



## Rapid Prototyping and Design Certificate - 14 credits

Program Area: Integrated Manufacturing Machine Tool (Fall 2016)

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

### Program Description

Rapid Prototyping and Reverse Engineering is an emerging field that uses high tech tools, software, equipment, and processes to build a 3D working model of an idea or much needed part in a short period of time. This offers many versatile advantages compared to traditional methods of manufacturing. This certificate will complement skills learned and developed in the Integrated Manufacturing programs (Machine Tool, Engineering CAD, and Welding Diploma). Students will have the skills necessary to take a concept through the design, manufacture, and testing phases of the product upon completion of this certificate.

REQUIRED COURSES			
Number	Name	Credits	Term
MTCC 1432	Quality Methods	2	
INMG 1450	Prototyping Processes	3	
CADE 1468	Solidworks I	3	
CADE 1474	Reverse Engineering	3	
MTCC 2504	CAD CAM	3	
<b>TOTAL CREDITS</b>		<b>14</b>	

*\*Requires a prerequisite or a concurrent course*

### Program Outcomes

- Analyze product specifications
- Inspect, measure and test existing mechanical component
- Produce computer-aided drawing and assembly as needed
- Create prototype of product
- Set up and operate various prototyping equipment
- Make simple changes in models to achieve a working product
- Select proper processes used for the prototype
- Test product and make any revisions
- Present working finished product

### 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.

#### Math:

- A score of 33 or higher on the **Elementary Algebra Skills** portion of the Accuplacer, or
- Completion of MATH 0520 (or equivalent course or higher). 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 a professional advisor, pat@lsc.edu or 218-733-7601*



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For more information about the Rapid Prototyping and Design Certificate including course descriptions, course prerequisites, the gainful employment disclosure, and potential career opportunities, see program Website:  
<https://degrees.lsc.edu/3d-printing/>

- or -

Contact Faculty Advisors, Max Udovich: [m.udovich@lsc.edu](mailto:m.udovich@lsc.edu) or 218-733-7332 or  
Randy Antonich: [randy.antonich@lsc.edu](mailto:randy.antonich@lsc.edu) or 218-733-7641



CIP Code: 48.0510  
MnSCU Program ID: 13-013-0509  
LSC Major ID: 5694

Created: 02/04/13  
AASC Approval: 3/4/15  
Updated: 4/19/2016 4:59 PM

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