Engineering CAD Technology AAS Degree - 67 credits

Program Area: Integrated Manufacturing CAD (Fall 2020)

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

Program Description

This program prepares students to translate the ideas, sketches, and specifications of engineers and designers into workable plans which are used in product fabrication. Students learn to use engineering technology in determining exact specifications for new product design or modification, or redesign of present products. The course begins with instruction in basic drafting skills and advances to more complex technological areas, including the application of computer-aided design.

Program Outcomes

- Illustrate orthographic viewing and dimensioning techniques
- Demonstrate section and auxiliary detailing
- Display dimensioning and tolerance techniques
- Outline an understanding of manufacturing principles and practices
- Create mechanical component details
- Illustrate sheet metal development drawings
- Demonstrate basic through advanced principles of CAD applications
- Create and engineer electrical/electronic drawings
- Create and engineer industrial piping layouts
- Create and engineer fluid power drawings
- Present technical illustrations using 3-dimensional design
- Provide a cumulative final design project
- Create engineering drawings using advanced CAD applications

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	
CADE 1407	AutoCAD	3	
CADE 1450*	Mechanical Details	3	
CADE 1470	SolidWorks II	3	
CADE 1480*	Industrial/Mechanical CAD Applications I	3	
INMG 1412*	Advanced Mechanical Blueprint Reading	3	
CADE 1482*	Industrial/Mechanical CAD Applications II	3	
CADE 1490*	Revit Industrial/Structural (BIM) Applications	3	
CADE 2434	3D Process Piping Design	3	
CADE 2472*	AutoCAD Design Project	3	
CADE 2492	Revit Industrial/Mechanical (BIM) Applications	3	
COMM 1601	Interviewing Procedure and Practice	1	
Choose 6	credits from the following:	6	
INMG 1422*	Design Application Concepts II		
CADE 1474*	Reverse Engineering		
CADE 2407	Engineering Technology Internship (variable credits)		
CADE 2430*	Industrial Piping		
General Education Electives	*Choose from at least 3 different Goal Areas of the Minnesota Transfer Curriculum*	14	

Total Credits **67**

***Requires a prerequisite or a concurrent course**

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Program Articulation

This program has an articulation agreement in place that allows students to transfer most (if not all) of their credits earned, should the graduate decide to pursue a bachelor's degree from Minnesota State University, Moorhead with a BS in Operations Management.

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 250 or higher on the reading 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 250 or higher on the Arithmetic portion of the Accuplacer.

There are other ways to qualify. Visit LSC Accuplacer (lsc.edu/Accuplacer) to find out more.

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 (pat@lsc.edu) at 218-733-7601

For more information about the Integrated Manufacturing – Engineering CAD Technology AAS Degree including course descriptions, course prerequisites, and potential career opportunities,
see the program website (https://degrees.lsc.edu/cad/)

or

Contact Faculty Advisors, RIch Kresky (richard.kresky@lsc.edu) at 218-733-7630 or
Rick Steel (richard.steel@lsc.edu) at 218-733-6931

CIP Code: 15.1302
Minnesota State Program ID: 4708
LSC Major ID: 5303

Created: 6/10/06
AASC Approval: 12/4/2019
Updated: 2/1/20