This program prepares the learner for entry level detailing engineering positions in industry by teaching detailing fundamentals and computer aided design (CAD) skills related to industrial workplaces. Focus is on the detailing process and the development of complete and accurate 2D drawings. All courses utilize CAD as the mode of developing solutions to current and relevant industrial detailing applications. Emphasis is on view construction and detailing of mechanical parts as they are applied to the fields of automotive, defense, agriculture, furniture, appliances, heavy equipment, etc. Graduates will possess skills that will allow them to operate in a dynamic environment as part of the design team.

See Notes below for more information

Expand all "Preferred Classes" links

### Occupational Specialty Courses

<table>
<thead>
<tr>
<th>NOTE</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>GEN ED</th>
<th>CREDIT HOURS</th>
<th>CONTACT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CADD-100</td>
<td>Mechanical Blueprint Reading w/CADD</td>
<td></td>
<td>3</td>
<td>4</td>
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<tr>
<td></td>
<td>CADD-101</td>
<td>Parametric Modeling Fundamentals</td>
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<tr>
<td></td>
<td>CADD-102</td>
<td>Mechanical Detailing Applications</td>
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<td>CADD-103</td>
<td>Advanced Geometry Layout Application</td>
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<td></td>
<td>CADD-104</td>
<td>Fundamentals of Design</td>
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<td></td>
<td>CADD-110</td>
<td>Architectural Blueprint Reading w/CADD</td>
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<tr>
<td></td>
<td>CADD-201</td>
<td>Unigraphics Basic Modeling &amp; Drafting I</td>
<td></td>
<td>4</td>
<td>6</td>
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<td></td>
<td>CADD-202</td>
<td>Catia Basic Modeling and Drafting I</td>
<td></td>
<td>4</td>
<td>6</td>
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<tr>
<td></td>
<td>CADD-203</td>
<td>Advanced Dimensioning &amp; Geometric Dimensioning and Tolerancing</td>
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<tr>
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<td>CADD-204</td>
<td>CADD Product Design Applications</td>
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<td>CADD-205</td>
<td>CADD Tool &amp; Design Applications</td>
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<td>CADD-206</td>
<td>Product Data Management Processes</td>
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<td>CADD-250</td>
<td>CADD Externship</td>
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<td>2</td>
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<tr>
<td></td>
<td>TECH-100</td>
<td>Communication Skills for Technology</td>
<td>CAC, SAC, WAC</td>
<td>2</td>
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</table>

**Required**: 44 59

### Related Requirement Courses

<table>
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<tr>
<th>NOTE</th>
<th>COURSE</th>
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<th>GEN ED</th>
<th>CREDIT HOURS</th>
<th>CONTACT HOURS</th>
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<tbody>
<tr>
<td></td>
<td>MATT-120</td>
<td>Technical Mathematics I</td>
<td>MAC</td>
<td>4</td>
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Recommended Elective Courses

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<th>CONTACT HOURS</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Any Technology Division program course(s) - See Advisor</td>
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</table>

<table>
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<tr>
<th>NOTE</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>GEN ED</th>
<th>CREDIT HOURS</th>
<th>CONTACT HOURS</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>SUB TOTAL</td>
<td>47-48</td>
<td>62-63</td>
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<tr>
<td></td>
<td></td>
<td>Plus any additional credits needed to fulfill graduation and/or General Education Requirements.</td>
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General Education Requirements

To assure a broad experience with general education for every MCC student, the College has adopted the following General Education Graduation Requirements. In order to graduate with an AA, AS, AGS or AAS degree, each student must fulfill each of these objectives:

Objective I - Communication

Complete the following:

<table>
<thead>
<tr>
<th>NOTE</th>
<th># REQ.</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>GEN ED</th>
<th>CREDIT HOURS</th>
<th>CONTACT HOURS</th>
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<tbody>
<tr>
<td>B</td>
<td>1</td>
<td>ENGL 101</td>
<td>English Composition</td>
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<td>3</td>
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<tr>
<td></td>
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<td>and</td>
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<tr>
<td></td>
<td>1</td>
<td>ENGL 102</td>
<td>English Composition</td>
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<td>3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>WAC</td>
<td>Writing Across the Curriculum</td>
<td>CAC, SAC, WAC</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Objective II - Mathematics

