

**Catalog Changes for 2021-2022 Academic Year  
Biological Sciences Department**

**Bachelor of Science in Biology**

<b>GENERAL EDUCATION (Bachelor of Science) see page 50</b> .....	<b>42 hours</b>
<b>ADDITIONAL DEGREE REQUIREMENTS (Bachelor of Science)</b> .....	<b>18 hours</b>
<b>MAJOR – Biology</b> .....	<b>38 hours</b>
<b>OPTIONAL MINOR</b> .....	<b>18-24 hours</b>
<b>ELECTIVES (with optional minor)</b> .....	<b>7-13 hours</b>
<b>ELECTIVES (without optional minor)</b> .....	<b>26 hours</b>
<b>Total Hours in Degree Program (without optional minor)</b>	<b>124 hours</b>
<b>Total Hours in Degree Program (with optional minor)</b>	<b>124-130 hours</b>

**General Education (Bachelor of Science)**.....**42 hours**  
*CHE 1479 should be chosen from the approved lab science listing*

<b>Additional Degree Requirements (Bachelor of Science)</b> .....	<b>18 hours</b>
CIS 1339 Introduction to Information Technology .....	3 hours
CHE 1489 General Chemistry II .....	4 hours
CHE 2331 Organic Chemistry I.....	3 hours
CHE 2139 Organic Chemistry I Lab.....	1 hours
CHE 2341 Organic Chemistry II .....	3 hours
CHE 2149 Organic Chemistry II Lab .....	1 hours
MAT 2343 Statistics.....	3 hours

<b>Major-Biology</b> .....	<b>38 hours</b>
BIO 1359 General Biology I .....	3 hours
BIO 1119 or BIO 1108 General Biology I Lab or S.T.I.N.G.E.R. I Lab .....	1 hour
BIO 1369 General Biology II .....	3 hours
BIO 1129 or BIO 1109 General Biology II Lab or S.T.I.N.G.E.R. II Lab .....	1 hour
BIO 2429 Comparative Vertebrate Anatomy .....	4 hours
BIO 3389 Plant Biology.....	3 hours
BIO 3419 Microbiology .....	4 hours
BIO 3429 Cell Biology.....	4 hours
BIO 3469 General Ecology.....	4 hours
BIO 3438 Genetics .....	4 hours
BIO 3000-4000 level biology course.....	3 hours
BIO 4119 Research.....	1 hours
BIO 4311 Thesis and Assessment.....	3 hours

## Bachelor of Arts in Biology

GENERAL EDUCATION (Bachelor of Arts) see page 48 .....	42 hours
ADDITIONAL DEGREE REQUIREMENTS (Bachelor of Arts) see page XX.....	12 hours
ADDITIONAL BIOLOGY MAJOR REQUIREMENTS.....	18 hours
MAJOR – Biology Core .....	38 hours
OPTIONAL MINOR .....	18-24 hours
ELECTIVES (with optional minor) .....	0 hours
ELECTIVES (without optional minor).....	14 hours
Total Hours in Degree Program (without optional minor)	124 hours
Total Hours in Degree Program (with optional minor)	128-134 hours

General Education (Bachelor of Arts).....42 hours  
*CHE 1479 should be chosen from the approved lab science listing*

Additional Degree Requirements (Bachelor of Arts) see page XX.....12 hours

Additional Biology Major Requirements (Bachelor of Arts) .....18 hours

CIS 1339 Introduction to Information Technology .....	3 hours
CHE 1489 General Chemistry II .....	4 hours
CHE 2331 Organic Chemistry I .....	3 hours
CHE 2139 Organic Chemistry Lab I .....	1 hour
CHE 2341 Organic Chemistry II .....	3 hours
CHE 2149 Organic Chemistry Lab II.....	1 hour
MAT 2343 Statistics.....	3 hours

Major-Biology Core .....38 hours

BIO 1359 General Biology I .....	3 hours
BIO 1119 or BIO 1108 General Biology I Lab or S.T.I.N.G.E.R. I Lab .....	1 hour
BIO 1369 General Biology II .....	3 hours
BIO 1129 or BIO 1109 General Biology II Lab or S.T.I.N.G.E.R. II Lab .....	1 hour
BIO 2429 Comparative Vertebrate Anatomy .....	4 hours
BIO 3389 Plant Biology.....	3 hours
BIO 3419 Microbiology .....	4 hours
BIO 3429 Cell Biology.....	4 hours
BIO 3469 General Ecology .....	4 hours
BIO 3438 Genetics .....	4 hours
BIO 3000-4000 level biology course.....	3 hours
BIO 4119 Research.....	1 hour
BIO 4311 Thesis and Assessment.....	3 hours

The Biomedical Science Program will no longer have an admissions process; any student can choose to be a biomedical science major.

