**Des Moines Area Community College (DMACC) Transfer Plan**

**Iowa State University College of Engineering Requirements**
- Courses must be completed with a grade of "C" or better in order to be considered for transfer credit into the College of Engineering.
- Students not adequately prepared for success in Calculus I may need to take courses in addition to those listed below. Some students may first need to successfully complete college algebra and/or college trigonometry/prep for calculus.
- The College of Engineering requires two years of a single foreign language in high school or the equivalent in college.
- Beginning Fall 2023, ISU is offering a new degree program, Biomedical Engineering. This program requires a separate application and certain first-year course requirements. If you have interest in this degree, please consult with engineering@iastate.edu.

<table>
<thead>
<tr>
<th>Iowa State</th>
<th>Cr</th>
<th>Iowa State Course Name</th>
<th>DMACC</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 177 (or 167)</td>
<td>4</td>
<td>General Chemistry I (for Engineers)</td>
<td>CHM 165</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 150</td>
<td>3</td>
<td>Critical Thinking and Communication</td>
<td>ENG 105</td>
<td>3</td>
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<td>ENGL 250</td>
<td>3</td>
<td>WOVE Composition</td>
<td>ENG 106</td>
<td>3</td>
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<tr>
<td>ENGR 101</td>
<td>R</td>
<td>Engineering Orientation</td>
<td>EGR 100</td>
<td>1</td>
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<tr>
<td>ENGR 160*</td>
<td>3</td>
<td>Engineering Problems</td>
<td>EGR 161* and EGR 151,152 or 155*</td>
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<tr>
<td>LIB 160</td>
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<td>Information Literacy</td>
<td>SDV 171</td>
<td>1</td>
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<tr>
<td>MATH 165</td>
<td>4</td>
<td>Calculus I</td>
<td>MAT 211</td>
<td>5</td>
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<tr>
<td>MATH 166</td>
<td>4</td>
<td>Calculus II</td>
<td>MAT 217</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 231/231L</td>
<td>5</td>
<td>Classical Physics I and Lab</td>
<td>PHY 213</td>
<td>6</td>
</tr>
</tbody>
</table>

**Courses required in all engineering degree programs at ISU**

<table>
<thead>
<tr>
<th>Iowa State</th>
<th>Engineering Major(s) Requiring Course (see abbreviation key below)</th>
<th>Cr</th>
<th>Iowa State Course Name</th>
<th>DMACC</th>
<th>Cr</th>
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<tbody>
<tr>
<td>AGRON 181</td>
<td>AE(LW)</td>
<td>3</td>
<td>Intro to Crop Science</td>
<td>AGA 114</td>
<td>3</td>
</tr>
<tr>
<td>AGRON 182</td>
<td>AE(LW,PM)</td>
<td>3</td>
<td>Intro to Soil Science</td>
<td>AGA 154</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 211*</td>
<td>AE</td>
<td>3</td>
<td>Principles of Biology I</td>
<td>BIO 112*</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 212*</td>
<td>BSE</td>
<td>3</td>
<td>Principles of Biology II</td>
<td>BIO 113*</td>
<td>4</td>
</tr>
<tr>
<td>CE 274</td>
<td>All except Ch,E,CprE,CybE,EE,MatE,SE</td>
<td>3</td>
<td>Engineering Statics</td>
<td>EGR 180</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 178/178L</td>
<td>ChE,CE,EnvE,MatE (possibly AE,BSE)</td>
<td>4</td>
<td>General Chemistry II and Lab</td>
<td>CHM 175</td>
<td>4</td>
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<tr>
<td>CHEM 331/333L</td>
<td>ChE (possibly BSE)</td>
<td>5</td>
<td>Organic Chemistry I and Lab</td>
<td>CHM 263</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 332/334L</td>
<td>ChE (possibly BSE)</td>
<td>5</td>
<td>Organic Chemistry II and Lab</td>
<td>CHM 273</td>
<td>5</td>
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<tr>
<td>ECON 101 or ECON 102</td>
<td>ME, SE (also accepted as an elective by all other engineering majors)</td>
<td>3</td>
<td>Principles of Microeconomics (101) or Principles of Macroeconomics (102)</td>
<td>ECN 130 or ECN 120</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 170</td>
<td>AE, BSE, CE, ConE, MatE, ME</td>
<td>3</td>
<td>Engineering Graphics &amp; Intro to Design</td>
<td>EGR 166</td>
<td>4</td>
</tr>
<tr>
<td>MATH 207</td>
<td>EE, CprE</td>
<td>3</td>
<td>Matrices and Linear Algebra</td>
<td>MAT 148</td>
<td>4</td>
</tr>
<tr>
<td>MATH 265</td>
<td>Required (or accepted as math elective) in all majors except AE(LW), BSE</td>
<td>4</td>
<td>Calculus III</td>
<td>MAT 219</td>
<td>4</td>
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<tr>
<td>MATH 267 or 266</td>
<td>All</td>
<td>4</td>
<td>Differential Equations</td>
<td>MAT 227</td>
<td>4</td>
</tr>
<tr>
<td>M E 231</td>
<td>AerE, AE, BSE, EnVE, IE, ME</td>
<td>3</td>
<td>Engineering Thermodynamics I</td>
<td>EGR 290</td>
<td>3</td>
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<tr>
<td>PHYS 232/232L</td>
<td>AerE,Ch,E,ConE,EE,IE,MatE,ME</td>
<td>5</td>
<td>Classical Physics II and Lab</td>
<td>PHY 223</td>
<td>6</td>
</tr>
<tr>
<td>SP CM 212</td>
<td>AE,BSE,CE,EnVE,IE,ME,SE (also accepted as an elective by Ch,E,CprE,CybE,EE,MatE)</td>
<td>3</td>
<td>Fundamentals of Public Speaking</td>
<td>SPC 101</td>
<td>3</td>
</tr>
</tbody>
</table>

