

## CNC MACHINING



### BLONG TECHNOLOGY CENTER

#### Machining Instructor

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[www.eicc.edu](http://www.eicc.edu)

**1888-336-3907**

**Toll-free**

#### Our Web Links:

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[www.eicc.edu/financialaid](http://www.eicc.edu/financialaid)

[www.eicc.edu/catalog](http://www.eicc.edu/catalog)

*Tuition and fees subject to change  
by the EICCD Board of Trustees.*

### Program Description

The Blong Technology Center (BTC) offers manual machining and Computer Numerical Control (CNC) machining. Certificate programs are available in both manual and CNC programming; the Associate in Applied Science degree program is available in CNC machining. Learning is hands-on in the modern laboratory furnished with the same types of equipment used by local manufacturing plants. Classes are offered in an eight-week format with a flexible schedule of attendance during day and evening hours (subject to sufficient enrollment).

### Award Options

Associate in Applied Science - Machining/CNC

Certificate - Manual Machining

Certificate - CNC Programming

### Job Outlook

Overall employment of computer control programmers and operators is expected to increase by 4 percent over the 2008–18 period, which is slower than average for all occupations. Employment of computer controlled machine tool operators, metal and plastic is expected to increase by 7 percent, which is about as fast as the average for all occupations. The increasing use of CNC machine tools in all sectors of the manufacturing industry, replacing older mechanical metal and plastic working machines, will increase demand for computer-controlled machine tool operators. Median hourly wages of computer-controlled machine tool operators, metal and plastic, are \$16.03. The middle 50 percent earned between \$12.83 and \$19.45.

For details, please visit this link <http://www.bls.gov/oco/>



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Since the colleges of EICCD are continually reviewing programs, information in the course catalog may change. Please visit [www.eicc.edu/catalog](http://www.eicc.edu/catalog) for any program updates which have occurred since the most recent edition of the catalog.

# CNC MACHINING

## MACHINING/CNC A.A.S. DEGREE

| <b>SESSION I</b>    |   | <b>CREDITS</b> |
|---------------------|---|----------------|
| MAT:733             | Math for Manufacturing Technologies A           | 1.5            |
| MFG:115             | Lathe Work                                      | 4.5            |
| MFG:186             | Plant Safety                                    | 1              |
|                     |   | <b>7</b>       |
| <b>SESSION II</b>   |   |                |
| MAT:734             | Math for Manufacturing Technologies B           | 1.5            |
| MFG:105             | Machine Shop Measuring                          | 3              |
| MFG:192             | Blueprint Reading                               | 3              |
|                     |   | <b>7.5</b>     |
| <b>SESSION III</b>  |   |                |
| CSC:112             | Computer Fundamentals for Technicians I/A       | 2              |
| MFG:111             | Machinery Handbook                              | 1              |
| MFG:113             | Vertical/Horizontal Mills                       | 5.5            |
|                     |   | <b>8.5</b>     |
| <b>SESSION IV</b>   |   |                |
| CSC:113             | Computer Fundamentals for Technicians I/B       | 2              |
| MFG:112             | Drills and Saws                                 | 2              |
| MFG:114             | Surface Grinding                                | 2.75           |
| MFG:140             | Geometric Dimensioning and Tolerances           | 1              |
|                     |   | <b>7.75</b>    |
| <b>SESSION V</b>    |   |                |
| EGT:116             | Continuous Quality Management                   | 3              |
| MFG:117             | Cylindrical Grinding                            | 1.5            |
| MFG:190             | Metallurgy                                      | 2              |
|                     |   | <b>6.5</b>     |
| <b>SESSION VI</b>   |   |                |
| ENG:107             | Composition I: Technical Writing (16 wk. class) | 3              |
| MFG:151             | CNC Fundamentals                                | 2              |
| PHY:173             | Applied Physics I/A                             | 1.75           |
|                     |   | <b>6.75</b>    |
| <b>SESSION VII</b>  |   |                |
| MFG:116             | Carbide Tooling                                 | 1              |
| MFG:118             | Machine Tool Project (Capstone)                 | 4              |
| PHY:174             | Applied Physics I/B                             | 1.75           |
|                     |   | <b>6.75</b>    |
| <b>SESSION VIII</b> |   |                |
| MFG:201             | CNC Turning Operator                            | 2              |
| MFG:221             | CNC Milling Operator                            | 2              |
| MFG:223             | CAD/CAM   | 2              |
| MFG:224             | Coordinate Measuring Machine                    | 1              |
|                     |   | <b>7</b>       |
| <b>SESSION IX</b>   |   |                |
| MFG:200             | Electric Discharge Machines                     | 1              |
| MFG:205             | Milling Programming                             | 2              |
| MFG:229             | CNC Project (Capstone)                          | 2              |
| MFG:239             | Lathe Programming                               | 2              |
|                     |   | <b>7</b>       |
| <b>A.A.S. TOTAL</b> |   | <b>64.75</b>   |

