

**Common Course Outline**  
CAMM 206  
**CNC Specialization Programming**  
3 Credits

**Community College of Baltimore County**

**Description**

**CAMM 206 – CNC Specialization Programming** covers specific applications of interactive graphics using Computer Aided Manufacturing (CAM) software. This course uses engineering designs to generate Computerized Numerical Control (CNC) tool paths that can be downloaded to CNC machine tools.

**3 Credits**

**Prerequisites:** CAMM 111 with a passing grade of “C” or higher or NIMS “Measurement, Material and Safety” certification and CAMM 101 with a passing grade of “C” or higher.

**Overall Course Objectives**

Upon completion of this course, students will be able to

1. describe the software’s user interface;
2. create a new CNC file;
3. change the display configuration;
4. use the CAM software package to edit programs;
5. import and export CAD files, solids, and surfacing formats;
6. create 2-D geometry;
7. demonstrate the use of layers;
8. describe masking;
9. demonstrate simulation of a machine tool;
10. create a tool library;
11. construct and display tool paths; and
12. make use of CAM software to verify programs.

**Major Topics**

- I. Introduction to CNC software
  - A. Setting the origin
  - B. Assigning tools
  - C. Program storage
  - D. Create milling operations
- II. Viewing the work piece
  - A. Changing work planes
  - B. Cutter path simulation
  - C. Changing the part zero

### III. Editing

- A. Editing the part geometry
- B. Editing CNC code

### **Course Requirements**

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

### **Grading/exams**

- Minimum of 6 classwork assignments
- Minimum of 2 quizzes
- Minimum of 10 homework assignments
- Class participation
- 1 Midterm
- 1 Final exam

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

### **Other Course Information**

This course is taught in a computerized environment.