



CNC Machining and Programming Certificate

Program: Computer Aided Drafting

Program Code:

CM

Academic Area:

Science, Technology, Engineering and Mathematics

Type:

Certificate of Recognition

CIP Code:

48.0510

Program Statement

Students learn to use standard machine-shop equipment and operate and program CNC machinery to become manufacturing technicians. Students also understand the materials to be processed and technical drawing through the use of AutoCAD.

Program Information

- This program serves as a solid basis for continuing on toward a degree. All courses apply to the college's degree programs in Automation, Electro-Mechanical and Mechanical Technology.
- This program utilizes Bristol's NSF-funded Computer-Integrated Manufacturing (CIM) Laboratory facility, utilizing typical industrial CNC machining centers.

Program Requirements

| Course # | Title | Credits |
|----------|--------------------------------------|---------|
| EGR 172 | Material Science | 4 |
| | CAD 101, CAD 111, CAD 112 or CAD 172 | 3 |
| | CAD 211, EGR 111 or EGR 112 | 6-7 |

Recommended Course Sequence - Semester 1

| Course # | Title | Credits |
|----------|--------------------------------------|---------|
| | CAD 101, CAD 111, CAD 112 or CAD 172 | 3 |
| | EGR 111, EGR 112 or EGR 172 | 3-4 |

Recommended Course Sequence - Semester 2

| Course # | Title | Credits |
|----------|--------------------------------------|--------------|
| | CAD 211, EGR 111, EGR 112 or EGR 172 | 6-8 |
| | Total credits: | 13-14 |



Category Descriptions

CAD 101, CAD 111, CAD 112 or CAD 172

Credits: 3

Choose one of the following:

| Course # | Title | Credits |
|----------|---|---------|
| CAD 101 | Computer Aided Drafting | 3 |
| CAD 111 | Mechanical Design with Solidworks | 3 |
| CAD 112 | Maker Space Projects and Advanced Mechanical Design with SolidWorks | 3 |
| CAD 172 | Mechanical Design Using Inventor | 3 |

CAD 211, EGR 111 or EGR 112

Credits: 6-7

Choose two of the following:

| Course # | Title | Credits |
|----------|----------------------------------|---------|
| CAD 211 | Computer Aided Manufacturing | 3 |
| EGR 111 | Fundamentals of Manual Machining | 4 |
| EGR 112 | Automated Machining | 3 |