

# Computer Aided Drafting (CAD) Design Technologies

100% ONLINE

## OVERVIEW

Complex products all start with a plan. By receiving a degree from Minnesota State College Southeast's online CAD drafting program, you will learn how to translate ideas at the product conception stage into physical work plans that launch the design process. As a CAD designer, you will be an essential part of any technical team.

Employment opportunities in the CAD drafting field abound, and a degree from MSC Southeast's online CAD drafting program will prepare you with the specific skills employers are looking for. Solidworks, Inventor, Google SketchUP, Autocad - they're all here, and you'll learn how to apply these industry-standard software programs on a project basis just as you will on the job.

Our highly experienced CAD drafting faculty will teach you the tools of the trade so that you can be successful in your career on day one. And with their industry connections, MSC Southeast instructors will help you find an internship to gain invaluable real-world experience.

Have a busy schedule or just like to work at your own pace? MSC Southeast's online CAD drafting program is flexible enough to accommodate your busy lifestyle, but rigorous enough to ensure you develop the skills employers demand.

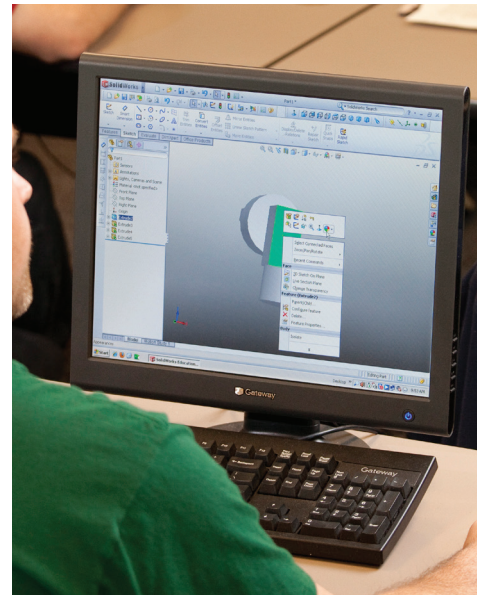
## MAJORS WITHIN

Computer Aided Design (CAD) Drafting Technologies	AAS	60 credits
Computer Aided Design (CAD) Drafting Technologies	Diploma	33 credits
Computer Aided Drafting (CAD) Technologies	Certificate	9 credits
Basic Drafting Technologies	Certificate	16 credits
See back for program plans		

## PROGRAM OUTCOMES

Program graduates will be able to:

1. Complete industry standard assembly drawings using 2d and 3d CAD.
2. Complete industry standard part drawings using 2d and 3d CAD.
3. Calculate mating part conditions to guarantee part fits.
4. Define and apply proper design materials.
5. Define and apply proper standard part vendors.
6. Communicate verbally and in written forms.



## PROGRAM HIGHLIGHTS

Courses are taught using state of the art CAD 3D Parametric software

Excellent training for self-starters

CAD Drafters/Designers are in constant demand

The courses are focused on developing your skills for employment

Instructors are licensed because of their experience in the drafting and design field

## CAREER OPPORTUNITIES

Mechanical Designers  
 Plant Designers  
 Mechanical Drafters  
 CAD Technicians

## JOB PLACEMENT

Nearly 100%

## PROGRAM COSTS - estimated cost including tuition, books and supplies

Computer Aided Design (CAD) Drafting Technologies - AAS	\$15,025
Computer Aided Design (CAD) Drafting Technologies - Diploma	\$8,096
Computer Aided Drafting (CAD) Technologies - Certificate	\$2,276
Basic Drafting - Certificate	\$3,563

[www.southeastmn.edu](http://www.southeastmn.edu)

