

Department:

Construction Technology

Course Description:

Though the finishing of footings, foundations, and floor slabs is typically done by subcontractors, there are occasions when the residential carpenter is called on to build basic forms and place reinforcing materials in the structure. This course is a study of the reinforcing materials, concrete and basic formwork used in construction. Student will learn how to perform several masonry and concrete finishing tasks, such as mixing concrete, building footings, edges and wall forms and using concrete reinforcing materials.

Course Competencies:

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

1. Identify various properties of cement.
2. Describe the composition of concrete.
3. Perform volume estimates for concrete quantity requirements.
4. Identify types of concrete reinforcement materials and describe their uses.
5. Identify various types of footings and explain their uses.
6. Explain the safety procedures associated with the construction and use of concrete forms.
7. Erect, plumb, and brace a simple concrete form with reinforcement.

Course Content:

- A. Concrete & Concrete Materials
- B. Normal Concrete Mix Proportions and Measurements
- C. Special Types of Concrete
- D. Curing Methods and Materials
- E. Concrete Slump Testing
- F. Estimating Concrete Volume
- G. Concrete Reinforcement Materials
- H. Concrete Forms

Learning Assessments:

Competencies will be assessed by assignments, case problems, quizzes, chapter tests, hands-on projects, lab assignments, a midterm test, and a final test. The test can be in the objective format or in a problem solving format.

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](#).