# **BIOLOGY (BS) - GENERAL TRACK**

### **Program Overview**

The Bachelor of Science degree in Biology prepares students for employment in biological or life science careers and/or for entry into advanced degree programs in biology or health-related professional schools, by providing a more specialized biological education to include the analytical skills, knowledge, laboratory and field techniques across various disciplines within the biological sciences.

#### **Career Opportunities**

Career opportunities are available in the following areas: conservation, medicine, pharmacy, biotechnology, research, genetic counseling, veterinary medicine.

## **Program of Study**

Core IMPACTS Area : Institutional Priorities  Choose one of the following communication options  COMM 1110 Public Speaking Foreign Language Course Options  AMSL, ARAB, CHIN, FREN, GERM, GREK, ITAL, JAPN, KREN, LATIN, PORT, SPAN - 1001, 1002, 2001, 2002; SWAH - 1001, 1002.  Take one of the following courses 1-2  ITDS 1779 Scholarship Across the Disciplines  LEAD 1705 Introduction to Servant Leadership PERS 1506 Perspectives 1-hour PERS 1507 Perspectives 2-hour  Core IMPACTS Area : Mathematics & Quantitative Skills  ATH 1001 Quantitative Skills and Reasoning 3  MATH 1101 Introduction to Data Science 3  MATH 1111 College Algebra 3  MATH 1111 College Algebra 3  MATH 1112 Applied Calculus 4  MATH 1132 Calculus with Analytic Geometry I 4  MATH 1132 Calculus with Analytic Geometry I 4  MATH 11401 Introduction to Statistics 3  MATH 1401 Introduction to Statistics 3  MATH 1501 Calculus I 4  MATH 125 Introduction to Discrete Mathematics 3  STAT 1401 Elementary Statistics 3  Core IMPACTS Area : Political Science and U.S. History 6  HIST 2111 U. S. History to 1865  Or HIST 2111 U. S. History since 1865  POLS 1101 American Government 3  Core IMPACTS Area : Arts, Humanities, and Ethics 6  Select one Fine Arts course 3  ARTH 1100 Art Appreciation	Code	Title	Credit Hours
COMM 1110 Public Speaking Foreign Language Course Options  AMSL, ARAB, CHIN, FREN, GERM, GREK, ITAL, JAPN, KREN, LATIN, PORT, SPAN - 1001, 1002, 2001, 2002; SWAH - 1001, 1002.  Take one of the following courses  ITDS 1779 Scholarship Across the Disciplines  LEAD 1705 Introduction to Servant Leadership  PERS 1506 Perspectives 1-hour  PERS 1507 Perspectives 2-hour  Core IMPACTS Area: Mathematics & Quantitative Skills  ATH 1001 Quantitative Skills and Reasoning  MATH 1001 Quantitative Skills and Reasoning  MATH 1111 College Algebra  MATH 1111 College Algebra  MATH 1112 Applied Calculus  MATH 1131 Calculus with Analytic Geometry I  MATH 1132 Calculus with Analytic Geometry I  MATH 11401 Introduction to Statistics  MATH 1501 Calculus I  MATH 2125 Introduction to Discrete Mathematics  3 STAT 1401 Elementary Statistics  3 Core IMPACTS Area: Political Science and U.S. History  6 HIST 2111 U. S. History to 1865  POLS 1101 American Government  3 Core IMPACTS Area: Arts, Humanities, and Ethics  Select one Fine Arts course	Core IMPACTS Ar	ea : Institutional Priorities <sup>1</sup>	4-5
Foreign Language Course Options  AMSL, ARAB, CHIN, FREN, GERM, GREK, ITAL, JAPN, KREN, LATIN, PORT, SPAN - 1001, 1002, 2001, 2002; SWAH - 1001, 1002.  Take one of the following courses  ITDS 1779  Scholarship Across the Disciplines  LEAD 1705  Introduction to Servant Leadership  PERS 1506  Perspectives 1-hour  PERS 1507  Perspectives 2-hour  Core IMPACTS Area: Mathematics & Quantitative Skills  MATH 1001  Quantitative Skills and Reasoning  MATH 1101  Introduction to Mathematical Modeling  MATH 1111  College Algebra  MATH 1112  Applied Calculus  MATH 1125  Applied Calculus  MATH 1131  Calculus with Analytic Geometry I  MATH 1132  Calculus with Analytic Geometry II  MATH 1165  Computer-Assisted Problem Solving  MATH 101  Introduction to Statistics  MATH 101  MATH 2125  Introduction to Discrete Mathematics  STAT 1401  Elementary Statistics  3  Core IMPACTS Area: Political Science and U.S. History  6  HIST 2111  U. S. History to 1865  or HIST 2112  U. S. History since 1865  POLS 1101  American Government  3  Core IMPACTS Area: Arts, Humanities, and Ethics  6  Select one Fine Arts course	Choose one of th	e following communication options	3
AMSL, ARAB, CHIN, FREN, GERM, GREK, ITAL, JAPN, KREN, LATIN, PORT, SPAN - 1001, 1002, 2001, 2002; SWAH - 1001, 1002.  Take one of the following courses 1-2  ITDS 1779 Scholarship Across the Disciplines  LEAD 1705 Introduction to Servant Leadership  PERS 1506 Perspectives 1-hour  PERS 1507 Perspectives 2-hour  Core IMPACTS Area: Mathematics & Quantitative Skills 3-7  DATA 1501 Introduction to Data Science 3  MATH 1001 Quantitative Skills and Reasoning 3  MATH 1101 Introduction to Mathematical Modeling 3  MATH 1111 College Algebra 3  MATH 1113 Pre-Calculus 4  MATH 1125 Applied Calculus 3  MATH 1131 Calculus with Analytic Geometry I 4  MATH 1132 Calculus with Analytic Geometry I 4  MATH 1165 Computer-Assisted Problem Solving 3  MATH 1401 Introduction to Statistics 3  MATH 1215 Introduction to Discrete Mathematics 3  STAT 1401 Elementary Statistics 3  Core IMPACTS Area: Political Science and U.S. History 6  HIST 2111 U. S. History to 1865 3  or HIST 2111 U. S. History since 1865  POLS 1101 American Government 3  Core IMPACTS Area: Arts, Humanities, and Ethics 6  Select one Fine Arts course 3	COMM 1110	Public Speaking	
PORT, SPAN - 1001, 1002, 2001, 2002; SWAH - 1001, 1002.  Take one of the following courses  ITDS 1779 Scholarship Across the Disciplines  LEAD 1705 Introduction to Servant Leadership  PERS 1506 Perspectives 1-hour  PERS 1507 Perspectives 2-hour  Core IMPACTS Area : Mathematics & Quantitative Skills   AATH 1001 Quantitative Skills and Reasoning  MATH 1101 Introduction to Data Science  MATH 1111 College Algebra  MATH 1111 College Algebra  MATH 1112 Applied Calculus  MATH 1131 Calculus with Analytic Geometry I  MATH 1132 Calculus with Analytic Geometry I  MATH 1165 Computer-Assisted Problem Solving  MATH 1401 Introduction to Statistics  MATH 125 Introduction to Discrete Mathematics  STAT 1401 Elementary Statistics  Core IMPACTS Area : Political Science and U.S. History  6 HIST 2111 U. S. History to 1865  POLS 1101 American Government  3 Core IMPACTS Area : Arts, Humanities, and Ethics  6 Select one Fine Arts course	Foreign Langu	age Course Options	
