



Machine Technology CNC Programmer AAS Degree - 71 credits

Program Area: Integrated Manufacturing Machine Tool (Fall 2018)

*****REMEMBER TO REGISTER EARLY*****

Program Description

The CNC Machine Programmer program is designed to prepare the student for employment as a CNC Machinist/-Programmer. Skill development includes performing basic floor programming to produce a part to specifications, setup and operation of CNC machines, instruction in inspection and statistical process control, and program parts designed using a CAD/CAM computer system.

Program Outcomes

- Perform a basic setup and operate different types of manual metal working machines
- Write basic programs and operate different types of CNC metal working machines
- Perform mathematical calculation of shop problems
- Use basic CAD and CAM computer programs to generate CNC programs to be used on machine tools
- Interpret all basic drawings and blueprints
- Build basic machine parts and tools

Pre-program Requirements

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.

Required Courses

| Number | Name | Credits | Term |
|-----------------------------|---|---------|------|
| CADE 1468 | SolidWorks I | 3 | |
| INMG 1400 | Introduction to Manufacturing Technology | 4 | |
| INMG 1410 | Mechanical Blueprint Reading | 3 | |
| INMG 1420 | Design Application Concepts I | 3 | |
| WLDG 1560 | Gas Metal Arc Welding I | 3 | |
| INMG 1412* | Advanced Mechanical Blueprint Reading | 3 | |
| INMG 1422 | Design Application Concepts II | 3 | |
| MTCC 1432 | Quality Methods | 2 | |
| MTCC 1505* | Surface Grinder | 2 | |
| MTCC 1620 | CNC Basic Programming | 2 | |
| MTCC 2504* | CAD CAM | 3 | |
| MTCC 1600 | Engineering Materials | 1 | |
| MTCC 1603* | Turning | 2 | |
| MTCC 1604* | Milling | 2 | |
| MTCC 2502* | CNC Turning | 3 | |
| MTCC 2540* | CNC Machine Center 3 Axis | 3 | |
| MTCC 2564* | CNC Horizontal 4 Axis | 3 | |
| MTCC 2560* | Advanced CNC Mill 4 Axis | 3 | |
| MTCC 2562* | CNC Mill/Turn Live Tooling | 3 | |
| MTCC 2570 | Wire EDM | 2 | |
| MTCC 2572* | Swiss Automatic | 3 | |
| General Education Electives | <i>Choose from at least 3 of the goals areas of the Minnesota Transfer Curriculum Goal Areas 1-10</i> | 15 | |

Total Credits **71**

*Requires a prerequisite or a concurrent course



Machine Technology CNC Programmer AAS Degree - 71 credits

Program Area: Integrated Manufacturing Machine Tool (Fall 2018)

*****REMEMBER TO REGISTER EARLY*****

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

Program Articulations

This program has excellent articulation agreements in place with various colleges and universities that allow the student to transfer most (if not all) of their credits earned in the program including: Minnesota State University Moorhead, BS in Operations Management:

http://www.mntransfer.org/educators/transfer/e_artagreements.php?firstLetter=O&archive=false&numResults=25&pageNum=12

For more information about the Machine Technology CNC Programmer AAS Degree including course descriptions, course prerequisites, the gainful employment disclosure, and potential career opportunities, see program Website: <https://degrees.lsc.edu/cnc/>

- 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



MINNESOTA STATE

CIP Code: 48.0510
Minnesota State Program ID: 5588
LSC Major ID: 5394

Created: 6/9/06
AASC Approval: 3/4/15
Updated: 2/1/18

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.