

Course Outline

CADD 141

AutoCAD[®] 3D

3 semester hours

The Community College of Baltimore County

Description

AutoCAD[®] 3D

Studies three-dimensional (3D) CAD techniques and applications with emphasis on increasing productivity in the creation and editing of 3D models using AutoCAD[®] software; includes wireframe modeling, surfacing, shading, 3D primitives of solids, plotting 3D models, generating solids, and AutoLISP routines that aid in 3D construction.

3 credits; 2 lecture hours and 3 laboratory hours per week. Prerequisites: CADD 101 or permission of program coordinator.

Overall Course Objectives

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

1. Create a 3D model.
2. Extrude 2D geometry.
3. Create 3D wireframe geometry.
4. Place 3D faces on wireframe geometry.
5. Understand the “Right-Hand Rule.”
6. Display 3D models from different vantage points.
7. Construct 3D surface models.
8. Construct orthographic drawings from a 3D model.
9. Create rendered images.
10. Build solid models using Boolean operations.

Major Topics

1. Coordinate System Review
2. Right-Hand Rule
3. Extruding 2D Geometry
4. Creating User Coordinate Systems
5. Viewing 3D Geometry
6. Creating Surfaces
7. Generating Working Drawings
8. Rendering
9. Plotting
10. Solid Modeling

Course Requirements

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

1. Graded Exercises
2. Periodic Tests
3. Comprehensive Final Examination
4. Final Project

Other Course Information

This course is a core course in the CADD curricula.
This course is taught in a computerized environment.
There are 2 lecture and 3 laboratory hours per week.