ITDS 1779 Scholarship Across the Disciplines  LEAD 1705 Introduction to Servant Leadership PERS 1506 Perspectives 1-hour PERS 1507 Perspectives 2-hour  Core IMPACTS Area: Mathematics & Quantitative Skills 1 3-7  DATA 1501 Introduction to Data Science 3  MATH 1001 Quantitative Skills and Reasoning 3  MATH 1101 Introduction to Mathematical Modeling 3  MATH 1111 College Algebra 3  MATH 1113 Pre-Calculus 4  MATH 1125 Applied Calculus 3  MATH 1131 Calculus with Analytic Geometry I 4  MATH 1132 Calculus with Analytic Geometry II 4  MATH 1165 Computer-Assisted Problem Solving 3  MATH 1401 Introduction to Statistics 3  MATH 1501 Calculus I 4  MATH 2125 Introduction to Discrete Mathematics 3  STAT 1401 Elementary Statistics 3  Core IMPACTS Area: Political Science and U.S. History 6  HIST 2111 U. S. History to 1865 3  or HIST 2112 U. S. History since 1865  POLS 1101 American Government 3  Core IMPACTS Area: Arts, Humanities, and Ethics 6  Select one Fine Arts course 3			IN,
LEAD 1705 Introduction to Servant Leadership PERS 1506 Perspectives 1-hour PERS 1507 Perspectives 2-hour  Core IMPACTS Area: Mathematics & Quantitative Skills 1 3-7  DATA 1501 Introduction to Data Science 3  MATH 1001 Quantitative Skills and Reasoning 3  MATH 1101 Introduction to Mathematical Modeling 3  MATH 1111 College Algebra 3  MATH 1113 Pre-Calculus 4  MATH 1125 Applied Calculus 3  MATH 1131 Calculus with Analytic Geometry I 4  MATH 1132 Calculus with Analytic Geometry II 4  MATH 1165 Computer-Assisted Problem Solving 3  MATH 1401 Introduction to Statistics 3  MATH 1501 Calculus I 4  MATH 2125 Introduction to Discrete Mathematics 3  STAT 1401 Elementary Statistics 3  Core IMPACTS Area: Political Science and U.S. History 6  HIST 2111 U. S. History to 1865 3  or HIST 2112 U. S. History since 1865  POLS 1101 American Government 3  Core IMPACTS Area: Arts, Humanities, and Ethics 6  Select one Fine Arts course 3	Take one of the fo	ollowing courses	1-2
PERS 1506 Perspectives 1-hour PERS 1507 Perspectives 2-hour  Core IMPACTS Area: Mathematics & Quantitative Skills 1  DATA 1501 Introduction to Data Science 3  MATH 1001 Quantitative Skills and Reasoning 3  MATH 1101 Introduction to Mathematical Modeling 3  MATH 1111 College Algebra 3  MATH 1113 Pre-Calculus 4  MATH 1125 Applied Calculus 3  MATH 1131 Calculus with Analytic Geometry I 4  MATH 1132 Calculus with Analytic Geometry I 4  MATH 1165 Computer-Assisted Problem Solving 3  MATH 1401 Introduction to Statistics 3  MATH 1501 Calculus I 4  MATH 2125 Introduction to Discrete Mathematics 3  STAT 1401 Elementary Statistics 3  Core IMPACTS Area: Political Science and U.S. History 6  HIST 2111 U. S. History to 1865 3  or HIST 2112 U. S. History since 1865  POLS 1101 American Government 3  Core IMPACTS Area: Arts, Humanities, and Ethics 6  Select one Fine Arts course 3	ITDS 1779	Scholarship Across the Disciplines	
PERS 1507 Perspectives 2-hour  Core IMPACTS Area : Mathematics & Quantitative Skills   DATA 1501 Introduction to Data Science   MATH 1001 Quantitative Skills and Reasoning   MATH 1101 Introduction to Mathematical Modeling   MATH 1111 College Algebra   MATH 1113 Pre-Calculus   MATH 1125 Applied Calculus   MATH 1131 Calculus with Analytic Geometry I   MATH 1132 Calculus with Analytic Geometry II   MATH 1165 Computer-Assisted Problem Solving   MATH 1401 Introduction to Statistics   MATH 1501 Calculus I   MATH 2125 Introduction to Discrete Mathematics   STAT 1401 Elementary Statistics   Core IMPACTS Area : Political Science and U.S. History   HIST 2111 U. S. History to 1865   or HIST 2112 U. S. History since 1865   POLS 1101 American Government   Core IMPACTS Area : Arts, Humanities, and Ethics   Select one Fine Arts course   3-	LEAD 1705	Introduction to Servant Leadership	
Core IMPACTS Area: Mathematics & Quantitative Skills   DATA 1501 Introduction to Data Science   MATH 1001 Quantitative Skills and Reasoning   MATH 1101 Introduction to Mathematical Modeling   MATH 1111 College Algebra   MATH 1113 Pre-Calculus   MATH 1125 Applied Calculus   MATH 1131 Calculus with Analytic Geometry I   MATH 1132 Calculus with Analytic Geometry II   MATH 1165 Computer-Assisted Problem Solving   MATH 1401 Introduction to Statistics   MATH 1501 Calculus I   MATH 2125 Introduction to Discrete Mathematics   STAT 1401 Elementary Statistics   Core IMPACTS Area: Political Science and U.S. History   HIST 2111 U. S. History to 1865   or HIST 2112 U. S. History since 1865   POLS 1101 American Government   Core IMPACTS Area: Arts, Humanities, and Ethics   Select one Fine Arts course   3	PERS 1506	Perspectives 1-hour	
DATA 1501 Introduction to Data Science 3 MATH 1001 Quantitative Skills and Reasoning 3 MATH 1101 Introduction to Mathematical Modeling 3 MATH 1111 College Algebra 3 MATH 1111 Pre-Calculus 4 MATH 1112 Applied Calculus 3 MATH 1131 Calculus with Analytic Geometry I 4 MATH 1132 Calculus with Analytic Geometry II 4 MATH 1165 Computer-Assisted Problem Solving 3 MATH 1401 Introduction to Statistics 3 MATH 1501 Calculus I 4 MATH 2125 Introduction to Discrete Mathematics 3 STAT 1401 Elementary Statistics 3 Core IMPACTS Area : Political Science and U.S. History 6 HIST 2111 U. S. History to 1865 3 Or HIST 2112 U. S. History since 1865 POLS 1101 American Government 3 Core IMPACTS Area : Arts, Humanities, and Ethics 6 Select one Fine Arts course 3	PERS 1507	Perspectives 2-hour	
MATH 1001 Quantitative Skills and Reasoning 3 MATH 1101 Introduction to Mathematical Modeling 3 MATH 1111 College Algebra 3 MATH 1111 Pre-Calculus 4 MATH 1112 Applied Calculus 3 MATH 1131 Calculus with Analytic Geometry I 4 MATH 1132 Calculus with Analytic Geometry II 4 MATH 1132 Calculus with Analytic Geometry II 4 MATH 1165 Computer-Assisted Problem Solving 3 MATH 1401 Introduction to Statistics 3 MATH 1501 Calculus I 4 MATH 2125 Introduction to Discrete Mathematics 3 STAT 1401 Elementary Statistics 3 Core IMPACTS Area: Political Science and U.S. History 6 HIST 2111 U. S. History to 1865 3 or HIST 2112 U. S. History since 1865 POLS 1101 American Government 3 Core IMPACTS Area: Arts, Humanities, and Ethics 6 Select one Fine Arts course 3	Core IMPACTS Ar	ea : Mathematics & Quantitative Skills <sup>1</sup>	3-7
MATH 1101 Introduction to Mathematical Modeling  MATH 1111 College Algebra  MATH 1113 Pre-Calculus  MATH 1113 Pre-Calculus  MATH 1125 Applied Calculus  MATH 1131 Calculus with Analytic Geometry I  MATH 1132 Calculus with Analytic Geometry II  MATH 1165 Computer-Assisted Problem Solving  MATH 1401 Introduction to Statistics  MATH 1501 Calculus I  MATH 2125 Introduction to Discrete Mathematics  STAT 1401 Elementary Statistics  3  Core IMPACTS Area: Political Science and U.S. History  6  HIST 2111 U. S. History to 1865  or HIST 2112 U. S. History since 1865  POLS 1101 American Government  3  Core IMPACTS Area: Arts, Humanities, and Ethics  6  Select one Fine Arts course	DATA 1501	Introduction to Data Science	3