# Computer Aided Design (CAD) Drafting Technologies

## Fall Start Sample Program Plan

**BOLD = Courses in bold depict the part-time course sequence**

\*Required credit totals may vary based on suggested technical elective choices

### Computer Aided Design (CAD) Drafting Technologies AAS

Course No.	Course Name	Credits
<b>Fall</b>		
<b>MDAD1250</b>	<b>Print Reading</b>	<b>3</b>
<b>MDAD1204</b>	<b>Autocad</b>	<b>3</b>
MDAD1251	Manuf. Processes	3
MDAD1255	Free CAD	3
COMM1420	Social Media Communications (Tech Elective)	3
<b>Semester total</b>		<b>15</b>

#### Spring

<b>MDAD1241</b>	<b>Solidworks</b>	<b>3</b>
<b>MDAD1252</b>	<b>Working Drawings 1</b>	<b>3</b>
MDAD1216	Mechanisms	3
MDAD1272	CAD Elective Drawing 2 (Tech Elective)	3
ENGL1215	College Writing I	3
<b>Semester total</b>		<b>15</b>

#### Fall

<b>MDAD1253</b>	<b>Working Drawings 2</b>	<b>3</b>
MDAD1254	Mold Design	3
MDAD1206	Geometric Tol	3
MDAD1271	CAD Elective Drawing 1 (Tech Elective)	3
MATH1220	College Algebra	3
<b>Semester total</b>		<b>15</b>

#### Spring

<b>MDAD1256</b>	<b>Design Project 1</b>	<b>3</b>
<b>MDAD1257</b>	<b>Design Project 2</b>	<b>3</b>
SOCS1110	Introduction to Sociology	3
HUMA1125	Moral Problems	3
PHYS1215	Physics	4
<b>Semester total</b>		<b>16</b>

Credit total shown - 61\*  
Total Required Credits - 60

Note: Liberal Arts classes can be taken during the summer session as well

### Computer Aided Design (CAD) Drafting Technologies Diploma

Course No.	Course Name	Credits
<b>Fall</b>		
<b>MDAD1250</b>	<b>Print Reading</b>	<b>3</b>
<b>MDAD1204</b>	<b>Autocad</b>	<b>3</b>
MDAD1251	Manufacturing Processes	3
MDAD1255	Free CAD	3
ENGL1215	College Writing I	3
<b>Semester Total</b>		<b>15</b>

#### Summer

COMM1420	Social Media Communications	3
<b>Semester Total</b>		<b>3</b>

#### Spring

<b>MDAD1241</b>	<b>Solidworks</b>	<b>3</b>
<b>MDAD1252</b>	<b>Working Drawings 1</b>	<b>3</b>
MDAD1216	Mechanisms	3
MDAD1272	CAD Elective Drawing 2 (Tech Elective)	3
MATH1220	College Algebra	3
<b>Semester Total</b>		<b>15</b>

Total Required Credits - 33

### Basic Drafting Technologies - Certificate

Course No.	Course Name	Credits
<b>First Semester (Fall)</b>		
<b>MDAD1250</b>	<b>Print Reading</b>	<b>3</b>
<b>MDAD1204</b>	<b>Autocad</b>	<b>3</b>
MDAD1251	Manufacturing Processes	3
<b>Semester Total</b>		<b>9</b>

#### Second Semester (Spring)

<b>MDAD1241</b>	<b>Solidworks</b>	<b>3</b>
<b>MDAD1252</b>	<b>Working Drawings 1 (Tech Elective)</b>	<b>3</b>
MDAD1216	Mechanisms (Tech Elective)	3
<b>Semester Total</b>		<b>9</b>

Credit total shown - 18\*  
Total Required Credits - 16

### Computer Aided Drafting (CAD) Technologies - Certificate

Course No.	Course Name	Credits
<b>Fall</b>		
MDAD1250	Print Reading (Tech Elective)	3
MDAD1204	Autocad	3
<b>Semester Total</b>		<b>6</b>
<b>Spring</b>		
MDAD1241	Solidworks	3
<b>Semester Total</b>		<b>3</b>