## Bachelor of Science in Biomedical Science

GENERAL EDUCATION (Bachelor of Science) see page 50 .....	42 hours
ADDITIONAL DEGREE REQUIREMENTS (Bachelor of Science) .....	14 hours
MAJOR - BIOLOGY CORE.....	31 hours
BIOMEDICAL SCIENCE REQUIREMENTS.....	27 hours
OPTIONAL MINOR.....	18-24 hours
ELECTIVES (without optional minor).....	10 hours
ELECTIVES (with optional minor).....	0 hours
Total Hours in Degree Program (without optional minor)	124 hours
Total Hours in Degree Program (with optional minor)	132-138 hours

General Education (Bachelor of Science) ..... 42 hours  
*CHE 1479 should be chosen from the approved lab science listing*  
*MAT 2445 should be chosen for the mathematics requirement*

Additional Degree Requirements (Bachelor of Science) ..... 14 hours  
 CIS 1339 Introduction to Information Technology .....3 hours  
 MAT 2451 Calculus I.....4 hours  
 CHE 1489 General Chemistry II .....4 hours  
 MAT 2343 Statistics.....3 hours

Major – Biology Core..... 31 hours  
 BIO 1359 General Biology I ..... 3 hours  
 BIO 1119 or BIO 1108 General Biology I Lab or S.T.I.N.G.E.R. I Lab .....1 hour  
 BIO 1369 General Biology II .....3 hours  
 BIO 1129 or BIO 1109 General Biology II Lab or S.T.I.N.G.E.R. II Lab .....1 hour  
 BIO 2429 Comparative Vertebrate Anatomy ..... 4 hours  
 BIO 3419 Microbiology ..... 4 hours  
 BIO 3429 Cell Biology..... 4 hours  
 BIO 3438 Genetics ..... 4 hours  
 BIO 4119 Research..... 1 hours  
 BIO 4311 Thesis and Assessment..... 3 hours  
 BIO 3000 or 4000-level biology course.....3 hours

Biomedical Science Requirements ..... 27 hours  
 BIO 1159 Health Professions Seminar..... 1 hour  
 SCI 1200 Medical Terminology..... 2 hours  
 SCI 2104 Medical Internship.....1 hour  
 BIO 3399 Pathophysiology.....3 hours  
 PHY 2439 University Physics I ..... 4 hours  
 PHY 2449 University Physics II ..... 4 hours  
 CHE 2331 Organic Chemistry I.....3 hours  
 CHE 2139 Organic Chemistry I Lab .....1 hour  
 CHE 2341 Organic Chemistry II.....3 hours  
 CHE 2149 Organic Chemistry II Lab .....1 hour  
 CHE 4439 Biochemistry I .....4 hours

**Teacher Certification:** Students majoring in biology and seeking teacher certification should refer to the School of Education section in this catalog. All students seeking teacher certification in biology must be advised by both the biology faculty and the faculty of the School of Education.

**Students must have a grade of “C” or better in all prerequisites and in all required courses (BIO, CHE, CIS, MAT, and SCI) for a biology or biomedical science major.**

All graduating biology and biomedical majors will be required to take the Major Field Test (MFT) in biology as a condition for graduation. Results of this test will be used as an assessment tool for the biology curriculum and will not have a direct bearing on graduation, but is part of the student’s grade in BIO 4311.

## Biology Minor

**Biology Minor** – The biology minor is for students who want to compliment another major with a biology background.

<b>Biology Minor</b> .....	<b>18-24 hours</b>
BIO 1359 General Biology I .....	3 hours
BIO 1119 or BIO 1108 General Biology I Lab or S.T.I.N.G.E.R. I Lab.....	1 hour
BIO 1369 General Biology II.....	3 hours
BIO 1129 or BIO 1109 General Biology II Lab or S.T.I.N.G.E.R. II Lab.....	1 hour
Additional hours chosen in consultation with the head of the biological sciences department* .....	10-16 hours

*\*Courses that will NOT count towards a minor include BIO 1409, 1410, 1419, 2409, 2489, 2499, 3399.*

## Biomedical Science Minor

**Biomedical Science Minor** – The Biomedical Science minor gives students extra preparation for graduate and health profession schools. The minor will consist of at least 24 hours. Six hours must be from upper level courses.

<b>Biomedical Science Minor</b> .....	<b>24 hours</b>
Ten hours chosen from .....	10 hours
BIO 2489 Human Anatomy and Physiology I .....	4 hours
BIO 2499 Human Anatomy and Physiology II .....	4 hours
BIO 3399 Pathophysiology.....	3 hours
BIO 3419 Microbiology.....	4 hours
BIO 4340 Neurobiology .....	3 hours
BIO 4329 Developmental Biology.....	3 hours
BIO 4372 Immunology .....	3 hours
BIO 4419 Advanced Physiology .....	4 hours
SCI 2343 Statistics .....	3 hours
SCI 1200 Medical Terminology .....	2 hours
The 10 hours may include up to 3 hours chosen from:	
SCI 2104 Medical Internship.....	1 hour
SCI 2204 Medical Internship.....	2 hours
SCI 2304 Medical Internship.....	3 hours
Special studies biology or biomedical science courses may be used with the approval of the chair of the department	
Eight hours chosen from .....	8 hours
CHE 4439 Biochemistry I .....	4 hours
CHE 4449 Biochemistry II .....	4 hours
PHY 2439 University Physics I.....	4 hours
PHY 2449 University Physics II.....	4 hours
Six hours chosen from .....	6 hours
PSY 1311 Introduction to Psychology .....	3 hours
PSY 2351 Statistics for the Social Sciences.....	3 hours
PSY 2355 Lifespan Development .....	3 hours
PSY 4300 Human Sexuality .....	3 hours
PSY 4302 Health Psychology .....	3 hours
PSY 4339 Experimental Psychology .....	3 hours
SOC 1311 Introduction to Sociology.....	3 hours

**Students cannot use the same courses for two different minors.**

All prerequisites for these courses must be met and with a grade of "C" or better.