### Clinton Community College

1000 Lincoln Boulevard,  
Clinton, IA 52732  
(563) 244-7001  
1-800-638-0559  
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clintoncommunitycollegeia

#### Admissions Officer

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(563) 244-7007  
FAX (563) 244-7107

### Muscatine Community College

152 Colorado Street,  
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### Scott Community College

500 Belmont Road,  
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The Eastern Iowa Community College District endorses the principle of equal educational opportunities for all people regardless of race, color, creed, marital status, national origin, sex, sexual orientation, religion, ancestry, age, or non-job related handicap or disability in the educational programs or activities it operates. Persons having inquiries concerning the district's accommodation for or compliance with Title VI, Title IX, Section 504, the Americans with Disabilities Act and the Age Discrimination Act may contact: Affirmative Action Officer, 306 West River Drive, Davenport, IA 52801-1221 or call (563) 336-3300.

*Program requirements subject to change. Please check with your advisor.*

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**Manual Machining Certificate**

|                          |                                 | <b>CREDITS</b> |
|--------------------------|---------------------------------|----------------|
| <b>SESSION I</b>         |                                 |                |
| MAT:733                  | Math for Mfg Technologies - A   | 1.5            |
| MFG:105                  | Machine Shop Measuring          | 3              |
| MFG:186                  | Plant Safety                    | 1              |
|                          |                                 | <b>5.5</b>     |
| <b>SESSION II</b>        |                                 |                |
| MAT:734                  | Math for Mfg Technologies - B   | 1.5            |
| MFG:115                  | Lathe Work                      | 4.5            |
| MFG:192                  | Blueprint Reading               | 3              |
|                          |                                 | <b>9</b>       |
| <b>SESSION III</b>       |                                 |                |
| MFG:113                  | Vertical/Horizontal Mills       | 5.5            |
| MFG:116                  | Carbide Tooling                 | 1              |
| MFG:117                  | Cylindrical Grinding            | 1.5            |
|                          |                                 | <b>8</b>       |
| <b>SESSION IV</b>        |                                 |                |
| MFG:112                  | Drills and Saws                 | 2              |
| MFG:114                  | Surface Grinding                | 2.75           |
| MFG:118                  | Machine Tool Project (Capstone) | 4              |
|                          |                                 | <b>8.75</b>    |
| <b>CERTIFICATE TOTAL</b> |                                 | <b>31.25</b>   |

**CNC Programming Certificate**

|                          |                                       |            |
|--------------------------|---------------------------------------|------------|
| <b>SESSION I</b>         |                                       |            |
| MAT:733                  | Math for Mfg Technologies - A         | 1.5        |
| MFG:140                  | Geometric Dimensioning and Tolerances | 1          |
| MFG:186                  | Plant Safety                          | 1          |
|                          |                                       | <b>3.5</b> |
| <b>SESSION II</b>        |                                       |            |
| MAT:734                  | Math for Mfg Technologies - B         | 1.5        |
| MFG:116                  | Carbide Tooling                       | 1          |
| MFG:151                  | CNC Fundamentals                      | 2          |
| MFG:192                  | Blueprint Reading                     | 3          |
|                          |                                       | <b>7.5</b> |
| <b>SESSION III</b>       |                                       |            |
| MFG:201                  | CNC Turning Operator                  | 2          |
| MFG:221                  | CNC Milling Operator                  | 2          |
| MFG:223                  | CAD/CAM                               | 2          |
| MFG:224                  | Coordinate Measuring Machine          | 1          |
|                          |                                       | <b>7</b>   |
| <b>SESSION IV</b>        |                                       |            |
| MFG:200                  | Electric Discharge Machines           | 1          |
| MFG:205                  | Milling Programming                   | 2          |
| MFG:229                  | CNC Project (Capstone)                | 2          |
| MFG:239                  | Lathe Programming                     | 2          |
|                          |                                       | <b>7</b>   |
| <b>CERTIFICATE TOTAL</b> |                                       | <b>25</b>  |