MATH 1111       College Algebra       3         MATH 1113       Pre-Calculus       4         MATH 1125       Applied Calculus       3         MATH 1131       Calculus with Analytic Geometry I       4         MATH 1132       Calculus with Analytic Geometry II       4         MATH 1165       Computer-Assisted Problem Solving       3         MATH 1401       Introduction to Statistics       3         MATH 1501       Calculus I       4         MATH 2125       Introduction to Discrete Mathematics       3         STAT 1401       Elementary Statistics       3         Core IMPACTS Area : Political Science and U.S. History       6         HIST 2111       U. S. History to 1865       3         or HIST 2112       U. S. History since 1865         POLS 1101       American Government       3         Core IMPACTS Area : Arts, Humanities, and Ethics       6         Select one Fine Arts course       3	MATH 1001	Quantitative Skills and Reasoning	3
MATH 1113       Pre-Calculus       4         MATH 1125       Applied Calculus       3         MATH 1131       Calculus with Analytic Geometry I       4         MATH 1132       Calculus with Analytic Geometry II       4         MATH 1165       Computer-Assisted Problem Solving       3         MATH 1401       Introduction to Statistics       3         MATH 1501       Calculus I       4         MATH 2125       Introduction to Discrete Mathematics       3         STAT 1401       Elementary Statistics       3         Core IMPACTS Area : Political Science and U.S. History       6         HIST 2111       U. S. History to 1865       3         or HIST 2112       U. S. History since 1865         POLS 1101       American Government       3         Core IMPACTS Area : Arts, Humanities, and Ethics       6         Select one Fine Arts course       3	MATH 1101	Introduction to Mathematical Modeling	3
MATH 1125         Applied Calculus         3           MATH 1131         Calculus with Analytic Geometry I         4           MATH 1132         Calculus with Analytic Geometry II         4           MATH 1165         Computer-Assisted Problem Solving         3           MATH 1401         Introduction to Statistics         3           MATH 1501         Calculus I         4           MATH 2125         Introduction to Discrete Mathematics         3           STAT 1401         Elementary Statistics         3           Core IMPACTS Area : Political Science and U.S. History         6           HIST 2111         U. S. History to 1865         3           or HIST 2112         U. S. History since 1865           POLS 1101         American Government         3           Core IMPACTS Area : Arts, Humanities, and Ethics         6           Select one Fine Arts course         3	MATH 1111	College Algebra	3
MATH 1131 Calculus with Analytic Geometry I 4 MATH 1132 Calculus with Analytic Geometry II 4 MATH 1165 Computer-Assisted Problem Solving 3 MATH 1401 Introduction to Statistics 3 MATH 1501 Calculus I 4 MATH 2125 Introduction to Discrete Mathematics 3 STAT 1401 Elementary Statistics 3 Core IMPACTS Area: Political Science and U.S. History 6 HIST 2111 U. S. History to 1865 3 or HIST 2112 U. S. History since 1865 POLS 1101 American Government 3 Core IMPACTS Area: Arts, Humanities, and Ethics 6 Select one Fine Arts course 3	MATH 1113	Pre-Calculus	4
MATH 1132 Calculus with Analytic Geometry II 4 MATH 1165 Computer-Assisted Problem Solving 3 MATH 1401 Introduction to Statistics 3 MATH 1501 Calculus I 4 MATH 2125 Introduction to Discrete Mathematics 3 STAT 1401 Elementary Statistics 3 Core IMPACTS Area: Political Science and U.S. History 6 HIST 2111 U. S. History to 1865 3 or HIST 2112 U. S. History since 1865 POLS 1101 American Government 3 Core IMPACTS Area: Arts, Humanities, and Ethics 6 Select one Fine Arts course 3	MATH 1125	Applied Calculus	3
MATH 1165 Computer-Assisted Problem Solving  MATH 1401 Introduction to Statistics  3  MATH 1501 Calculus I  MATH 2125 Introduction to Discrete Mathematics  3  STAT 1401 Elementary Statistics  3  Core IMPACTS Area: Political Science and U.S. History  6  HIST 2111 U. S. History to 1865  or HIST 2112 U. S. History since 1865  POLS 1101 American Government  3  Core IMPACTS Area: Arts, Humanities, and Ethics  6  Select one Fine Arts course	MATH 1131	Calculus with Analytic Geometry I	4
MATH 1401 Introduction to Statistics 3 MATH 1501 Calculus I 4 MATH 2125 Introduction to Discrete Mathematics 3 STAT 1401 Elementary Statistics 3 Core IMPACTS Area: Political Science and U.S. History 6 HIST 2111 U. S. History to 1865 3 or HIST 2112 U. S. History since 1865 POLS 1101 American Government 3 Core IMPACTS Area: Arts, Humanities, and Ethics 6 Select one Fine Arts course 3	MATH 1132	Calculus with Analytic Geometry II	4
MATH 1501 Calculus I 4 MATH 2125 Introduction to Discrete Mathematics 3 STAT 1401 Elementary Statistics 3 Core IMPACTS Area: Political Science and U.S. History 6 HIST 2111 U. S. History to 1865 3 or HIST 2112 U. S. History since 1865 POLS 1101 American Government 3 Core IMPACTS Area: Arts, Humanities, and Ethics 6 Select one Fine Arts course 3	MATH 1165	Computer-Assisted Problem Solving	3
MATH 2125 Introduction to Discrete Mathematics 3 STAT 1401 Elementary Statistics 3 Core IMPACTS Area: Political Science and U.S. History 6 HIST 2111 U. S. History to 1865 3 or HIST 2112 U. S. History since 1865 POLS 1101 American Government 3 Core IMPACTS Area: Arts, Humanities, and Ethics 6 Select one Fine Arts course 3	MATH 1401	Introduction to Statistics	3
STAT 1401 Elementary Statistics 3  Core IMPACTS Area: Political Science and U.S. History 6  HIST 2111 U. S. History to 1865 3  or HIST 2112 U. S. History since 1865  POLS 1101 American Government 3  Core IMPACTS Area: Arts, Humanities, and Ethics 6  Select one Fine Arts course 3	MATH 1501	Calculus I	4
Core IMPACTS Area: Political Science and U.S. History 6 HIST 2111 U. S. History to 1865 3 or HIST 2112 U. S. History since 1865 POLS 1101 American Government 3 Core IMPACTS Area: Arts, Humanities, and Ethics 6 Select one Fine Arts course 3	MATH 2125	Introduction to Discrete Mathematics	3
HIST 2111 U. S. History to 1865 3 or HIST 2112 U. S. History since 1865  POLS 1101 American Government 3  Core IMPACTS Area: Arts, Humanities, and Ethics 6 Select one Fine Arts course 3	STAT 1401	Elementary Statistics	3
or HIST 2112 U. S. History since 1865  POLS 1101 American Government 3  Core IMPACTS Area: Arts, Humanities, and Ethics 6  Select one Fine Arts course 3	Core IMPACTS Ar	ea : Political Science and U.S. History	6
POLS 1101 American Government 3  Core IMPACTS Area: Arts, Humanities, and Ethics 6  Select one Fine Arts course 3	HIST 2111	U. S. History to 1865	3
Core IMPACTS Area : Arts, Humanities, and Ethics6Select one Fine Arts course3	or HIST 2112	U. S. History since 1865	
Select one Fine Arts course 3	POLS 1101	American Government	3
	Core IMPACTS Ar	ea : Arts, Humanities, and Ethics	6
ARTH 1100 Art Appreciation	Select one Fine A	arts course	3
	ARTH 1100	Art Appreciation	

