



## Machine Technology CNC Programmer Diploma - 64 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 2500*	CNC Mill Conversational	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 2506*	Advanced CAM	2	
MTCC 2540*	CNC Machine Center 3 Axis	3	
MTCC 2564*	CNC Horizontal 4 Axis	3	
COMM 1601	Interviewing Procedure and Practice	1	
MTCC 1520*	Cylindrical Grinding	1	
MTCC 1530	Water Jet Cutting Processes	2	
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	

### Total Credits

**64**

\*Requires a prerequisite or a concurrent course



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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](mailto:pat@lsc.edu) or 218-733-7601

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

**- OR -**

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



MINNESOTA STATE

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