The Genetics major requires completion of two semesters with labs of each of the following sciences: **General Biology, General Chemistry, Organic Chemistry, and Physics.** At ISU, the labs are included in Phys 111/112 while the Biology and Chemistry labs are designated as “L”. The Genetics major also requires completion of **either two semesters of Calculus and one semester of Statistics or two semesters of Statistics (one at the 300 level) and one semester of Calculus.**

**Students should plan to take both semesters of any two-semester sequence of courses at the same institution** because each institution distributes the course material differently between courses in a sequence. **Students taking Biology at WITCC must take both BIO 116 and 117 to...**

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**First Semester**

<table>
<thead>
<tr>
<th>Course Title (SWICC)</th>
<th>SWICC</th>
<th>ISU</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition I</td>
<td>ENG 105</td>
<td>ENGL 150</td>
<td>3</td>
</tr>
<tr>
<td>Biology I</td>
<td>BIO 116</td>
<td>BIOL 211</td>
<td>3</td>
</tr>
<tr>
<td>Biology I Lab</td>
<td></td>
<td>BIOL 211L</td>
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</tr>
<tr>
<td>Inorganic Chemistry I</td>
<td>CHM 166</td>
<td>CHEM 177</td>
<td>4</td>
</tr>
<tr>
<td>Inorganic Chemistry I Lab</td>
<td></td>
<td>CHEM 177L</td>
<td>1</td>
</tr>
<tr>
<td>Statistics</td>
<td>MAT 156 or 157</td>
<td>STAT 104 or 101</td>
<td>3 or 4</td>
</tr>
<tr>
<td>OR Calculus I</td>
<td>MAT 211</td>
<td>MATH 165</td>
<td>4</td>
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</table>

**Second Semester**

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>English Composition II</td>
<td>ENG 106</td>
<td>ENGL 250</td>
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<tr>
<td>Biology II</td>
<td>BIO 117</td>
<td>BIOL 212</td>
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<td>Biology II Lab</td>
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<td>BIOL 212L</td>
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<tr>
<td>Inorganic Chemistry II</td>
<td>CHM 176</td>
<td>CHEM 178</td>
<td>4</td>
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<tr>
<td>Inorganic Chemistry II Lab</td>
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<td>CHEM 178L</td>
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<tr>
<td>Humanities or Social Science</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>OR Calculus II</td>
<td>MAT 217</td>
<td>MATH 166</td>
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</table>

**Third Semester**

<table>
<thead>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Humanities</td>
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<tr>
<td>General Physics I</td>
<td>PHY 162</td>
<td>PHYS 111</td>
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<tr>
<td>Organic Chemistry I</td>
<td>CHM 261</td>
<td>CHEM 331</td>
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<td>Organic Chemistry I Lab</td>
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<td>CHEM 331L</td>
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<tr>
<td>Social Science</td>
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**Fourth Semester**

<table>
<thead>
<tr>
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<th>ISU</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Ethics</td>
<td>PHI 105</td>
<td>PHIL 230</td>
<td>3</td>
</tr>
<tr>
<td>General Physics II</td>
<td>PHY 172</td>
<td>PHYS 112</td>
<td>4</td>
</tr>
<tr>
<td>Organic Chemistry II</td>
<td>CHM 271</td>
<td>CHEM 332</td>
<td>3</td>
</tr>
<tr>
<td>Organic Chemistry II Lab</td>
<td></td>
<td>CHEM 332L</td>
<td>1</td>
</tr>
<tr>
<td>International Perspective</td>
<td>See details below</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

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LG 07/18/2017
receive credits for Biology 211/L and 212/L. When taken singly, the courses are not equivalent, however when taken as a series the courses are deemed equivalent to 211/212.

This transfer plan differs from what ISU Genetics majors typically take primarily in the following: Genetics and Molecular Cell Biology courses are taken during the third and fourth semesters and Physics I and II during the fifth and sixth semesters.

General Education Requirements

Typical courses that fulfill the College of Liberal Arts and Sciences requirements for Humanities and Social Sciences and the University International Perspectives and US Diversity requirements are listed below. Other courses may apply; contact an advisor in Genetics at ISU or use the TRANSIT function on Iowa State’s website: https://transit.iastate.edu/ to check individual course equivalencies.

Humanities (need 4 courses, 12 cr, including one Science/Humanities Bridge course, 3 cr)
- Courses from History such as WITCC HIS 110, 111, 151, 152
- Courses from Literature such as WITCC LIT 101, 105, 110, 111, 140, 141
- PHI 101, 111; MUS 100
- Science/Humanities Bridge course: WITCC PHI 105

Social Sciences (need 3 courses, 9 cr)
- Courses from Political Science such as WITCC POL 111
- Courses from Psychology such as WITCC PSY 111, 121, 251, 261
- Courses from Sociology such as WITCC SOC 110, 235, 219

ISU International Perspectives requirement (need 1 course, 3 cr)
- WITCC REL 101; HIS 110, 111, MUS 100

ISU US Diversity requirement (need 1 course, 3 cr)
- Literature WITCC LIT 105; Sociology WITCC SOC 115; Psychology WITCC PSY 261

For a full list of WITCC courses which transfer to ISU see the Iowa State University Admissions web page: http://www.admissions.iastate.edu/equiv/iowa.php?type=transfer

This guide was developed to assist students planning to attend Iowa State University to major in Genetics in the College of Liberal Arts and Sciences. The equivalency table is based on the ISU 2017-18 Catalog and course equivalencies provided by the ISU Admissions office. Students should contact Dr. Lois Girton, Genetics advising coordinator (lgirton@iastate.edu or 515-294-0616), for more assistance. **Students should also plan to visit with an advisor in Genetics at ISU prior to beginning their second year of studies, or earlier.**