ARTH 2125	Introduction to the History of Art I – Prehistoric through Gothic	
ARTH 2126	Introduction to the History of Art II— Renaissance through Modern	•
MUSC 1100	Music Appreciation	
THEA 1100	Theatre Appreciation	
ITDS 1145	Comparative Arts <sup>2</sup>	
Select one Human	nities course	3
ENGL 2111	World Literature I	
ENGL 2112	World Literature II	
ITDS 1155	The Western Intellectual Tradition	
ITDS 1774	Introduction to Digital Humanities	
PHIL 2010	Introduction to Philosophy	
ITDS 1145	Comparative Arts <sup>2</sup>	
Core IMPACTS Ar	ea : Communicating in Writing	6
ENGL 1101	English Composition I	3
ENGL 1102	English Composition II	3
Core IMPACTS Ar	ea : Technology, Mathematics, and Sciences <sup>1,3</sup>	7-11
ANTH 1145	Human Origins	3
ASTR 1105	Descriptive Astronomy: The Solar System	3
ASTR 1106	Descriptive Astronomy: Stars and Galaxies	3
ASTR 1305	Descriptive Astronomy Lab	1
ATSC 1112	Understanding the Weather	3
ATSC 1112L	Understanding the Weather Lab	1
BIOL 1125	Contemporary Issues in Biology Non-Lab	3
BIOL 1215K	Introductory Biology	4
BIOL 1225K	Contemporary Issues in Biology with Lab	4
CHEM 1151 & 1151L	Survey of Chemistry I and Survey of Chemistry I Lab	4
CHEM 1152 & 1152L	Survey of Chemistry II and Survey of Chemistry II Lab	4
CHEM 1211 & 1211L	Principles of Chemistry I and Principles of Chemistry I Lab	4
CHEM 1212 & 1212L	Principles of Chemistry II and Principles of Chemistry II Lab	4
CPSC 1105	Introduction to Computing Principles and Technology	3
CPSC 1301K	Computer Science I	4
ENVS 1105	Environmental Studies	3
ENVS 1105L	Environmental Studies Laboratory	1
ENVS 1205K	Sustainability and the Environment	4
GEOG 2215	Introduction to the Geographic Information Systems	3
GEOL 1110	Natural Disasters: Our Hazardous Environment	3
GEOL 1121	Introductory Geoscience I: Physical Geology	3
GEOL 1121L	Introductory Geoscience I: Physical Geology Lab	1
GEOL 1122	Introductory Geo-sciences II: Historical Geology	3
GEOL 1322	Introductory Geo-sciences II: Historical Geology Lab	1
GEOL 2225	The Fossil Record	4
PHYS 1111 & PHYS 1311	Introductory Physics I and Introductory Physics I Lab	4
PHYS 1112 & PHYS 1312	Introductory Physics II and Introductory Physics II Lab	4

