

BLDT-111 FOUNDATIONS AND FLOOR FRAMING 3 CREDITS

SYLLABUS

CATALOG DESCRIPTION

This course will teach students how to shoot proper elevations and determine exactly where the building envelope will be located. We will also study the theory of different foundation systems. As a final exercise, students will build forms and pour the concrete piers which our house will temporarily sit on. Additionally, students will be introduced to proper floor framing techniques and participate in the actual construction of a floor system.

Prerequisites: BLDT 120 Construction Safety

Semester Offered: Fall

COMMON STUDENT LEARNING OUTCOMES

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in...

BROAD AND SPECIALIZED LEARNING

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION

Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to...

1. List the basic ingredients and the characteristics of concrete that make it a useful building material.

2. Describe and demonstrate how to mix, form, reinforce, and place a small batch of concrete.
3. Identify basic types of surveying instruments and demonstrate the set up and operation of each.
4. Explain how to take and measure differences in elevation points.
5. Describe and demonstrate installation of batter boards and building layout.
6. Calculate volume quantities for soil and concrete.
7. Explain the purpose of and exact location of concrete footings.
8. Identify four types of foundation systems.
9. Identify the basic components of a wood framed floor and their purpose.
10. Explain sill plates and the layout of basic joist spacing.
11. Explain and demonstrate how to construct and anchor rim joists.
12. Explain and demonstrate installation of cross bracing.
13. Explain and demonstrate how to properly construct a girder.
14. Explain and demonstrate how to measure, cut and install floor joists.
15. Explain and demonstrate how to cut and install different kinds of bridging.
16. Explain and demonstrate how to cut and install subflooring properly.

GENERAL LEARNING OBJECTIVES

1. To provide the student with the knowledge to be able to shoot site elevations and determine the exact location of footings.
2. Students with gain expertise in how to properly frame a floor using a variety of building products, techniques and spacing standards.