Department:

Building Trades

Course Description:

This course provides step by step instruction on how to use equipment, tools, and fasteners, as well as how to measure, cut, drill, join, fasten, and finish various types of hardwoods and softwoods. The course will also cover reading and interpreting plans, elevations, schedules, sections, and details contained in basic construction drawings. Students will apply construction skills through participation in a student designed and built house project.

Course Competencies:

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

1. Provide an overview of the carpentry trade:
   a. Describe the history of the carpentry trade.
   b. Identify the aptitudes, behaviors, and skills needed to be a successful carpenter.
   c. Describe the training opportunities within the carpentry trade.
   d. List the career and entrepreneurial opportunities within the carpentry trade.
   e. State the responsibilities of a person working in the construction industry.
   f. Describe the personal characteristics of a professional.
   g. Explain the importance of safety in the construction industry.

2. Give a basic explanation of 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 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. Use 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. Read 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. Identifying Building Materials, Fasteners, Adhesives
C. Proper and Safe Use of Hand Tools
D. Proper and Safe Use of Power Tools
E. Interpreting Site and Plot Drawings
F. Interpreting Foundation and Floor Plan Drawings.
G. Performing a Quantity Takeoff for Materials

Learning Assessments:

Course competencies will be assessed by participation in class discussion and activities, examinations, assignments, and class attendance.

Instructional Materials:

Core Curriculum, Introductory Craft Skills, Contren Learning Series, Pearson Hall.

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” at this link: https://highlandcc.edu/pages/disability-services.

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.