PHYS 1125	Physics of Color and Sound	3
PHYS 1325	Physics of Color and Sound Lab	1
PHYS 2211 & PHYS 2311	Principles of Physics I and Principles of Physics I Lab	4
PHYS 2212 & PHYS 2312	Principles of Physics II and Principles of Physics II Lab	4
Core IMPACTS A	rea : Social Sciences	6
Select one Behav	rioral Science course	
ECON 2105	Principles of Macroeconomics	
ECON 2106	Principles of Microeconomics	
PHIL 2030	Moral Philosophy	
PSYC 1101	Introduction to General Psychology	
SOCI 1101	Introduction to Sociology	
Select one World	Cultures course	3
ANTH 1107	Discovering Archaeology	
ANTH 1105	Cultural Anthropology	
ANTH 2105	Ancient World Civilizations	
ANTH 2136	Language and Culture	
ENGL 2136	Language and Culture	
GEOG 1101	World Regional Geography	
HIST 1111	World History to 1500	
HIST 1112	World History since 1500	
ITDS 1156	Understanding Non-Western Cultures	
Core IMPACTS To	otal Hours	42
Health and Welln	ess	3
KINS 1106	Lifetime Wellness	2
or PHED 1205	Concepts of Fitness	
Select one of the	•	1
Any PEDS cou		
MUSC 1206	Body Mapping (Music Majors Only)	

The hours applied in the Institutional Priorities; Mathematics & Quantitative Skills; and Technology, Mathematics, and Sciences areas must add to 18 credit hours.

## **Major Requirements**

Code	Title	Credit Hours
Core Requireme	ents	
Complete the co	ore requirements for this program	45
Field of Study F	Requirements	
Minimum grade	e of C is required	
BIOL 1107K	Principles of Biology I	4
BIOL 1108K	Principles of Biology II	4
BIOL 2206K	Organismic Biology I	4
BIOL 2207K	Organismic Biology II	4
Apply two hours	s of Guided Electives	2
Field of Study F	Requirements Total	18
Required for the	e Major	

Minimum grade o	it C is required	
BIOL 3215K	Cell Biology	4
BIOL 3216K	Genetics	4
BIOL 3217K	Ecology	4
BIOL 4795	Capstone Senior Seminar	2
CHEM 3111	Organic Chemistry I	3
CHEM 3112	Organic Chemistry II	3
CHEM 3311	Organic Chemistry I Lab	1
CHEM 3312	Organic Chemistry II Lab	1
MATH 1111	College Algebra	3
PHYS 1111	Introductory Physics I	3
PHYS 1112	Introductory Physics II	3
PHYS 1311	Introductory Physics I Lab	1
PHYS 1312	Introductory Physics II Lab	1
Select one of the	following options:	4
Option 1:	renerming operation	
BIOL 4392	Undergraduate Research	
BIOL 4393	Research Presentation	
Option 2:	Trebearon Frederitation	
BIOL 4698	Internship	
Option 3:	memorip	
•	nal hours from List 1-3 of Major Electives	
Required for the N	· · · · · · · · · · · · · · · · · · ·	37
Major Electives	Major Total	31
Minimum grade o	f C is required	
=	rom Cellular and Molecular Biology Electives (List 1	) 3-4
BIOL 5117U	Medical Genetics and Genomics	) 3-4
BIOL 51170	Neuroscience	
BIOL 51180	Developmental Biology	
BIOL 5216U		
BIOL 5217U	Histology and Histotechniques Cell and Molecular Techniques	
BIOL 52170		
	Introduction to Virology	
BIOL 5219U	Immunology	
BIOL 5225U	Microbial Pathogenesis	
BIOL 5317U	Genomics and Bioinformatics Lab	
BIOL 5318U	Neuroscience Lab	
BIOL 5515U	Selected Topics in Cell and Molecular Biology	
	from Organismal Biology Electives (List 2)	3-4
BIOL 5245U	Comparative Animal Physiology	
BIOL 5246U	Entomology	
BIOL 5247U	Microbial Diversity	
BIOL 5248U	Ornithology	
BIOL 5249U	Parasitology	
BIOL 5255U	Vertebrate Diversity	
	Plant Taxonomy	
BIOL 5256U		
BIOL 5256U BIOL 5257U	Biology of Aging	
BIOL 5257U	Biology of Aging	
BIOL 5257U BIOL 5259U	Biology of Aging Comparative Vertebrate Anatomy	
BIOL 5257U BIOL 5259U BIOL 5265U BIOL 5525U	Biology of Aging Comparative Vertebrate Anatomy Food Microbiology	3-4
BIOL 5257U BIOL 5259U BIOL 5265U BIOL 5525U	Biology of Aging Comparative Vertebrate Anatomy Food Microbiology Selected Topics in Organismic Biology	3-4

