

Common Course Outline
CADD 202
CAD Building Information Modeling (BIM)-Revit
3 Credits

Community College of Baltimore County

Description

CADD 202 – CAD Building Information Modeling (BIM)-Revit introduces the concepts of architectural drawing using 3D BIM software for commercial and residential structures. The 3D BIM software is used for the visualization, interpretation, and development of architectural floor plan, sectional, elevation, and detail drawings. Materials and methods of construction are covered in relation to wall, floor, ceiling, roof, footer, and foundation systems. Students use and develop families, data tables, and drawing sheets to complete drawing projects. The use of the 3D BIM model in the construction process is introduced.

3 Credits: 2 lecture and 2 laboratory hours

Prerequisite: CADD 101 or permission by CADD coordinator.

Overall Course Objectives

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

1. identify floor plan, sectional, elevation, and detail drawings;
2. visualize and interpret architectural drawings, symbols, and dimensions;
3. identify basic materials and methods used in construction;
4. explain different building systems including structural, plumbing, HVACR, electrical, lighting, and specialties;
5. define BIM and explain how it relates to the construction process;
6. use Revit to draw single and multi-story building, load components, and edit families;
7. develop sheet views, load title blocks, set drawing views, and tables for plotting;
8. recognize basic house designs;
9. describe Leadership in Energy & Environmental Design (LEED), and how LEED relates to building design;
10. create sketches of floor plans, elevations, and building details;
11. describe the basic construction drawings used to build a structure;
12. develop a project scope of work;
13. design an independent building project; and
14. draw and print projects to create a portfolio packet.

Major Topics

- I. Architectural Trends
- II. Autodesk Revit Features
- III. Model Elements
 - A. HOST
 - B. Components
- IV. Datum Elements

- A. Grids
- B. Levels
- C. Reference Planes
- V. View-Specific Elements
 - A. Annotation
 - B. Details
- VI. Primary Consideration in Architecture Design
- VII. Room Planning
- VIII. Plan Views
 - A. Site
 - B. Foundation
 - C. Floor
 - D. Ceiling
 - E. Mechanical
- IX. Footings, Foundations, and Concrete
- X. New Products
- XI. Materials and Methods of Construction
- XII. Annotations, Dimensions, and Plotting

Course Requirements

Grading procedures will be determined by the individual faculty member and will include the following:

Grading/exams

- Graded exercises
- A minimum of 8 homework assignments
- A minimum of 3 tests and quizzes
- A minimum of 1 scope of work
- A minimum of 2 personal projects
- Comprehensive final examination
- Class participation

Written Assignments: Students are required to use appropriate academic resources.

Other Course Information

This course is a core course in the CADD curricula.