

CAMM 105

Technical Blueprints and Schematics

3 Credits

Community College of Baltimore County
Common Course Outline

Description

CAMM 105 – Technical Blueprint and Schematics: introduces students to the basic graphic elements, symbols, and conventions described by the American Society of Mechanical Engineers (ASME) Y14.5 Dimensioning and Tolerancing standard used in the American manufacturing industry. Students will learn how three-dimensional objects are described using two-dimensional orthographic projections, as well as how to interpret the various lines, symbols and notations used on prints. This course also provides an introduction to the concepts of linear and geometric dimensioning and tolerancing.

Pre-requisites: ACLT 053 or (ESOL 052 and ESOL 054)

Overall Course Objectives

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

1. visualize three-dimensional objects from multi-view drawings;
2. understand the basic principles of orthographic projections, section views, and auxiliary views;
3. identify the various lines and their uses in a machining print;
4. interpret information found in a title block;
5. interpret linear dimensioning and tolerancing systems;
6. demonstrate the function and use of basic precision measuring tools during the manufacturing, and inspection processes;
7. use the information provided on a print to evaluate the requirements of a part;
8. describe the machining tools and techniques to achieve feature requirements; and
9. identify the geometric characteristics controlled by Geometric Dimensioning & Tolerancing (GD&T).

Major Topics

- I. Visualizing shapes
- II. Line Usage
- III. Title Block & Notes
- IV. Semi-precision & Precision Measuring Tools & Techniques
- V. Dimensions & Tolerance Systems
- VI. Auxiliary & Sectional Views
- VII. Part Features & Tool Selection
- VIII. Geometric Dimensioning & Tolerancing
- IX. Assembly Drawings

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

Course Requirements

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

- Ten homework assignments
- Two quizzes
- Midterm exam
- Final exam

Date Revised: 2/18/2025