Minimum grade of C is required

ITDS 1145 Comparative Arts, though listed under both Fine Arts and Humanities, may be taken only once.

<sup>3</sup> At least 4 of the credit hours in this area must be in a lab science course.

BIOL 5287U	Conservation Genetics	
BIOL 5288U	Plant Ecology	
BIOL 5289U	Environmental Toxicology	
BIOL 5295U	Animal Communication	
BIOL 5535U	Selected Topics in Ecological and Evolutionary Biology	
Select one addition	onal course from List 1-3 or from the following:	3-4
CHEM 3141	Biochemistry I	
GEOL 5275U	Vertebrate Paleontology	
PSYC 4116	Comparative Animal Behavior	
Major Electives T	otal	15-16
<b>General Electives</b>		
Select 7-8 credits	of General Electives	7-8
General Electives	Total	7-8
Total Credit Hours	S	123

## **Program Map**

Course

Title

## Suggested four year course schedule with MATH 0999 or lower

Credit

		Hours
First Year		
Fall		
Institutional Priorities	ITDS 1779 (2), LEAD 1705 (2), PERS 1506 (1; may be repeated with different topic), PERS 1507 (2)	1
Arts, Humanities, and Ethics	Fine Arts	3
Social Science	World Culture	3
BIOL 1715	Professionalism and Careers in Biology (recommended Area F Guided Elective; minimum grade of C)	1
ENGL 1101	English Composition I (minimum grade of C)	3
MATH 1111	College Algebra (minimum grade of C)	3
MATH 0999B or MATH 0999	Support for College Algebra B or Support for College Algebra C	
WIATH 0999		
	Credit Houre	1/
Spring	Credit Hours	14
Spring BIOL 1107K	Principles of Biology I (minimum grade of C)	1 <b>4</b> 4
	Principles of Biology I (minimum grade of	
BIOL 1107K  CHEM 1211	Principles of Biology I (minimum grade of C) Principles of Chemistry I and Principles of Chemistry I Lab	4
BIOL 1107K  CHEM 1211 & 1211L	Principles of Biology I (minimum grade of C)  Principles of Chemistry I and Principles of Chemistry I Lab (minimum grade of C)  English Composition II (minimum grade of	4
BIOL 1107K  CHEM 1211 & 1211L  ENGL 1102	Principles of Biology I (minimum grade of C)  Principles of Chemistry I and Principles of Chemistry I Lab (minimum grade of C)  English Composition II (minimum grade of C)	4
BIOL 1107K  CHEM 1211 & 1211L  ENGL 1102	Principles of Biology I (minimum grade of C)  Principles of Chemistry I and Principles of Chemistry I Lab (minimum grade of C)  English Composition II (minimum grade of C)  Pre-Calculus (minimum grade of C)	4 4 3
BIOL 1107K  CHEM 1211 & 1211L  ENGL 1102  MATH 1113	Principles of Biology I (minimum grade of C)  Principles of Chemistry I and Principles of Chemistry I Lab (minimum grade of C)  English Composition II (minimum grade of C)  Pre-Calculus (minimum grade of C)	4 4 3
BIOL 1107K  CHEM 1211 & 1211L  ENGL 1102  MATH 1113  Second Year	Principles of Biology I (minimum grade of C)  Principles of Chemistry I and Principles of Chemistry I Lab (minimum grade of C)  English Composition II (minimum grade of C)  Pre-Calculus (minimum grade of C)	4 4 3

