

COURSE INFORMATION

Course prefix/No.:	BCT 102
Course Title:	Fundamentals of Building Construction
Lecture Hours/Week:	3
Lab Hours/Week:	3
Credit Hours/Semester:	4

[Distance Learning Attendance/VA Statement](#)
[Textbook Information](#)

COURSE DESCRIPTION

This course is a study of framing for residential and light commercial buildings.

COURSE COMPETENCIES

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

Module 1

Power tools

- Use carpenter's power tools properly.

Wood and wood products

- State the grades and sizes of lumber.
- Calculate square foot and board foot measures.
- Describe the composition, grades, and uses for plywood, OSB, particleboard, and fiberboards.
- Describe the types of engineered wood panels and their applications.
- Describe the types of engineered lumber and their applications.
- Name and describe commonly used fasteners and explain applications.

Module 2

Building layout

- Describe the kinds of drawings in a set of blueprints.
- Read and interpret drawings.
- Follow drawings to lay out a building, build batter boards and establish building lines.

Concrete form construction

- Lay out and construct concrete forms for footings, foundation walls, walks and driveways.
- Complete a quantity takeoff for concrete.

Module 3

Rough framing

- Lay out and construct floor framing.
- Apply subflooring.
- Lay out and construct wall and ceiling framing.
- Apply wall sheathing.
- Safely use scaffolding, ladders, ladder jacks and sawhorses.
- Lay out, cut, and install ceiling joists.

Roof framing

- Explain common roof framing terms
- Describe common roof types.
- Estimate the quantities of materials used in a rough frame.
- Lay out a common rafter and erect a gable roof.
- Describe safe procedures to erect a trussed roof.
- Apply roof sheathing.

Module 4

Exterior finish

- Select and install windows and doors in an approved manner.
- Install locksets on doors.
- Describe and correctly apply roofing underlayment, organic or fiberglass shingles, and roll roofing.
- Apply flashing to valleys, sidewalls, chimneys, and other roof obstructions.
- Complete quantity takeoff for roofing materials.
- Describe the types and sizes of siding materials.
- Apply various kinds of siding materials.
- Complete a quantity takeoff for exterior siding.
- Install gutters and downspouts.
- Lay out and construct decks.

Module 5

Interior finish

- Describe and install commonly used insulating materials.
- Describe the kinds, sizes, and uses of gypsum panels.
- Install and finish drywall.
- Describe and apply commonly used sheet wall paneling.
- Complete a quantity takeoff for drywall and sheet wall paneling.
- Lay out and install suspended ceilings.
- Apply window, ceiling, and wall moldings.
- Select and install flooring.

- Complete a quantity takeoff for flooring.
- Lay out and build a basic staircase.
- Install manufactured base cabinets.
- Install cabinet hardware.
- Complete a quantity takeoff for cabinets and hardware.

REQUIREMENTS

Attendance Policy

The college attendance policy, stated in the college handbook, will be honored. The instructor will provide specific requirements for the course.

Academic Honesty

Students are expected to adhere to the college policy regarding student conduct as stated in the college handbook.

Assignments

Students are expected to complete all assignments and any supplementary exercises designated by the instructor.

EVALUATION STRATEGIES/GRADING

Students must complete all modules, including assignments, projects, labs, and tests. Students must earn at least a “C” in order for the course to serve as a prerequisite and for the course to apply towards a certificate.

Grading Scale

A=90-100

B=80-89

C=70-79

D=60-69

F=0-59

Evaluation Method

Tests/Projects (minimum of four total)	10% for each module
Work Attitude	5% for each module
Lab	5% for each module

20% X 5 modules = 100% Final Grade

Work Attitude is defined as:

- Participation
- Responsibility
- Cooperation
- Professionalism
- Appearance
- Attendance
- Effort
- Self Motivation
- Safety
- Works Independently

ENTRY LEVEL SKILLS

The student must be able to read and solve basic mathematical equations.

PREREQUISITES/CO-REQUISITES

Prerequisites: RDG 031 or equivalent, BCT 101, BCT 142

Co-requisites: None

METHODS OF INSTRUCTION

Lectures, reading assignments, projects, discussions, video presentations, multimedia presentations, and web content are the major teaching methods used in this course. See instructor for specifics.

LAB EXERCISES

See addendum and/or instructor for additional details.