

**Course Outline**  
**CADD 242**  
**Solid Modeling**  
**3 Credits**

**The Community College of Baltimore County**

**Description**

**CADD 242 - Solid Modeling** focuses on the nature of solid modeling as contrasted with traditional two-dimensional techniques emphasizing mechanical applications; includes: development and editing of solid entities, importing and exporting models, and use of solid models in manufacturing situations.

**3 Credits:** 2 lecture and 2 laboratory hours

**Prerequisites:** Current experience with two dimensional CADD software, or permission of Program Coordinator

**Overall Course Objectives**

Upon completion of this course students will be able to:

1. create models utilizing sketches, profiles, dimensions and constraints;
2. add specific features to models;
3. edit model features and dimensions;
4. determine the mass properties of a model;
5. develop associative two dimensional drawings from models;
6. utilize reference geometry;
7. create multi-part assemblies; and
8. manage the components of a multi-part assembly model.

**Major Topics**

- I. Develop skills with industrial level solid modeling software
- II. Recognize the advantages of solid modeling over traditional two dimensional techniques
- III. Identify, originate and edit solid primitives
- IV. Determine mass properties of models
- V. Create multi-part models
- VI. Understand how solid models are used in manufacturing situations

**Course Requirements**

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

### **Grading/exams**

- Portfolio including a minimum of three graded exercises
- A minimum of three tests
- One comprehensive midterm and final examination (Two examinations)

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

### **Other Course Information**

This course is an elective course in the CADD curricula. This course is taught in a computerized environment.

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