CHEM 1212		
	Principles of Chemistry II	4
& 1212L	and Principles of Chemistry II Lab (minimum grade of C)	
KINS 1106	Lifetime Wellness	2
or PHED 1205	or Concepts of Fitness	2
STAT 1401	Elementary Statistics (minimum grade of	3
	C)	
	Credit Hours	16
Spring		
General Elective	Elective	2
BIOL 2206K	Organismic Biology I (minimum grade of C)	4
BIOL 2207K	Organismic Biology II (minimum grade of C)	4
Institutional Priorities	COMM 1110 Public Speaking or foreign language 1001, 1002, 2001, 2002	3
PHYS 1111	Introductory Physics I	4
& PHYS 1311	and Introductory Physics I Lab (minimum	
	grade of C)	
	Credit Hours	17
Third Year		
Fall		
BIOL 3215K	Cell Biology (minimum grade of C)	4
BIOL 3216K	Genetics (minimum grade of C)	4
CHEM 3111	Organic Chemistry I	4
& CHEM 3311	and Organic Chemistry I Lab (minimum grade of C)	
PHYS 1112	Introductory Physics II	4
& PHYS 1312	and Introductory Physics II Lab (minimum	
	grade of C)  Credit Hours	16
Spring	Cleuit Hours	10
BIOL 3217K	Ecology (minimum grade of C)	4
General Elective	Elective	1
Program Elective	BIOL Cell/Molecular Senior Elective	4
-	(minimum grade of C)	
CHEM 3112	Organic Chemistry II	
9 CLIEM 2212		4
& CHEM 3312	and Organic Chemistry II Lab (minimum	4
& CHEM 3312		
& CHEM 3312  Fourth Year	and Organic Chemistry II Lab (minimum grade of C)	
	and Organic Chemistry II Lab (minimum grade of C)	
Fourth Year	and Organic Chemistry II Lab (minimum grade of C)  Credit Hours	13
Fourth Year Fall	and Organic Chemistry II Lab (minimum grade of C)  Credit Hours  following:  Undergraduate Research (option #1;	13
Fourth Year Fall Select one of the	and Organic Chemistry II Lab (minimum grade of C)  Credit Hours  following:	13
Fourth Year Fall Select one of the BIOL 4392 BIOL 4698	and Organic Chemistry II Lab (minimum grade of C)  Credit Hours  following:  Undergraduate Research (option #1; minimum grade of C)	13
Fourth Year Fall Select one of the BIOL 4392 BIOL 4698	and Organic Chemistry II Lab (minimum grade of C)  Credit Hours  following:  Undergraduate Research (option #1; minimum grade of C)  Internship (option #2; minimum grade of C)  ours from List 1-3 of Program Elective (option	13
Fourth Year Fall Select one of the BIOL 4392 BIOL 4698 4 additional ho	and Organic Chemistry II Lab (minimum grade of C)  Credit Hours  following:  Undergraduate Research (option #1; minimum grade of C)  Internship (option #2; minimum grade of C)  ours from List 1-3 of Program Elective (option	2-4
Fourth Year Fall Select one of the BIOL 4392 BIOL 4698 4 additional ho #3; minimum g BIOL 4795	and Organic Chemistry II Lab (minimum grade of C)  Credit Hours  following:  Undergraduate Research (option #1; minimum grade of C)  Internship (option #2; minimum grade of C)  ours from List 1-3 of Program Elective (option grade of C)  Capstone Senior Seminar (minimum grade	2-4 2-4
Fourth Year Fall Select one of the BIOL 4392  BIOL 4698 4 additional ho #3; minimum g BIOL 4795  Program Elective  HIST 2111	and Organic Chemistry II Lab (minimum grade of C)  Credit Hours  following:  Undergraduate Research (option #1; minimum grade of C)  Internship (option #2; minimum grade of C)  ours from List 1-3 of Program Elective (option grade of C)  Capstone Senior Seminar (minimum grade of C)  BIOL Organismal Senior Elective (minimum grade of C)  U. S. History to 1865	2-4 2
Fourth Year Fall Select one of the BIOL 4392  BIOL 4698 4 additional ho #3; minimum g BIOL 4795  Program Elective	and Organic Chemistry II Lab (minimum grade of C)  Credit Hours  following:  Undergraduate Research (option #1; minimum grade of C)  Internship (option #2; minimum grade of C)  ours from List 1-3 of Program Elective (option grade of C)  Capstone Senior Seminar (minimum grade of C)  BIOL Organismal Senior Elective (minimum grade of C)	2-4 2 4

POLS 1101	American Government	3
	Credit Hours	15-17
Spring		
Arts, Humanities, and Ethics	Humanities	3
General Elective	Elective	4
BIOL 4393	Research Presentation (minimum grade of C)	2
Program Elective	BIOL Ecology/Evolution Senior Elective (minimum grade of C)	4
Program Elective	BIOL Senior Elective Option (minimum grade of C)	4
	Credit Hours	17
	Total Credit Hours	123-125

MATH 1113 Pre-Calculus has 4 credits, all of which count in Mathematics and Quantitative Skills.

## Suggested four year course schedule with MATH 1111 College Algebra

	- 4-	
Course	Title	Credit Hours
First Year		
Fall		
Institutional	ITDS 1779 (2), LEAD 1705 (2), PERS 1506	1
Priorities	(1; may be repeated with different topic), PERS 1507 (2)	
Arts, Humanities, and Ethics	Fine Arts	3
BIOL 1107K	Principles of Biology I (minimum grade of C)	4
BIOL 1715	Professionalism and Careers in Biology (recommended Area F Guided Elective; minimum grade of C)	1
ENGL 1101	English Composition I (minimum grade of C)	3
MATH 1111	College Algebra (minimum grade of C)	3
	Credit Hours	15
Spring		
BIOL 1108K	Principles of Biology II (minimum grade of C)	4
CHEM 1211	Principles of Chemistry I	4
& 1211L	and Principles of Chemistry I Lab (minimum grade of C)	
ENGL 1102	· · · · · · · · · · · · · · · · · · ·	3
ENGL 1102	English Composition II (minimum grade of C)	3
MATH 1113	Pre-Calculus (minimum grade of C) 1	4
	Credit Hours	15
Second Year		
Fall		
Social Science	Behavioral Science	3
BIOL 2206K	Organismic Biology I (minimum grade of C)	4
CHEM 1212	Principles of Chemistry II	4
& 1212L	and Principles of Chemistry II Lab	
	(minimum grade of C)	

