

Common Course Outline
CONT 116
Practices of Residential Construction
3 Semester Hours

The Community College of Baltimore County

Description

Practices of Residential Construction

Studies the current construction methods and materials used for various types of residential structures; introduces site development and preparation, job layout, and materials and methods for frame and masonry construction.

3 credits: 3 lecture hours per week. Offered spring semester only.

Overall Course Objectives

Upon completion of this course the student will be able to:

Identify and evaluate soil conditions and assess proper foundation designs.

Identify wood products and determine the correct methods of fastening.

Identify framing methods available for residential construction.

Illustrate layout and framing methods.

Review codes of residential framing and locate code documents.

Identify and explain weathertight construction for closing up a residential building.

Identify and evaluate thermal energy requirements, like insulation, heating units, solar, and fireplace construction methods.

Identify and compare different masonry and concrete construction.

Describe different interior finishes and glazing requirements.

Discuss and analyze the different mechanical and electrical requirements of a residential dwelling.

Describe material take offs and how to calculate materials needed.

Major Topics

Designing the building

Gather the professionals to develop the owner's ideas

Building Systems Constraints

How much land

How heavy a building can the soil support

Structural restraints

What sort of materials

Zoning Ordinance

What can I use the land for

How much coverage by the building

How far the building has to be set back

Parking Spaces

How tall the building can be built

Building Codes

Use Group, Construction types, Fire Resistance rating of different materials and parts of building

Building systems resources

UL, ASTM, ANSI, CSI (Master format)

Foundations

Foundation loads

Soil types, soil testing

Frost Protection

Footing size

Types of foundations for shallow foundations, slab, crawl space, full basement

Deep foundation - Caissons

Retaining Walls

Complicated by such factors as Height, Soil, Presence of or absence of ground water, foundation pressure behind the wall

Water Proofing & Drainage

All foundation walls that have living space below grade requires some type of waterproofing or damp proofing

Types of Foundations
Concrete Block
Poured concrete
Pre Cast Concrete
Wood Foundations
Foam & Concrete
Foam insulation inside block cells
Straw Bales

Radon Systems
Area of Concern, facts on radon, new construction

Designing Foundation to building code
Frost depth
Footing Size
Foundation wall size/type
Damp proofing
Waterproofing
Drainage

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member and will include at least 4 out of the 7 categories that follow:

Homework
Projects
Mid term
Term paper/oral report
Classwork
Team project
Quizzes
Final exam

There will be a minimum of 8 graded assignments.

Writing: The individual faculty member will determine specific writing assignments.

Other Course Information

This course is a _____ core course and a _____ X _____ elective.

This course is taught in a computerized environment.

This course is the first course in a required two-course sequence.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.

Date Revised: 08/31/00