

**2016-17 GENETICS**  
**College of Agriculture and Life Sciences**  
**Iowa State University**

Students must fulfill all area requirements and have **120** credits to graduate. This is a suggested plan of study. Students may need to deviate from this plan to satisfy unmet requirements or to add a minor/double major. We **strongly encourage** student involvement in internships, study abroad, or research opportunities at ISU. These will enhance the program of study but may add credits or time to the degree plan. **Courses in bold are standard choices for that semester.** Please visit the Undergraduate Genetics Major website for details. <http://undergrad.genetics.iastate.edu/information-current-genetics-majors>

<b>Semester 1 Fall</b>		<b>FRESHMAN YEAR</b>		<b>Semester 2 Spring</b>	
<b>Gen 110 – Introduction to Genetics</b>	<b>1</b>	<b>Biology 211 &amp; L – Principles of Biology I</b>	<b>4</b>		
<b>Biology 212 &amp; L – Principles of Biology II &amp; L</b>	<b>4</b>	<b>Chemistry 178 &amp; L – General Chemistry II &amp; L</b>	<b>4</b>		
<b>Chemistry 177 &amp; L – General Chemistry I &amp; L</b>	<b>5</b>	Math/Stat choice or Humanities Choice	3-4		
Math/Stat choice or Humanities Choice	3-4	English 250 or Social Sciences Choice	3		
English 150 or 250- Composition I or II	3	Lib 160 – Library (or Semester 1 with 250)	1		
Lib 160 if taking English 250	1	Consider Research	0-2		
	<b>17-18</b>		<b>15-16</b>		

<b>Semester 3 Fall</b>		<b>SOPHOMORE YEAR</b>		<b>Semester 4 Spring</b>	
<b>Biology 313 &amp; L – Principles of Genetics</b>	<b>4</b>	<b>Biology 314 – Principles of Cell Biology</b>	<b>3</b>		
<b>Chemistry 331 &amp; L – Organic Chemistry I &amp; Lab</b>	<b>4</b>	<b>Chemistry 332 &amp; L – Organic Chemistry II &amp; Lab</b>	<b>4</b>		
Speech Communications 212	3	<b>MICRO 302, BIOL 315, or Bioinformatics/Genomics Choice</b>	<b>3</b>		
Math/Stat Choice or Social Sciences	3-4	Math/Stat Choice or Social Sciences	3 -4		
		Ethics Choice	3		
	<b>14-15</b>		<b>16 -17</b>		

*Summer: Consider Internship, Study Abroad*

<b>Semester 5 Fall</b>		<b>JUNIOR YEAR</b>		<b>Semester 6 Spring</b>	
<b>Genetics 409 or 410</b>	<b>3</b>	<b>Genetics 409 or 410</b>	<b>3</b>		
<b>*Physics 111 or 221 – Physics I</b>	<b>5</b>	<b>*Physics 112 or 222– Physics II</b>	<b>5</b>		
<b>*BBMB 404 – Biochemistry I</b>	<b>3</b>	<b>*BBMB 405 – Biochemistry II</b>	<b>3</b>		
<b>MICRO 302, BIOL 315, or Bioinformatics/Genomics Choice</b>	<b>3</b>	<b>MICRO 302, BIOL 315, or Bioinformatics/Genomics Choice</b>	<b>3</b>		
U.S. Diversity/Social Sciences Choice	3	Genetics 491 – Seminar (or semester 5)	1		
	<b>17</b>		<b>15</b>		

*Summer: \*Students taking the MCAT need to have completed Biochemistry and Physics by this time. Others can complete Senior year.*

<b>Semester 7 Fall</b>		<b>SENIOR YEAR</b>		<b>Semester 8 Spring</b>	
<b>Genetics 462 – Evolutionary Genetics</b>	<b>3</b>	Advanced Science Electives	6		
Advanced Science Elective or Statistics 301	3-4	International Perspective/Humanities	3		
Advanced Writing (Engl 302-316)	3	Electives	3-6		
Environmental Awareness Course	3-4				
	<b>12-14</b>		<b>12-15</b>		