmates' materials
- Make a welcoming environment for everyone
- Respect tools and equipment

What does it mean to be **responsible**?
- Attending class
- Cleaning up the classroom and lab
- Being productive

What does it mean to be **engaged**?
- Participate in the learning process

- Demonstrates an understanding of content
- Show passion in your work

## Grading Scale

| | |
|---|---|
| 4.0 | 88% - 78% |
| 3.5 | 77% - 68% |
| 3.0 | 67% - 57% |
| 2.5 | 56% - 47% |
| 2.0 | 48% - 36% |
| 1.5 | 35% - 26% |
| 1.0 | 25% - 6% |
| .5 | 5% - 0% |

**Summative Assessments:** 70%

(Tests, Quizzes, Projects, Large Assignments)

**Formative Assessments:** 30%

(Independent Practice and Other Small Assignments)

# 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. Students receive a grade per project, and students will not get a favorable grade in the class if they are not here. Students are responsible for asking the instructor for what they missed for the days they were absent.

NOTE: Group projects can not be made up.

**Cell Phones-** Cell phones, earbuds, and headphones are **not** allowed in the classroom; there are no exceptions. Students will lock their phones in the class cellphone locker and check them at the end of the hour. This is an environment where danger is present at all times; therefore, attention to safety protocols is paramount.

**Disciplinary Actions-** Safety is the number one priority in this class, and failure to follow the expectations will result in the following consequences:

1. The first action will be a warning
2. If the student still isn't following the rules, they will sit down with the instructor and talk about the safety procedures before they can go back to work.
3. For the third action, the student won't be allowed to work and will be responsible for doing the corresponding chapter in the textbook while also getting a call home.
4. If the student is still being unsafe/disruptive at this point, they will be sent to the office and possibly an in-person meeting with parents will be needed.
5. NOTE: Actions can be skipped if needed.

**Food -** Students are **not** allowed to eat 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.

**Arrival and dismissal -** Students must arrive and depart at their scheduled time. Failure to take heed this warning will result in a dismissal from the program.

**Driving -** Students from different schools can apply for a driving pass to drive to William D. Ford (Wayne Memorial students must use the provided school transportation).

**With this pass, students CAN NOT:**

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

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

****Note**: The above content is subject to adjustments throughout the school year.

Please sign and have your parent(s)/guardian(s) sign below after you have read the Construction Technology 1 syllabus. By signing below, you acknowledge the requirements for this class and agree to follow them. I look forward to helping you learn a valuable trade and increase your knowledge of other trades.

**Student Signature_____**

**Date_____**

**Student Name Printed _____**

****Email _____**

**Parent/Guardian Signature_____**

**Name Printed _____**

**Date_____**

**** Email _____**

** Email addresses will not be used except to discuss individual student progress. If you have any questions during the school year, contact Mr. Grantham granthamt@wwcsd.net