*DMACC EGR 161 & 151 recommended for: AE, BSE, CE, ConE, EnvE, IE, MSE, Undeclared.

*DMACC EGR 161 & 152 recommended for: AerE, ChE, EE, ME.

*DMACC EGR 161 & 155 recommended for CprE, CybE, SE. ISU credit for ENGR 160 & CprE 161.

*DMACC BIO 112 & BIO 113 must both be completed in order to transfer as credit for ISU BIOL 211 and BIOL 212.
General Education: Social Science/Humanities (SS/H) Requirements

- Engineering degree programs require between 9 and 15 general education credits in social sciences and humanities (SS/H). The list below offers course options that are widely accepted by ISU engineering majors; however, each program has unique requirements—please confirm choices on an individual basis if you know your intended engineering major.
- Iowa State University requires each student to complete three credits of course work categorized as “US Diversity” (indicated below with 1); and three credits of course work categorized as “International Perspective” (indicated below with 2). These can be included within the SS/H requirements.

### Social science/humanities (SS/H) courses widely accepted in ISU engineering degree programs

<table>
<thead>
<tr>
<th>Iowa State</th>
<th>Cr</th>
<th>Iowa State Course Name</th>
<th>DMACC</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHRO 201&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
<td>Intro to Cultural Anthropology</td>
<td>ANT 105</td>
<td>3</td>
</tr>
<tr>
<td>CJ ST 241</td>
<td>3</td>
<td>Youth and Crime</td>
<td>CRJ 201</td>
<td>3</td>
</tr>
<tr>
<td>ECON 101 or ECON 102</td>
<td>3</td>
<td>Principles of Microeconomics or Macroeconomics</td>
<td>ECN 130 or 120</td>
<td>3</td>
</tr>
<tr>
<td>HD FS 240&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td>Literature for Children</td>
<td>LIT 105</td>
<td>3</td>
</tr>
<tr>
<td>HD FS 276&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td>Human Sexuality</td>
<td>PSY 261</td>
<td>3</td>
</tr>
<tr>
<td>HIST 201&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
<td>Intro to Western Civilization I</td>
<td>HIS 110</td>
<td>3</td>
</tr>
<tr>
<td>HIST 202&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
<td>Intro to Western Civilization II</td>
<td>HIS 111</td>
<td>3</td>
</tr>
<tr>
<td>HIST 221</td>
<td>3</td>
<td>Survey of U.S. History I</td>
<td>HIS 151</td>
<td>3</td>
</tr>
<tr>
<td>HIST 222</td>
<td>3</td>
<td>Survey of U.S. History II</td>
<td>HIS 152</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 102&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
<td>Intro to Music Listening</td>
<td>MUS 100</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 201</td>
<td>3</td>
<td>Intro to Philosophy</td>
<td>PHI 101</td>
<td>3</td>
</tr>
<tr>
<td>POL S 111</td>
<td>3</td>
<td>Intro to American Government</td>
<td>POL 111</td>
<td>3</td>
</tr>
<tr>
<td>POL S 125&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
<td>Intro to Comparative Government and Politics</td>
<td>POL 125</td>
<td>3</td>
</tr>
<tr>
<td>POL S 121&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
<td>Intro to International Politics</td>
<td>POL 121</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 101</td>
<td>3</td>
<td>Intro to Psychology</td>
<td>PSY 111</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 230</td>
<td>3</td>
<td>Developmental Psychology</td>
<td>PSY 121</td>
<td>3</td>
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<tr>
<td>PSYCH 280</td>
<td>3</td>
<td>Social Psychology</td>
<td>PSY 251</td>
<td>3</td>
</tr>
<tr>
<td>RELIG 205&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
<td>World Religions</td>
<td>REL 101</td>
<td>3</td>
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<tr>
<td>RELIG 210&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td>Religion in America</td>
<td>REL 140</td>
<td>3</td>
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<tr>
<td>SOC 134</td>
<td>3</td>
<td>Intro to Sociology</td>
<td>SOC 110</td>
<td>3</td>
</tr>
<tr>
<td>SOC 219</td>
<td>3</td>
<td>Families and Intimate Relationships</td>
<td>SOC 120</td>
<td>3</td>
</tr>
<tr>
<td>SOC 235&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td>Social Problems and American Values</td>
<td>SOC 115</td>
<td>3</td>
</tr>
</tbody>
</table>

