CNC/MACHINING

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 – CNC/Machining
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 2010–20 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 $22.08. The middle 50 percent earned between $17.60 and $28.03.

For details, please visit this link http://www.bls.gov/oco/
CNC/MACHINING

A.A.S. Degree

TERM 1

<table>
<thead>
<tr>
<th>Session</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>I</td>
<td>CSC:112</td>
<td>Computer Fundamentals for Technology I/A</td>
<td>2.00</td>
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<tr>
<td></td>
<td>MAT:733</td>
<td>Math for Manufacturing Technologies A</td>
<td>1.50</td>
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<td></td>
<td>MFG:186</td>
<td>Plant Safety</td>
<td>1.00</td>
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<td>II</td>
<td>CSC:113</td>
<td>Computer Fundamentals for Technology I/B</td>
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<td>MAT:734</td>
<td>Math for Manufacturing Technologies B</td>
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<td>MFG:105</td>
<td>Machine Shop Measuring</td>
<td>3.00</td>
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<td>MFG:192</td>
<td>Blueprint Reading</td>
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Credits: 14.00

TERM 2

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<tr>
<td>I</td>
<td>IND:222</td>
<td>Geometric Tolerancing and Dimensioning</td>
<td>3.00</td>
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<tr>
<td></td>
<td>MFG:112</td>
<td>Drills and Saws</td>
<td>2.00</td>
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<td></td>
<td>MFG:116</td>
<td>Carbide Tooling</td>
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<td>MFG:140</td>
<td>Geometric Dimensioning and Tolerances (Optional)</td>
<td>(1.00)</td>
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<td>II</td>
<td>MFG:113</td>
<td>Vertical/Horizontal Mills</td>
<td>5.50</td>
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<td>MFG:115</td>
<td>Lathe Work</td>
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Credits: 16.00

TERM 3 - SUMMER

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<tr>
<td>ECN:120</td>
<td>Principles of Macroeconomics</td>
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<td>ECN:130</td>
<td>Principles of Microeconomics</td>
<td>3.00</td>
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<tr>
<td>HUM:105</td>
<td>Working in America</td>
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<td>HUM:110</td>
<td>Changes and Choices</td>
<td>3.00</td>
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<td>POL:111</td>
<td>American National Government</td>
<td>3.00</td>
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<td>PSY:111</td>
<td>Introduction to Psychology</td>
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<td>SOC:110</td>
<td>Introduction to Sociology</td>
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<td>MFG:111</td>
<td>Machinery Handbook</td>
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<td>MFG:117</td>
<td>Cylindrical Grinding</td>
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<td>MFG:190</td>
<td>Metallurgy</td>
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Credits: 7.50

TERM 4

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<tr>
<td>I</td>
<td>ENG:105</td>
<td>Composition I OR</td>
<td>3.00</td>
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<td>ENG:107</td>
<td>Composition I: Technical Writing</td>
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<td>MFG:151</td>
<td>CNC Fundamentals</td>
<td>2.00</td>
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<td></td>
<td>PHY:185</td>
<td>Conceptual Physics Fundamentals I</td>
<td>2.00</td>
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<tr>
<td>II</td>
<td>MFG:114</td>
<td>Surface Grinding</td>
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<td>MFG:118</td>
<td>Machine Tool Project</td>
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<td></td>
<td>PHY:186</td>
<td>Conceptual Physics Fundamentals II</td>
<td>2.00</td>
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Credits: 15.50

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If you have questions or complaints related to compliance with the policy, please contact Debora J. Sullivan, Equity Coordinator, 306 W. River Drive, Davenport, Iowa 52801, 563/336-3487, dsullivan@eicc.edu or the Director of the Office for Civil Rights, U.S. Department of Education, Citigroup Center, 500 West Madison, Suite 1475, Chicago, IL 60661, phone number 312/730-1560, fax 312/730-1576.
TERM 5
Session I
MFG:201 CNC Lathe Operator 2.00
MFG:221 CNC Milling Operator 2.00
MFG:223 CAD/CAM 2.00
MFG:224 Coordinate Measuring Machine 1.00
Session II
MFG:205 Mill Programming 2.00
MFG:239 Lathe Programming 2.00
MFG:372 SolidWorks/MasterCam Applications 3.00
14.00
TERM 6
Session I
MFG:229 CNC Project 4.00
4.00
A.A.S. Total..................................................................................................................................... 71.00

CNC Programming Certificate

TERM 1
Credits
IND:222 Geometric Tolerancing and Dimensioning 3.00
MAT:733 Math for Manufacturing Technologies A 1.50
MAT:734 Math for Manufacturing Technologies B 1.50
MFG:105 Machine Shop Measuring 3.00
MFG:116 Carbide Tooling 1.00
MFG:186 Plant Safety 1.00
MFG:192 Blueprint Reading 3.00
14.00
TERM 2
MFG:151 CNC Fundamentals 2.00
MFG:201 CNC Turning Operator 2.00
MFG:205 Milling Programming 2.00
MFG:221 CNC Milling Operator 2.00
MFG:223 CAD/CAM 2.00
MFG:224 Coordinate Measuring Machine 1.00
MFG:239 Lathe Programming 2.00
13.00
TERM 3 - SUMMER
MFG:229 CNC Project 4.00
4.00
Certificate Total..................................................................................................................................... 31.00

Clinton Community College
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FAX (563) 244-7107

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FAX (563) 441-4101

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Manual Machining Certificate

**TERM 1**

**Session I**
- MAT:733 Math for Manufacturing Technologies A 1.50
- MFG:116 Carbide Tooling 1.00
- MFG:186 Plant Safety 1.00
- MFG:192 Blueprint Reading 3.00

**Session II**
- MAT:734 Math for Manufacturing Technologies B 1.50
- MFG:105 Machine Shop Measuring 3.00

**TERM 2**

**Session I**
- MFG:112 Drills and Saws 2.00

**Session II**
- MFG:113 Vertical/Horizontal Mills 5.50
- MFG:115 Lathe Work 4.50

**TERM 3**

**Session I**
- MFG:114 Surface Grinding 2.50
- MFG:117 Cylindrical Grinding 1.50

**Session II**
- MFG:118 Machine Tool Project 4.00

**Certificate Total** ................................................................. 31.00

Gainful employment information for the CNC/Machining program is located at [www.eicc.edu/gainfulemployment](http://www.eicc.edu/gainfulemployment)

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