

BCN-BUILDING CONSTRUCTION

BCN 1001 Intro to Building Construction (3 Credits)

This course provides a broad overview of the built environment, the architectural, engineering and construction (A/E/C) industry as well as different career paths within the industry. Insight into the processes, the people and the practices involved to bring a building from a concept to reality are presented. An emphasis will be placed on the construction management process and the critical role of the construction manager.

BCN 1014 Introduction to Sustainability (3 Credits)

This course provides students with a foundation in sustainability principles and practices. Students will explore core sustainability concepts related to population, climate change, renewable energy, consumption, ecosystem threats, transportation, green design and construction, biodiversity, and environmental justice. The course emphasizes green building rating systems and helps students explore green career opportunities.

Prerequisite: C or higher in BCN 1001 (may also be taken as a corequisite)

BCN 1054 Construction Surveying Methods (3 Credits)

This course provides an overview of basic surveying principles and methods used in building construction, covering general surveying principles, site surveys, contours, elevations, building layout, and levels.

Prerequisite: C or higher in BCN 1001 (may also be taken as a corequisite)

BCN 1215 Construction Materials/Methods 1 (2 Credits)

This course offers in-depth knowledge of the materials and methods used in wood frame, masonry, concrete, and steel construction and a study of the fabrication of component units and their assembly at the construction site. Construction techniques are presented as related to sitework and the building envelope. This course covers major construction materials such as soil, concrete, masonry, wood and structural steel.

Prerequisite: C or higher in BCN 1001 (may be taken as a corequisite)

BCN 1226 Soils and Foundations (3 Credits)

This course covers the criteria used in the selection, design, and construction of the elements of a structure that transfers its total load to the underlying formations. Theoretical aspects considered and treated are analysis of subsoil conditions, bearing capacity and settlement analysis, character of natural soil deposits, earth pressure and retaining wall theory, and stability of slopes and subgrades. The course also covers the basic types of prevalent foundations, their design and behavior characteristics.

Prerequisite: C or higher in BCN 1001 (may also be taken as a corequisite)

BCN 1231 Construction Materials/Methods 2 (2 Credits)

This course teaches and examines how various materials and construction methods associated with thermal and moisture protection; doors and windows, interior and exterior finishes; specialties and equipment; electrical; mechanical affect the construction cost, total life, and maintenance cost of a building. The merits of new materials and methods are introduced and compared to existing products and methods. The major focus is from a builder's perspective emphasizing proper installation procedures, coordination and processes.

Prerequisite: C or higher in BCN 1001 and BCN 1215 (Both may be taken as a corequisite)

BCN 1272 Blueprint Reading (3 Credits)

This course will develop the knowledge and skills involved in the effective use and interpretation of construction drawings. Students will learn how to examine a variety of different types of plans included within a standard set of drawings such as civil, architectural, structural, MEP (Mechanical, Electrical, and Plumbing), and welding prints to understand the scope of the project and the means and methods required to construct the project. Basic construction abbreviations, symbols and various scaling will be introduced.

Prerequisite: C or higher in BCN 1001 (may be taken as a corequisite)

BCN 1732 OSHA Standards for Con Indus (2 Credits)

This course is an overview of the Occupational Safety and Health Act (OSHA) and its relationship to the construction industry. Topics include history, general OSHA standards, job safety, health hazards, fire protection and prevention, material storage, handling, use and disposal, and hand and power tools. Students receive OSHA 30 training upon successful completion of the class.

BCN 1798 Managing a Construction Business (3 Credits)

This course introduces the entrepreneurial aspects of starting and building a construction business. Company organization and structure, licensing, finance, accounting, policies and procedures, business development and operations are topical areas covered.

Prerequisite: C or higher in BCN 1001 (may also be taken as a corequisite)

BCN 1940 Construction Practicum (3 Credits)

Students with a completed High School Career Pathways program in the building construction areas that are identified in the articulation agreements Lake, Sumter, and the surrounding counties high schools will be eligible to sit for the building trades exam. Upon successful passing of credit by exam, students will receive 3 credits towards the associate in science in building construction management.

BCN 2440 Concrete Construction Methods (3 Credits)

This course teaches and examines concrete formwork & placement for residential, light commercial, and heavy construction, using ACI recommended practices and OSHA shoring recommendations. Topics include slab-on-grade placement & finishing techniques, prefabrication, reinforcing steel, form ties, openings, residential foundations, flatwork, precast concrete, concrete mixing, and placement.

Prerequisite: C or higher in BCN 1001 (may be taken as a corequisite)

BCN 2560 Mechanical, Electrical and Plumbing Systems (3 Credits)

This course teaches and examines the mechanical, electrical and plumbing (MEP) equipment commonly required in residential and commercial buildings. The course presents the fundamentals of heating, ventilation and air conditioning (HVAC); heat loss/gain, and comfort control. Electrical systems are also covered in this course including power generation and distribution, circuit wiring and illumination; communication systems; and safety systems.

Prerequisite: C or higher in BCN 1001

BCN 2721 Construction Scheduling and Planning (3 Credits)

This is an introductory course in project scheduling and planning using Gantt charts, critical path method (CPM), precedence diagram and linear scheduling methods. Students will develop an understanding of resource leveling, cost loaded schedule, updating and expediting the schedule on construction projects. Students will learn to develop activities and sequences involved on a typical construction project.

Prerequisite: C or higher in BCN 1001

BCN 2793 Managing Building Construction (3 Credits)

This course covers techniques for planning, controlling, and coordinating building construction projects and construction companies. The fundamentals of project management specific to the construction industry will be provided in detail.

Prerequisite: C or higher in BCN 1001

BCN 2941 Building Construction Management Internship (3 Credits)

This is a planned work-based experience that provides students with an opportunity to fine-tune skill sets learned in course work and enhance workplace skills through supervised practical experiences related to their career objectives. Individual objectives will be developed to address technology competencies. Each earned credit of internship requires a minimum of 50 clock hours of work. Refer to the Internship Handbook for additional information.

Prerequisite: C or higher in BCN 1001