### More information and resources

- Pre-engineering students are strongly encouraged to join Iowa State’s free DMACC-ISU Connect to stay connected to resources and current information; visit the [DMACC-ISU Connect website](https://www.dmaccisucourses.com) to learn about the benefits and application.
- Please use this transfer plan as a guide as you confirm course choices with an academic advisor in your major of interest.
- Additional transfer student resources are available at [www.engineering.iastate.edu/transfer-students](http://www.engineering.iastate.edu/transfer-students).
- Email questions to engineering@iastate.edu.

Last updated on 4/22/24 based on course listings in the ISU 2023-24 catalog and the DMACC 2023-24 catalog.
### Sample DMACC course plan – Year One
*(Shown as an example only – please personalize when working with your academic advisor)*

#### SEMESTER 1

<table>
<thead>
<tr>
<th>DMACC Course Number</th>
<th>Credits</th>
<th>Course Name/Topic</th>
<th>Equivalent course at Iowa State</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 105</td>
<td>3</td>
<td>English/Composition I</td>
<td>ENGL 150</td>
</tr>
<tr>
<td>MAT 211</td>
<td>5</td>
<td>Calculus I</td>
<td>MATH 165</td>
</tr>
<tr>
<td>HIS 110</td>
<td>3</td>
<td>Western Civilization I</td>
<td>HIST 201²</td>
</tr>
<tr>
<td>CHM 165</td>
<td>4</td>
<td>General Chemistry I</td>
<td>CHEM 177 (or CHEM 167)</td>
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</tbody>
</table>

= 15 cr

#### SEMESTER 2

<table>
<thead>
<tr>
<th>DMACC Course Number</th>
<th>Credits</th>
<th>Course Name/Topic</th>
<th>Equivalent course at Iowa State</th>
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<tbody>
<tr>
<td>ENG 106</td>
<td>3</td>
<td>English/Composition II</td>
<td>ENGL 250</td>
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<tr>
<td>MAT 217</td>
<td>5</td>
<td>Calculus II</td>
<td>MATH 166</td>
</tr>
<tr>
<td>EGR 161</td>
<td>2</td>
<td>Engineering Problems I</td>
<td>ENGR 160</td>
</tr>
<tr>
<td>EGR 151 or 152 or 155</td>
<td>2</td>
<td>(combined w/EGR 161 = ENGR 160)</td>
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<tr>
<td>ECN 130</td>
<td>3</td>
<td>Microeconomics</td>
<td>ECON 101</td>
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= 15 cr

#### SUMMER 1

<table>
<thead>
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<th>DMACC Course Number</th>
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<th>Course Name/Topic</th>
<th>Equivalent course at Iowa State</th>
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<tbody>
<tr>
<td>PHY 213</td>
<td>6</td>
<td>Classical Physics I</td>
<td>PHYS 231/231L</td>
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= 6 cr