KINS 1106	Lifetime Wellness	2
or PHED 1205 STAT 1401	or Concepts of Fitness Elementary Statistics (minimum grade of	3
31A1 1401	C)	3
	Credit Hours	16
Spring		
Social Science	World Culture	3
General Elective	Elective	2
BIOL 2207K	Organismic Biology II (minimum grade of C)	4
Institutional Priorities	COMM 1110 Public Speaking or foreign language 1001, 1002, 2001, 2002	3
PHYS 1111 & PHYS 1311	Introductory Physics I and Introductory Physics I Lab (minimum grade of C)	4
	Credit Hours	16
Third Year Fall		
BIOL 3215K	Cell Biology (minimum grade of C)	4
BIOL 3216K	Genetics (minimum grade of C)	4
CHEM 3111 & CHEM 3311	Organic Chemistry I and Organic Chemistry I Lab (minimum grade of C)	4
PHYS 1112 & PHYS 1312	Introductory Physics II and Introductory Physics II Lab (minimum grade of C)	4
	Credit Hours	16
Spring		
BIOL 3217K	Ecology (minimum grade of C)	4
General Elective	Elective	1
Program Elective	BIOL Cell/Molecular Senior Elective (minimum grade of C)	4
CHEM 3112 & CHEM 3312	Organic Chemistry II and Organic Chemistry II Lab (minimum grade of C)	4
	Credit Hours	13
Fourth Year		
Fall		
Select one of the	-	2-4
BIOL 4392	Undergraduate Research (option #1; minimum grade of C)	
BIOL 4698	Internship (option #2; minimum grade of C)	
	urs from List 1-3 of PROGRAM ELECTIVE nimum grade of C)	
BIOL 4795	Capstone Senior Seminar (minimum grade of C)	2
Program Elective	BIOL Organismal Senior Elective (minimum grade of C)	4
HIST 2111 or HIST 2112	U. S. History to 1865 or U. S. History since 1865	3
Health and Wellness	PEDS Activity	1
POLS 1101	American Government	3
	Credit Hours	15-17

	Total Credit Hours	123-125
	Credit Hours	17
Progrma Elective	BIOL Senior Elective Option (minimum grade of C)	4
Program Elective	BIOL Ecology/Evolution Senior Elective (minimum grade of C)	4
BIOL 4393	Research Presentation (minimum grade of C)	2
General Elective	Elective	4
Arts, Humanities, and Ethics	Humanities	3
Spring		

MATH 1113 Pre-Calculus has 4 credits, all of which count in Mathematics and Quantitative Skills.

## Suggested four year course schedule with MATH 1113 Pre-Calculus or higher.

i ic oalouluo	or inglien	
Course	Title	Credit Hours
First Year Fall		
Institutional Priorities	ITDS 1779 (2), LEAD 1705 (2), PERS 1506 (1; may be repeated with different topic), PERS 1507 (2)	1
Arts, Humanities and Ethics	Fine Arts	3
BIOL 1107K	Principles of Biology I (minimum grade of C)	4
BIOL 1715	Professionalism and Careers in Biology (recommended Area F Guided Elective; minimum grade of C)	1
CHEM 1211 & 1211L	Principles of Chemistry I and Principles of Chemistry I Lab (minimum grade of C)	4
ENGL 1101	English Composition I (minimum grade of C)	3
	Credit Hours	16
Spring		
BIOL 1108K	Principles of Biology II (minimum grade of C)	4
CHEM 1212 & 1212L	Principles of Chemistry II and Principles of Chemistry II Lab (minimum grade of C)	4
ENGL 1102	English Composition II (minimum grade of C)	3
MATH 1113	Pre-Calculus (minimum grade of C) 1	4
	Credit Hours	15
Second Year		
Fall		
Social Science	Behavioral Science	3
BIOL 2206K	Organismic Biology I (minimum grade of C)	4
CHEM 3111 & CHEM 3311	Organic Chemistry I and Organic Chemistry I Lab (minimum grade of C)	4

KINS 1106 or PHED 1205	Lifetime Wellness or Concepts of Fitness	2
STAT 1401	Elementary Statistics (minimum grade of C)	3
	Credit Hours	16
Spring		
Social Science	World Culture	3
General Elective	Elective	2
BIOL 2207K	Organismic Biology II (minimum grade of C)	4
CHEM 3112 & CHEM 3312	Organic Chemistry II and Organic Chemistry II Lab (minimum grade of C)	4
Institutional Priorities	COMM 1110 Public Speaking or foreign language 1001, 1002, 2001, 2002	3
	Credit Hours	16
Third Year Fall		
Arts, Humanities, and Ethics	Humanities	3
BIOL 3215K	Cell Biology (minimum grade of C)	4
BIOL 3216K	Genetics (minimum grade of C)	4
PHYS 1111 & PHYS 1311	Introductory Physics I and Introductory Physics I Lab (minimum grade of C)	4
	Credit Hours	15
Spring	Credit Hours	13
Program Requirement	Elective (minimum grade of C)	3
BIOL 3217K	Ecology (minimum grade of C)	4
General Elective	Elective	1
Program Elective	BIOL Cell/Molecular Senior Elective (minimum grade of C)	4
PHYS 1112 & PHYS 1312	Introductory Physics II and Introductory Physics II Lab (minimum grade of C)	4
	Credit Hours	16
Fourth Year Fall		
Select one of the	following:	2-4
BIOL 4392	Undergraduate Research (option #1; minimum grade of C)	
BIOL 4698	Internship (option #2; minimum grade of C)	
	urs from List 1-3 of Program Electives nimum grade of C)	
BIOL 4795	Capstone Senior Seminar (minimum grade of C)	2
Program Elective: grade of C)	BIOL Organismal Senior Elective (minimum	4
HIST 2111 or HIST 2112	U. S. History to 1865 or U. S. History since 1865	3
Health and Wellness	PEDS Activity	1
POLS 1101	American Government	3
	Credit Hours	15-17

#### **Spring**

	Total Credit Hours	123-125
	Credit Hours	14
Program Elective	BIOL Senior Elective Option (minimum grade of C)	4
Program Elective	BIOL Ecology/Evolution Senior Elective (minimum grade of C)	4
BIOL 4393	Research Presentation (minimum grade of C)	2
General Elective	Elective	4

MATH 1113 Pre-Calculus has 4 credits, all of which count in Mathematics and Quantitative Skills.

#### **Admission Requirements**

In order to declare a major in biology, a student is required to have an overall GPA of 2.5.

## **Additional Program Requirements**

Students must receive a grade of "C" or better for all classes in Areas D, F, G, and H. Classes with grades lower than a "C" cannot be used to satisfy prerequisite requirements for courses required in the major. To complete a degree in biology, students must obtain a minimum overall grade point average of 2.0 in all science courses applied to graduation.