Complete one of the following:

a. Placement Test score of Math 120 or higher;
b. Score 22 or better on the Math portion of the ACT or 560 on the Math portion of SAT test;
c. Complete Math 110 or higher level MCC math course;
d. Placement Test score of Math 110 or higher or complete:

<table>
<thead>
<tr>
<th>NOTE</th>
<th># REQ.</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>GEN ED</th>
<th>CREDIT HOURS</th>
<th>CONTACT HOURS</th>
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<tbody>
<tr>
<td></td>
<td>1</td>
<td>MAC</td>
<td>Math Across the Curriculum</td>
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<tr>
<td>NOTE</td>
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<td>CONTACT HOURS</td>
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<tr>
<td></td>
<td>MATT-120</td>
<td>Technical Mathematics I</td>
<td>MAC</td>
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and

<table>
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<tr>
<th>NOTE</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>GEN ED</th>
<th>CREDIT HOURS</th>
<th>CONTACT HOURS</th>
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<tbody>
<tr>
<td>1</td>
<td>MATH 021</td>
<td>Basic Mathematics</td>
<td></td>
<td>5</td>
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<tr>
<td>or</td>
<td>MATT 094A</td>
<td>Technical Arithmetic</td>
<td></td>
<td>1</td>
<td>1</td>
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<tr>
<td></td>
<td>MATT 094B</td>
<td>Technical Algebra</td>
<td></td>
<td>1</td>
<td>1</td>
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<tr>
<td></td>
<td>MATT 094C</td>
<td>Technical Measurement</td>
<td></td>
<td>1</td>
<td>1</td>
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<tr>
<td></td>
<td>MATT 094D</td>
<td>Technical Geometry</td>
<td></td>
<td>1</td>
<td>1</td>
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<tr>
<td>or</td>
<td>BUSN 106</td>
<td>Business Mathematics</td>
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<td>3</td>
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<tr>
<td>or</td>
<td>FMG.104</td>
<td>Food Service Math</td>
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</table>

**Objective III - Multicultural Awareness**

Complete **one** of the following:

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<tr>
<th>NOTE</th>
<th># REQ.</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>GEN ED</th>
<th>CREDIT HOURS</th>
<th>CONTACT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>MES</td>
<td>Multi-cultural Ethnic Studies</td>
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</table>

**Objective IV - Computing**

Complete **one** of the following:

<table>
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<tr>
<th>NOTE</th>
<th># REQ.</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>GEN ED</th>
<th>CREDIT HOURS</th>
<th>CONTACT HOURS</th>
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</thead>
<tbody>
<tr>
<td>C</td>
<td>1</td>
<td>CAC</td>
<td>Computer Across the Curriculum</td>
<td>CAC, SAC, WAC</td>
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</table>

**Objective V - Scientific Inquiry**

Complete **one** of the following:

<table>
<thead>
<tr>
<th>NOTE</th>
<th># REQ.</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>GEN ED</th>
<th>CREDIT HOURS</th>
<th>CONTACT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>SMC</td>
<td>Scientific Method Course</td>
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<td>CAC, SAC, WAC</td>
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</table>

**Area Requirements**

Complete **one** for **each** requirement:

<table>
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<tr>
<th>NOTE</th>
<th># REQ.</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>GEN ED</th>
<th>CREDIT HOURS</th>
<th>CONTACT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>HUM</td>
<td>Humanities courses</td>
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<tr>
<td>1</td>
<td></td>
<td>SOC</td>
<td>Social Sciences courses</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>NTL</td>
<td>Natural/Technical Laboratory Science courses</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES**

A. Students who first started classes Fall 2002 or after must complete requirements in all categories. Students who enrolled prior to
Fall 2002 may choose to fulfill these requirements or those in effect when they first enrolled. Those requirements may be found in previous catalogs or by checking with an advisor or counselor.

B. A student may qualify to skip ENGL 101 and go directly to ENGL 102 by scoring 24 on the English part of the ACT, or 590 on verbal part of the SAT, or 115 on the placement test along with a reading level of grade 13 or higher and applying for and passing a special writing exam.

C. Students may satisfy this requirement by passing the MCC computer literacy test.

D. Students may substitute ENGL 101 - English Composition I with ENGL 101 - Technical Writing Emphasis I

Graduation:
Remember to file an application for graduation with the Registration & Cashier’s Office as soon as you register for your final semester.

Associate Degrees require completion of 62 credits minimum, which include the requirements listed above.