Total Required Credits - 9

# Computer Aided Design (CAD) Drafting Technologies

## Spring Start Sample Program Plan

**BOLD = Courses in bold depict the part-time course sequence**

**\*Required credit totals may vary based on suggested technical elective choices**

### Computer Aided Design (CAD) Drafting Technologies AAS

Course No.	Course Name	Credits
<b>Spring</b>		
<b>MDAD1241</b>	<b>Solidworks</b>	<b>3</b>
<b>MDAD1250</b>	<b>Print Reading</b>	<b>3</b>
<b>MDAD1252</b>	<b>Working Drawings 1</b>	<b>3</b>
MDAD1204	Autocad	3
MATH1220	College Algebra	3
<b>Semester total</b>		<b>15</b>

#### Summer

COMM1420	Social Media Communications	3
<b>Semester Total</b>		<b>3</b>

#### Fall

<b>MDAD1253</b>	<b>Working Drawings 2</b>	<b>3</b>
MDAD1254	Mold Design	3
MDAD1206	Geometric Tol	3
MDAD1251	Manuf. Processes	3
MDAD1255	Free CAD	3
<b>Semester total</b>		<b>15</b>

#### Spring

<b>MDAD1256</b>	<b>Design Project 1</b>	<b>3</b>
<b>MDAD1257</b>	<b>Design Project 2</b>	<b>3</b>
MDAD1216	Mechanisms	3
MDAD1272	CAD Elective Drawing 2 (Tech Elective)	3
PHYS1215	Physics	4
<b>Semester total</b>		<b>16</b>

#### Fall

MDAD1271	CAD Elective Drawing 1 (Tech Elective)	3
ENGL1215	College Writing I	3
SOCS1110	Introduction to Sociology	3
HUMA1125	Moral Problems	3
<b>Semester total</b>		<b>12</b>

**Credit total shown - 61\***

**Total Required Credits - 60**

### Computer Aided Design (CAD) Drafting Technologies Diploma

Course No.	Course Name	Credits
<b>Spring</b>		
<b>MDAD1241</b>	<b>Solidworks</b>	<b>3</b>
<b>MDAD1250</b>	<b>Print Reading</b>	<b>3</b>
<b>MDAD1252</b>	<b>Working Drawings 1</b>	<b>3</b>
MDAD1204	Autocad	3
ENGL1215	College Writing I	3
<b>Semester Total</b>		<b>15</b>

#### Summer

COMM1420	Social Media Communications	3
<b>Semester Total</b>		<b>3</b>

#### Fall

<b>MDAD1252</b>	<b>Working Drawings 1</b>	<b>3</b>
MDAD1251	Manufacturing Processes	3
MDAD1255	Free CAD	3
MDAD1271	CAD Elective Drawing 1 (Tech Elective)	3
MATH1220	College Algebra	3
<b>Semester Total</b>		<b>15</b>

**Total Required Credits - 33**

### Basic Drafting Technologies - Certificate

Course No.	Course Name	Credits
<b>Spring</b>		
MDAD1241	Solidworks	3
MDAD1250	Print Reading	3
MDAD1252	Working Drawings 1 (Tech Elective)	3
<b>Semester Total</b>		<b>9</b>

#### Fall

MDAD1251	Manufacturing Processes	3
MDAD1204	Autocad	3
MDAD1253	Working Drawings 2 (Tech Elective)	3
<b>Semester Total</b>		<b>9</b>

**Credit total shown - 18\***

**Total Required Credits - 16**

**Note: Liberal Arts classes can be taken during the summer session as well**

### Computer Aided Drafting (CAD) Technologies - Certificate

Course No.	Course Name	Credits
<b>Spring starts can finish in one semester</b>		
MDAD1204	Autocad	3
MDAD1241	Solidworks	3
MDAD1250	Print Reading (Suggested tech elective)	3
<b>Semester Total</b>		<b>3</b>

**Total Required Credits - 9**