Automated Machining Certificate - 16 credits
Program Area: Integrated Manufacturing Machine Tool (Fall 2018)

***REMEMBER TO REGISTER EARLY***

Program Description
This 16 credit certificate provides advanced training for people already working as machinists. It gives them a chance to improve their skills with the latest fully-automated machine tools available today. The CNC machines will be set up and programmed keeping lights out machining in mind. CAM will also be used to create programs for these machines.

Program Outcomes
- Manufacture mating parts and assemblies
- Perform set ups and use milling fixtures to manufacture parts
- Setup and machine compound angles using various processes
- Build jigs and fixtures to complete manufacturing processes
- Manufacture and inspect quality products

Required Courses

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Credits</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTCC 2600</td>
<td>CNC Automation Programming</td>
<td>1</td>
<td></td>
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<tr>
<td>MTCC 2602</td>
<td>Swiss Automation</td>
<td>3</td>
<td></td>
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<tr>
<td>MTCC 2604</td>
<td>CNC Mill/Turn Application</td>
<td>4</td>
<td></td>
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<tr>
<td>MTCC 2606</td>
<td>CNC 4 Axix Horizontal Automation</td>
<td>4</td>
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<tr>
<td>Elective</td>
<td>Choose 4 elective credits from any MTCC course.</td>
<td>4</td>
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</table>

Total Credits 16
*Requires a prerequisite or a concurrent course

Pre-program Requirements
Completion of an AAS or Diploma degree in the Machine Technology program and/or instructor’s consent.

Successful entry into this program requires a specific level of skill in the areas of English, mathematics, and reading. Program entry will depend, in part, on meeting the prerequisites listed below:

**English/Reading:**
- A score of 78 or higher on the reading comprehension portion of the Accuplacer, or
- Completion of ENGL/READ 0950 or 0955 (or equivalent course or higher). ENGL/READ 0955 may be taken concurrently with Semester I coursework.

**Mathematics:**
- A score of 33 or higher on the Elementary Algebra Skills portion of the Accuplacer, or
- Completion of MATH0520 (or equivalent course or higher), and with a grade of “C” or better. MATH 0520 may be taken concurrently with Semester I coursework.

For interpretation of test results and selection of appropriate coursework; or general information about the program, admissions, financial aid, and getting started at LSC, contact the professional advising team at: pat@lsc.edu or 218-733-7601
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For more information about the Automated Machining Certificate including course descriptions, course prerequisites, and gainful employment statistics, see program website: https://degrees.lsc.edu/cnc-machine/

- OR –

Contact Faculty Advisors, Max Udovich: m.udovich@lsc.edu or 218-733-7732 or Randy Antonich: randy.antonich@lsc.edu or 218-733-7641

CIP Code: 48.0510
Minnesota State Program ID: 7578
LSC Major ID: 5119

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All courses in diploma and/or certificate programs are acceptable for credit toward Lake Superior College degree programs as indicated on individual program planners. This is not a contract; Lake Superior College reserves the right to change the planner as necessary. This document is available in alternative formats upon request, by contacting Disability Services, disabilityservices@lsc.edu or (218) 733-7650 or MRS/TTY (800) 627-3529.