

CAMM 130

Digital Fabrication Fundamentals

3 Credits (2 lecture hours, 2 lab hours)

Community College of Baltimore County

Common Course Outline

Description

CAMM 130 – Digital Fabrication Fundamentals: introduces basic fabrication principles using digital design and prototyping as a problem-solving tool. The students develop a working knowledge of the operation of a variety of fabrication equipment and related design and machine operating software. Emphasis on critical thinking allows the students to evaluate their ideas and consider the practical implications of taking a digital design to the prototyping stage. Lab assignments provide an opportunity to design and then fabricate a project using the appropriate lab equipment.

Co-requisites: CADD 101 or permission of the program coordinator

Overall Course Objectives

Upon completion of this course, students will be able to:

1. describe the different pieces of fabrication equipment and how they are used;
2. explain the various types of software that can be used for digital fabrication;
3. identify the best way to make a prototype when presented with a digital design;
4. apply fundamental construction principles such as dimensional stability;
5. recognize the implications of mass manufacturing when designing a prototype;
6. operate appropriate machines to produce prototypes;
7. test prototypes for form and fit; and
8. discuss how digital fabrication is implemented in other fields.

Major Topics

- I. Safety
- II. Digital Fabrication Software
- III. Digital Fabrication Equipment
- IV. Materials
- V. Design Manipulation
- VI. File Formats
- VII. Design Concepts
- VIII. Manufacturing Concepts
- IX. Open-Source Design Software

Course Requirements

The Common Course Outline (CCO) determines the essential nature of each course.
For more information, see your professor's syllabus.

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

- Two quizzes
- Five homework assignments
- Midterm project
- Midterm exam
- Final exam
- Final project

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