



Course Syllabus 2026 - 2027

Course Title

Construction Technology

Instructor

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Course Description

Students who enroll in the Construction Technology course will become members of the construction crew, which builds a house from layout and framing, to final trim work. You will assist in the construction of various school and community projects based on current industry standards and practices. You will also develop skills using carpentry hand tools, and stationary and portable tools used in the construction industry.

Classroom Textbook

Huth, Jones, Smith & Wagner. *Modern Carpentry - 13th Edition*. Tinley Park, IL: The Goodheart-Wilcox Company Inc. (2022)

Course Goals

This program will enable a student to:

1. use hand tools, portable power tools, and woodworking machines safely.
2. explore various working drawing and understand the basics of reading them
3. learn operation techniques of various measuring and leveling instruments.
4. Develop basic skills to layout and installation of all construction materials
5. learn basic terminology and techniques as they apply to carpentry.
6. be involved in all aspects of the construction of a three-bedroom home.
7. examine building codes and apply them to daily building practices.
8. explore many of the occupations involved in construction.

Course Topics: - *see alignment document for state framework*

This course will be organized around major themes of the construction industry:

Semester I - CON 1001

- Safety: First, Last and Always
 - SP/2 Training
 - Shop Safety
 - Worksite Safety
 - Power Tools Safety - *portable circular saw & power miter saw*
 - Scaffold & Step Ladder Safety
 - Fall Protection
- Careers in Construction
- Land Development, surveying
- Foundations, footings, grading
- Building Materials
 - Wood, Engineered Lumber, Hardware and fasteners, Adhesives compounds
- Tool Identification & Use
 - Hand Tools –
 - Power Tools
- Layout & Framing Methods
 - Floor Framing – *1 joists*
 - Wall Framing – *exterior and interior partition walls*
 - Roof Framing – *roof sheathing and shingling*
- Building Codes covered during content
- Residential Mechanicals
- HVAC, plumbing, electrical, low voltage, central vac, septic systems

Semester II - CON 1002

- **New Students. Safety: First, Last and Always**
- Insulation, Vapor Barriers, housing envelope
- Drywall/Interior covering
- Exterior Trim & Siding
- Interior Trim & Doors
- Cabinetry & Vanities
- Flooring – carpet, tile, vinyl, wood

Skills Needed

To be successful in this program, you should have the following skills:

- Must be able to follow multiple step directions
- Dependability and strong work ethic
- Manual dexterity, Hand eye coordination, Physical stamina
- Strong math skills and problem solving skills
- Must be able to collaborate and work with others
- Accuracy to perform repeated actions precisely
- Professional behavior, clear communication and social skills
- Being alert and aware of what's going on around you
- Patience in understanding the scope of building a house

Classroom Supplies & Shop/Lab Fees

One pair of safety glasses will be provided to you. If another pair is needed for any reason the student will be responsible for purchasing safety glasses from an outside vendor.

Program Safety:

Students will complete industry and shop specific safety training before being allowed to participate in lab activities. Safety training includes:

- PPE - Personal Protective Equipment Training
- S/P2 Online Training Program
- Career Speakers focusing on site specific safety requirements and topics

Evaluation of Learning

Student performance will be evaluated using multiple assessments involving assigned program activities. Student's course grades will be based on the following:

Evaluation Criteria	Method of Evaluation	Total Points
Effort	● Attendance ● Daily participation & performance ● Professionalism ● Attitude/Behavior	Total Points
Knowledge of Course Content	● Performance tests ● Chapter quizzes and tests	

Grading Scale

Grade	Percentage
A+	100% – 98%
A	97% – 92%
A-	91% – 90%
B+	89% – 88%
B	87% – 82%
B-	81% – 80%

Grade	Percentage
C+	79% – 78%
C	77% – 72%
C-	71% – 70%
D+	69% – 68%
D	67% - 62%
D-	61% - 60%
F	59% - Below

Late Assignments

In the event of a student absence, students are allowed 3 days per excused absence to make up any missed work. This includes all quizzes, tests or performance tests. After one week no credit will be given. Students can also make up missed professional points by working on the same corresponding chapter from the classroom textbook. (See instructor for more details)

Career Information

MN Program of Study	
Career Field	Engineering, Manufacturing & Technology
Career Cluster	Architecture & Construction
Career Pathway	Construction
Occupations Requiring a Two Year Degree or Specialized Training and/or Apprenticeship	
● Carpenter/ Drywall Installer ● Code Official ● Concrete Finisher ● Construction Engineer ● Construction Foreman/Manager ● Construction Inspector ● Contractor ● Design Builder ● Electrician ● General Contractor/Builder ● Heating, Ventilation, Air Conditioning and Refrigeration Mechanic ● Mason ● Painter/Paperhanger ● Paperhanger ● Plumber ● Project Estimator ● Project Inspector ● Roofer ● Safety Director ● Sheet Metal Worker ● Specialty Contractor ● Tile and Marble Setters	
Career Outlook	<i>information available @ careerwise.minnstate.edu</i>

College Credit Opportunities

College credits can be earned if you maintain a “B” or above grade. Students can earn college credits through the following schools:

- Anoka Technical College
- Hennepin Technical College
- Rochester Community & Technical College
- South Central College – North Mankato
- St. Cloud State University

Visit the following website for specific articulated college courses - www.ctecreditmn.com

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