

# BIOLOGY - BA

## Program Requirements

### First Year

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

**Semester Credit Hours 15**

### Spring

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

**Semester Credit Hours 14**

### Second Year

Fall		
BIOL 213	Molecular Cell Biology <sup>2</sup>	3
CHEM 227 & CHEM 237	Organic Chemistry I and Organic Chemistry Laboratory <sup>2</sup>	4
PHYS 201	College Physics	4
American history ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a> ) <sup>4,5</sup>		3

**Semester Credit Hours 14**

### Spring

BIOL 214	Genes, Ecology and Evolution <sup>2</sup>	3
CHEM 228 & CHEM 238	Organic Chemistry II and Organic Chemistry Laboratory <sup>2</sup>	4
PHYS 202	College Physics	4
American history ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a> ) <sup>4,5</sup>		3

**Semester Credit Hours 14**

**Total Semester Credit Hours 57**

<sup>1</sup> Grade of C or better required.

<sup>2</sup> Must be completed by start of 5th full semester.

<sup>3</sup> Students may not use MATH 142 to satisfy this requirement.

<sup>4</sup> 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).

<sup>5</sup> 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 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		Semester Credit Hours
BICH 410 or BICH 440	Comprehensive Biochemistry I or Biochemistry I	3
POLS 206	American National Government <sup>5</sup>	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/ GENE 432	Laboratory in Molecular Genetics	
General elective <sup>6</sup>		4

**Semester Credit Hours 14**

### Spring

BICH 411 or BICH 441	Comprehensive Biochemistry II or Biochemistry II	3
POLS 207	State and Local Government <sup>5</sup>	3
Select one of the following: <sup>7</sup>		3
BICH 464/ GENE 464	Bacteriophage Genomics	

BIOL 300-499 ( <a href="http://catalog.tamu.edu/undergraduate/course-descriptions/biol/">http://catalog.tamu.edu/undergraduate/course-descriptions/biol/</a> )		
GENE 302 & GENE 314	Principles of Genetics and Principles of Genetics Laboratory	
GENE 400-499 ( <a href="http://catalog.tamu.edu/undergraduate/course-descriptions/gene/">http://catalog.tamu.edu/undergraduate/course-descriptions/gene/</a> )		
OCNG 320	Biological Oceanography	
VIBS 343	Histology	
VIBS 443	Biology of Mammalian Cells and Tissues	

General elective <sup>6</sup> 6

**Semester Credit Hours 15**

### Fourth Year

Fall		
Select from the following: <sup>7</sup>		7
BICH 464/ GENE 464	Bacteriophage Genomics	
BIOL 300-499 ( <a href="http://catalog.tamu.edu/undergraduate/course-descriptions/biol/">http://catalog.tamu.edu/undergraduate/course-descriptions/biol/</a> )		
GENE 302 & GENE 314	Principles of Genetics and Principles of Genetics Laboratory	
GENE 400-499 ( <a href="http://catalog.tamu.edu/undergraduate/course-descriptions/gene/">http://catalog.tamu.edu/undergraduate/course-descriptions/gene/</a> )		

OCNG 320	Biological Oceanography	
VIBS 343	Histology	
VIBS 443	Biology of Mammalian Cells and Tissues	
Social and behavioral sciences ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences</a> )		3
General elective <sup>6</sup>		7
<b>Semester Credit Hours</b>		<b>17</b>
<b>Spring</b>		
Select from the following: <sup>7</sup>		4
BICH 464/ GENE 464	Bacteriophage Genomics	
BIOL 300-499 ( <a href="http://catalog.tamu.edu/undergraduate/course-descriptions/biol/">http://catalog.tamu.edu/undergraduate/course-descriptions/biol/</a> )		
GENE 302 & GENE 314	Principles of Genetics and Principles of Genetics Laboratory	
GENE 400-499 ( <a href="http://catalog.tamu.edu/undergraduate/course-descriptions/gene/">http://catalog.tamu.edu/undergraduate/course-descriptions/gene/</a> )		
OCNG 320	Biological Oceanography	
VIBS 343	Histology	
VIBS 443	Biology of Mammalian Cells and Tissues	
Creative arts ( <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> )		3
Language, philosophy and culture ( <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> )		3
General elective <sup>6</sup>		7
<b>Semester Credit Hours</b>		<b>17</b>
<b>Total Semester Credit Hours</b>		<b>63</b>

<sup>6</sup> 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; CHEM 106, CHEM 116; MATH 102, MATH 142.) Only one KINE 199 may be used as a general elective.

<sup>7</sup> Two courses in the major must be designated as writing intensive.

## Total Program Hours 120