**Biology - BA**

The BA degree in Biology, through the availability of a large number of electives, gives students maximum flexibility in earning a biology degree. The 15-18 hour minor requirement, including 6 hours of advanced courses in a discipline other than biology, provides students with the opportunity to include significant coursework in areas such as foreign language, business, education, or social sciences. The BA program is recommended for students with broad educational objectives or who intend to pursue further education in areas such as allied health professions, professional schools, or teaching certification.

**Program Requirements**

**First Year**

**Fall**  
BIOL 111 Introductory Biology 1,2 4  
CHEM 119 Fundamentals of Chemistry I 2 4  
Select one of the following: 2,3  
- MATH 147 Calculus I for Biological Sciences 4  
- MATH 151 Engineering Mathematics I  
- MATH 171 Calculus I  
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) 3  

**Spring**  
BIOL 112 Introductory Biology II 1,2 4  
CHEM 120 Fundamentals of Chemistry II 2 4  
Select one of the following: 2  
- MATH 148 Calculus II for Biological Sciences 3-4  
- MATH 152 Engineering Mathematics II  
- MATH 172 Calculus II  
STAT 201 Elementary Statistical Inference  
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) 3  

**Second Year**

**Fall**  
BIOL 213 Molecular Cell Biology 2 3  
CHEM 227 Organic Chemistry I 4  
CHEM & CHEM 237 and Organic Chemistry Laboratory 2  
PHYS 201 College Physics 4  
American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) 3  

**Spring**  
BIOL 214 Genes, Ecology and Evolution 2 3  
CHEM 228 Organic Chemistry II 4  
CHEM & CHEM 238 and Organic Chemistry Laboratory 2  
PHYS 202 College Physics 4  

The following are CBK courses and must be completed prior to the start of the 5th full semester: BIOL 111, BIOL 112, BIOL 213, BIOL 214, CHEM 119, CHEM 120, CHEM 227 & CHEM 237, CHEM 228 & CHEM 238, MATH 147, MATH 148 or STAT 201.

**Third Year**

**Fall**  
BICH 410 or BICH 440 Comprehensive Biochemistry I or Biochemistry I 3  
POLS 206 American National Government 5 3  
STAT 312 Statistics for Biology 3  
Select one of the following: 1  
- BICH 412 Biochemistry Laboratory I  
- BICH 414 Biochemical Techniques I  
- BICH 432 Laboratory in Molecular Genetics  
- GENE 432  
General elective 6  

**Spring**  
BICH 411 or BICH 441 Comprehensive Biochemistry II or Biochemistry II 3  
POLS 207 State and Local Government 5 3  
Select one of the following: 7  
- BICH 464 Bacteriophage Genomics  
- BIOL 300-499 (http://catalog.tamu.edu/undergraduate/course-descriptions/biol/)  
- GENE 302 Principles of Genetics  
- GENE & GENE 312 and Comprehensive Genetics Laboratory  
- GENE 400-499 (http://catalog.tamu.edu/undergraduate/course-descriptions/gene/)  
- OCNG 420 Biological Oceanography  
- VIBS 343 Histology  
- VIBS 443 Biology of Mammalian Cells and Tissues  
General elective 6  

**Semester Credit Hours**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>37</td>
</tr>
<tr>
<td>2nd</td>
<td>36</td>
</tr>
<tr>
<td>3rd</td>
<td>37</td>
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</table>

1. Grade of C or better required.  
2. Must be completed by start of 5th full semester.  
3. Students may not use MATH 142 to satisfy this requirement.  
4. Students seeking teacher certification must take HIST 105 and HIST 106. Other students may choose HIST 105 and HIST 106 or any 6 hours of American history courses (3 hours may be in Texas history).  
5. Students successfully completing the required four semesters of upper-level ROTC courses may substitute these courses for 3 hours of American history and 3 hours of government/political science.  

The following are CBK courses and must be completed prior to the start of the 5th full semester: BIOL 111, BIOL 112, BIOL 213, BIOL 214, CHEM 119, CHEM 120, CHEM 227 & CHEM 237, CHEM 228 & CHEM 238, MATH 147, MATH 148 or STAT 201.
### Fourth Year

#### Fall

Select from the following: 7

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td>BICH 464</td>
<td>Bacteriophage Genomics</td>
<td>7</td>
</tr>
<tr>
<td>BIOL 300-499</td>
<td><a href="http://catalog.tamu.edu/undergraduate/course-descriptions/biol/">http://catalog.tamu.edu/undergraduate/course-descriptions/biol/</a></td>
<td></td>
</tr>
<tr>
<td>GENE 302</td>
<td>Principles of Genetics</td>
<td></td>
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<tr>
<td>&amp; GENE 312</td>
<td>and Comprehensive Genetics Laboratory</td>
<td></td>
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<tr>
<td>OCNG 420</td>
<td>Biological Oceanography</td>
<td></td>
</tr>
<tr>
<td>VIBS 343</td>
<td>Histology</td>
<td></td>
</tr>
<tr>
<td>VIBS 443</td>
<td>Biology of Mammalian Cells and Tissues</td>
<td></td>
</tr>
<tr>
<td>General elective</td>
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**Semester Credit Hours**: 17

#### Spring

Select from the following: 7

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td>BICH 464</td>
<td>Bacteriophage Genomics</td>
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<tr>
<td>BIOL 300-499</td>
<td><a href="http://catalog.tamu.edu/undergraduate/course-descriptions/biol/">http://catalog.tamu.edu/undergraduate/course-descriptions/biol/</a></td>
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</tr>
<tr>
<td>Creative arts</td>
<td><a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts</a></td>
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<tr>
<td>Language, philosophy and culture</td>
<td><a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture</a></td>
<td>3</td>
</tr>
<tr>
<td>General elective</td>
<td>6</td>
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</tbody>
</table>

**Semester Credit Hours**: 17

**Total Semester Credit Hours**: 63

6. Select from any 100-499 course not used elsewhere. (Except AGLS 101; ASCC 101, ASCC 102, ASCC 289; BIMS 101; BIOL 101, BIOL 107, BIOL 113, BIOL 206; BUSN 100; CHEM 106, CHEM 116; HORT 101; MATH 102, MATH 142; WFSC 101.) Only one KINE 199 may be used as a general elective.

7. Two courses in the major must be designated as writing intensive.

**Total Program Hours 120**