

Department:

Construction Technology

Course Description:

This is a step by step class that teaches the student how to use equipment, tools and fasteners; measure, cut, drill, join, fasten and finish various types of hardwoods and softwoods. The student will read, and interpret plans, elevations, schedules, sections, and details contained in basic construction drawings. Students master a variety of construction skills by applying knowledge through their participation in a 'student design-built' house project.

Course Competencies:

Upon completion of the course, the student should be able to:

1. Orientation to the Trade
 - a. Describe the history of the carpentry trade.
 - b. Identify the aptitudes, behaviors, and skills needed to be a successful carpenter.
 - c. Identify the training opportunities within the carpentry trade.
 - d. Identify the career and entrepreneurial opportunities within the carpentry trade.
 - e. Identify the responsibilities of a person working in the construction industry.
 - f. State the personal characteristics of a professional.
 - g. Explain the importance of safety in the construction industry.
2. Building Materials, Fasteners, and Adhesives
 - a. Identify various types of building materials and their uses.
 - b. State the uses of various types of hardwoods and softwoods.
 - c. Identify the different grades and markings of wood building materials.
 - d. Identify the safety precautions associated with building materials.
 - e. Describe the proper method of storing and handling building materials.
 - f. State the uses of various types of engineered lumber.
 - g. Calculate the quantities of lumber and wood products using industry-standard methods.
 - h. Describe the fasteners, anchors, and adhesives used in construction work and explain their uses.
3. Hand and Power Tools
 - a. Identify the hand tools commonly used by carpenters and describe their uses.
 - b. Use hand tools in a safe and appropriate manner.
 - c. State the general safety rules for operating all power tools, regardless of type.
 - d. State the general rules for properly maintaining all power tools, regardless of type.
 - e. Identify the portable power tools commonly used by carpenters and describe their uses.
 - f. Use portable power tools in a safe and appropriate manner.
4. Reading Plans and Elevations
 - a. Describe the types of drawings usually included in a set of plans and list the information found on each type.
 - b. Identify the different types of lines used on construction drawings.
 - c. Identify selected architectural symbols commonly used to represent materials on plans.
 - d. Identify selected electrical, mechanical, and plumbing symbols commonly used on plans.

- e. Identify selected abbreviations commonly used on plans.
- f. Read and interpret plans, elevations, schedules, sections, and details contained in basic construction drawings.
- g. State the purpose of written specifications.
- h. Identify and describe the parts of a specification.
- i. Demonstrate or describe how to perform a quantity takeoff for materials.

Course Content:

- A. Carpentry-A Career Path
- B. Identify Building Materials, Fasteners, Adhesives
- C. Proper & Safe Use of Hand Tools
- D. Proper & Safe Use of Power Tools
- E. Interpreting Site/Plot Drawings
- F. Interpreting foundation & floor plan drawings.
- G. Perform a Quantity Takeoff for Materials

Learning Assessments:

The instructor's evaluation of the student will be based on class discussion, examinations, assigned activities, class attendance, and student participation.

Instructional Materials:

Textbook: NCCER. (2013). *Carpentry Level 1 Trainee Guide* (5th ed.). Boston, MA: Pearson. ISBN-13: 978-0133402377

Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

In order to begin the process all students **must** complete the "Disabilities Self-Identification Form" on our [Disability Services website](#).

This form can also be accessed at the Highland Community College homepage under Students Services/Student Resources/Disability Service or by contacting the Disabilities Coordinator.

A Note on Harassment, Discrimination and Sexual Misconduct

Highland Community College seeks to assure all community members learn and work in a welcoming and inclusive environment. Title VII, Title IX, and College policy prohibit harassment, discrimination and sexual misconduct. Highland Community College encourages anyone experiencing harassment, discrimination or sexual misconduct to talk to report to the Vice President for Student Services, the Human Resources Director or complete an [online report](#) about what happened so that they can get the support they need and Highland Community College can respond appropriately.

There are both confidential and non-confidential resources and reporting options available to you. Highland Community College is legally obligated to respond to reports of sexual misconduct, and therefore we cannot guarantee the confidentiality of a report, unless made to a confidential resource. Responses may vary from support services to formal investigations. As a faculty member, I am required to report incidents of sexual misconduct and thus cannot guarantee confidentiality. I must provide our Title IX coordinator with relevant details such as the names of those involved in the incident. For more information about policies and resources or reporting options, please review our [Equity Grievance Policy](#).