

**Recommended Sequence for full-time students.**

**CAD Degree Checklist 2022-2023**

**Year One**

<u>Fall Semester</u>	<u>Credits</u>	<u>Comments</u>
<input type="checkbox"/> DRAF 101 Engineering Graphics** . . . . .	4	_____
<input type="checkbox"/> OIT 161 Application Software . . . . .	3	_____
<input type="checkbox"/> ENGL 151 Freshman Composition* . . . . .	3	_____
<input type="checkbox"/> Elective Personal and Cultural Engagement*** . . . . .	3	_____
<input type="checkbox"/> FYS 101 First Year Seminar****. . . . .	1	_____
	<u>14</u>	
 <u>Spring Semester</u>		
<input type="checkbox"/> DRAF 120 Machine Drafting (prereq. DRAF 101) . . . . .	3	_____
<input type="checkbox"/> DRAF 181 Applications in AutoCAD (prereq. DRAF 101) . . . . .	3	_____
<input type="checkbox"/> DRAF 234 SolidWorks (prereq. DRAF 101) . . . . .	3	_____
<input type="checkbox"/> MATH 125 College Algebra** . . . . .	4	_____
<input type="checkbox"/> Communication 110 or 207* . . . . .	3	_____
	<u>16</u>	
 <u>Summer Semester</u>		
<input type="checkbox"/> Manufacturing Processes modules***** . . . . .	4.16	_____
	<u>4.16</u>	

**Year Two**

<u>Fall Semester</u>		
<input type="checkbox"/> DRAF 141 Descriptive Geometry (prereq. DRAF 101) . . . . .	3	_____
<input type="checkbox"/> DRAF 221 Architectural Drafting (prereq. DRAF 101) . . . . .	3	_____
<input type="checkbox"/> DRAF 252 Advanced SolidWorks (prereq. DRAF 234) . . . . .	3	_____
<input type="checkbox"/> MATH 132 Trigonometry (prereq. MATH 125)** . . . . .	3	_____
<input type="checkbox"/> ENTE 215 Material Science . . . . .	3	_____
	<u>15</u>	
 <u>Spring Semester</u>		
<input type="checkbox"/> DRAF 211 Dimensioning & Tolerancing (prereq. 234) . . . . .	3	_____
<input type="checkbox"/> DRAF 262 Engineering Design (prereq. DRAF 252) . . . . .	3	_____
<input type="checkbox"/> PHYS 111 College Physics 1 (prereq. MATH 132)** . . . . .	4	_____
<input type="checkbox"/> Elective Personal and Cultural Engagement*** . . . . .	3	_____
	<u>13</u>	

**Total: 62.16**

Many of the above courses are only offered once per year. If you are out of sequence, please check with the CAD instructor for course availability.

\* Meets Effective Communication General Education requirement.

For Ferris State University (FSU) Product Design Engineering Technology program (PDET), **COMM 207** is the only transferable COMM course.

\*\* Meets Critical Thinking General Education requirement.

\*\*\* Must meet Personal and Cultural Engagement General Education requirement. Note that a service-learning endorsement is required for this degree. A course that offers a service-learning experience from the approved list within the KCC academic catalog is recommended.

For transfer to Ferris State University Product Design Engineering Technology program, **HIST 104 and SOCI 201 are recommended** for these six required credits. One of these must have the service-learning experience. See the KCC-to-FSU PDET transfer guide for more details.

\*\*\*\* See an Academic Advisor for information about FYS and the conditions that require this course be successfully completed.

\*\*\*\*\* The Manufacturing Processes modules are open-entry/open-exit individual industrial topics taught at the KCC Regional Manufacturing Technology Center (RMTC) located in the Fort Custer Industrial Park. These modules are offered every semester. All required modules are listed on the opposite side of this document and total 4.16 credit hours.

Note: For transfer to Ferris State University Product Design Engineering Technology program please refer to the KCC-to-FSU PDET transfer guide for additional courses, beyond those required for the KCC CAD degree, which may also transfer toward the FSU PDET degree.

This document is for academic advising only. See the current KCC catalog for official degree requirements.

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## CAD Degree Manufacturing Processes Required Modules Checklist 2022-2023

<u>Module Number</u>	<u>Module Title</u>	<u>Credits</u>	<u>Comments</u>
<input type="checkbox"/> INT 35030	Robot Programming Fanuc	0.75	_____
<input type="checkbox"/> INEL 20010	Electrical Motor Controls	0.42	_____
<input type="checkbox"/> INEL 20020	Manual Motor Controls	0.50	_____
<input type="checkbox"/> INWE 05020	Joints Welds Positions	0.13	_____
<input type="checkbox"/> INWE 40010	Explaining GMAW	0.29	_____
<input type="checkbox"/> INWE 40020	Start Arc Run Beads GMAW	0.17	_____
<input type="checkbox"/> INMT 20030	Machinist Scale	0.08	_____
<input type="checkbox"/> INMT 25010	Micrometers	0.13	_____
<input type="checkbox"/> INMT 25020	Calipers	0.17	_____
<input type="checkbox"/> INMT 25050	Dial Indicators	0.13	_____
<input type="checkbox"/> INMT 25080	Height Gage	0.17	_____
<input type="checkbox"/> INMT 30010	Shop Math Speeds and Feeds	0.21	_____
<input type="checkbox"/> INMT 30030	Drilling on the Drill Press	0.17	_____
<input type="checkbox"/> INMT 30050	Counterbore Spotface Countersink	0.21	_____
<input type="checkbox"/> INMT 35030	Facing on the Lathe	0.21	_____
<input type="checkbox"/> INMT 35050	Parallel Turning on the Lathe	0.21	_____
<input type="checkbox"/> INMT 45020	Fly Cutter End Mill Square a Block	<u>0.21</u>	_____

Total = 4.16

The Manufacturing Processes modules are open-entry/open-exit individual industrial topics taught at the KCC Regional Manufacturing Technology Center (RMTC) located in the Fort Custer Industrial Park. These modules are offered every semester. All modules are required for the KCC Computer-Aided Drafting and Design Associate in Applied Science Degree.

This document is for academic advising only. See the current KCC catalog for official degree requirements.

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