

**Course Outline**  
**CADD 212**  
**Advanced CADD II**  
3 semester hours

**The Community College of Baltimore County**

**Description**

**Advanced CADD II**

Continues study of mechanical design including assembly and detailed drawings of dynamic components; includes power transmission, bearings, cams, linkages, hydraulics, geometric tolerancing; materials types, characteristics and selection.

Prerequisites: CADD 211, or permission of Program Coordinator

**Overall Course Objectives**

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

1. Develop assembly and detail drawings of dynamic mechanical components including: power transmission, bearings, lubrication, seals, linkages and hydraulics.
2. Apply geometric tolerancing techniques.
3. Apply finishes for manufacturing and function.
4. Incorporate commercial components into assemblies.
5. Develop time and cost estimates.
6. Develop ability to check drawings for accuracy, completeness and conformance with standards.
7. Select appropriate hardware by type and size.
8. Select materials by type and characteristics.
9. Develop an appreciation for the design process and applicable design parameters.
10. Use standard national, industrial and commercial references.
11. Present formal and informal briefings on project status

**Major Topics**

1. Power transmission.
2. Bearings, lubrication, seals.
3. Cams, linkages, actuators.
4. Hydraulics and pneumatics.
5. Geometric tolerancing.
6. Materials and material selection.

## **Course Requirements**

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

1. Graded exercises
2. Periodic tests
3. Comprehensive final examination
4. Class participation

## **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.

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### **Banner Short Course Description**

A second course in mechanical design covering assembly and detailed drawings of dynamic components. Drawings will be produced using CADD techniques and AutoCAD software. Prerequisites: CADD 211, or permission of Program Coordinator

### **Full Catalog Description**

A second course in mechanical design covering assembly and detailed drawings of dynamic components. Includes: power transmission, bearings, cams, linkages, hydraulics; geometric tolerancing; materials types, characteristics and selection. Drawings will be produced using CADD techniques and AutoCAD software. Prerequisites: CADD 211, or permission of Program Coordinator