



## Machine Technology CNC Programmer Diploma - 64 credits

Program Area: Integrated Manufacturing Machine Tool (Fall 2023)

\*\*\*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:

- Eligible for ENLG 1106 – College Composition I, 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 250 or higher on the Arithmetic portion of the Accuplacer.

There are other ways to qualify. Visit [Course Placement](http://lsc.edu/course-placement) (lsc.edu/course-placement) to find out more.

### Required Courses

| Number     | Name                                     | Credits | Term |
|------------|--|---------|------|
| CADE 1468* | SolidWorks I                             | 3       |      |
| INMG 1400  | Introduction to Manufacturing Technology | 4       |      |
| INMG 1410* | Mechanical Print Reading                 | 3       |      |
| INMG 1420  | Design Application Concepts I            | 3       |      |
| WLDG 1560  | Gas Metal Arc Welding I                  | 3       |      |
| MTCC 1603* | Turning                                  | 2       |      |
| MTCC 1604* | Milling                                  | 2       |      |
| INMG 1412* | Advanced Mechanical Blueprint Reading    | 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 2502* | CNC Turning                              | 3       |      |
| MTCC 2540* | CNC Machine Center 3 Axis                | 3       |      |
| MTCC 2560* | Advanced CNC Mill 4 Axis                 | 3       |      |
| MTCC 2562* | CNC Mill/Turn Live Tooling               | 3       |      |
| MTCC 2564* | CNC Horizontal 4 Axis                    | 3       |      |
| COMM 1601  | Interviewing Procedure and Practice      | 1       |      |
| INMG 1422* | Design Application Concepts II           | 3       |      |
| MTCC 1520* | Cylindrical Grinding                     | 1       |      |
| MTCC 1530* | Water Jet Cutting Processes              | 2       |      |
| MTCC 2500* | CNC Mill Conversational                  | 2       |      |
| MTCC 2570  | Wire EDM                                 | 2       |      |
| MTCC 2572* | Swiss Automatic                          | 3       |      |
| MTCC 2506* | Advanced CAM                             | 2       |      |

### 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](mailto:advising@lsc.edu) (advising@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 program report, and potential career opportunities, see the  
[program website](https://degrees.lsc.edu/cnc-programmer/) (https://degrees.lsc.edu/cnc-programmer/)

**or**

Contact Faculty Advisor [Nathan Zobel](mailto:nathan.zobel@lsc.edu) (nathan.zobel@lsc.edu) or 218-733-7732



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Minnesota State Program ID: 154  
LSC Major ID: 5393

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