

Construction Systems Technology

West Fargo High School
Mr. Broeren– Room 117G
Phone (701)356-2050
Email: tbroeren@west-fargo.k12.nd.us

Course # 8475 **Prerequisite:** None **Credit/Length:** ½ credit 1 semester. Elective

Course Description:

Scale model homes are constructed by incorporating knowledge acquired of surveying, blue print reading, measurement, and building fundamentals. Power tools, both hand and stationary, are used extensively as students prepare for advancement towards higher level classes, work, or personal growth. Students should exit this class with a strong knowledge of fundamental construction techniques and have the ability to ‘build’ upon this knowledge through various challenging endeavors.

Required Text:

Carpentry, Second Edition, Vogt, Floyd (2008)

Class Materials You Will Need Daily:

- Notebook and folder
- Textbook on non-lab days
- Something to write with
- All assignments on day they are due

Course Requirements:

Requirements for this course include daily work (chapter questions, worksheets, quizzes, etc.) safety tests, lab project (scale house) and daily lab points.

Course Goals and Objectives:

- Students will study the technology involved in the construction of residential and commercial structures through the System Model approach.
- Students will be exposed to various measuring techniques including Architectural Scale ruler, carpenters measuring tape, various kinds of squares and a surveying builders’ level.
- In-depth use of and safety concerns for hand tools, power tools and stationary machines used in the construction industry.
- Architectural styles and blue print reading will be explored. Basic drawings in Orthographic (three views), Pictorial and Isometric will be performed.
- The study of the social, economic and environmental impacts stemming from the building trades will be discussed.
- Introductions to current advancements in construction technology such as tools, materials and processes will be addressed.
- Exploration of various construction careers are incorporated throughout the course.
- Students will exit the class with a basic knowledge of the fundamental construction techniques and have the ability to ‘build’ upon this knowledge in life long pursuits.

Classroom Expectations:

- Respect for other people, belongs, and all equipment in the classroom and lab.
- Be on time and be at your seat when the bell rings.
- Be prepared and have all materials with you when you get to class.
- Assume responsibility for your actions and obligations. This includes everything from homework to clean-up.
- Cell phones will not be allowed in this classroom.
- Utilize class time given to you as the machines are only running during class.
- You must use flextime manager as a pass if you need to leave the room.
- Clean up after yourself!!
- Inappropriate language will NOT be tolerated.

Lab Expectations:

- For the safety of yourself and others students are accountable for understanding and following all safety rules while in the lab. These rules are posted in a separate document that will be signed both students and guardians before students are allowed to use

Hybrid Learning:

- Complete work on Assigned Due dates. These will be added to Schoology
- Teacher will respond to emails during school hours.
- Schoology is the learning management system where you will receive all your assignments/tasks.

Virtual Learning: (This portion will be updated if virtual learning happens)

- Be prepared by keeping your iPad firmware up to date and charged.
- Check Schoology and Email daily
- TEAMS Etiquette:
 - Keep Microphone off unless speaking
 - Turn Camera On. I want to see your face
 - Locate yourself in a quiet space
 - Use the Chat as a source of communication
 - Make sure you have proper dress attire

Grading Scale:

A = 90 – 100 B = 80- 89 C = 70 – 79 D = 60 – 69 F = 0 - 59

Student Needs:

If you are having a difficult time seeing or hearing the instructor please inform the teacher as early as possible. As a student it is important to advocate for yourself so we can help you succeed.

Assignments and Student Accountability:

Homework and Make-up work: Completing your homework is a requirement for this class. It is your job to complete all assignments on time.

Late Work: If not completed on time the instructor assumes you made a choice. 1 day late will reduce the grade up to 50% and 2 or more days the instructor assumes the student has made a choice to earn a 0% and will record that choice on behalf of the student.

Missed work / absentee work: If you have an excused absence it is your responsibility to contact the instructor for all missed work – preferably before the absence if possible.

Extra Credit:

Extra credit can be obtained on the construction of the scale house. All work done beyond the required tasks is open for extra credit points. But no extra credit points will be given if any of the required tasks are not complete in construction of the house.

Course Schedule Outline:

- Basic measurement, scaling, orthographic
- Blue print reading, Surveying and Builders level, Chapter 5
- Hand Tools, Power Tools, Safety demos and testing, Chapters 1 & 2
- Concrete form Construction, lab pour time, Chapter 6
- Floor framing, Chapter 7, lab time
- Wall and Ceiling framing Chapter 8, lab time
- Roof Framing, Chapter 10, lab time
- Windows and doors, roofing, Chapter 11, lab time
- Lab time, project completion, final test study guide and final test