

BIOLOGY, BS

Course Sequencing

Ecology Track

First Year

	Hours
Fall	
BIOL 1406 Biology I	4
CHEM 1411 General Chemistry I	4
ENGL 1301 Writing and Rhetoric I	3
University Core Curriculum	3
USSE 1201 University Seminar	2
Hours	16

Spring

BIOL 1407 Biology II	4
CHEM 1412 General Chemistry II	4
ENGL 1302 Writing and Rhetoric II	3
University Core Curriculum	3
Hours	14

Summer

MATH 2413 Calculus I	4
University Core Curriculum	3
University Core Curriculum	3
Hours	10

Second Year

Fall

BIOL 2416 Genetics or BIOL 2421 or Microbiology or BIOL 2371 or Principles of Evolution	3-4
CHEM 3411 Organic Chemistry I	4
University Core Curriculum	3
University Core Curriculum	3
Hours	13-14

Spring

BIOL 2416 Genetics or BIOL 2421 or Microbiology or BIOL 2371 or Principles of Evolution	3-4
CHEM 3412 Organic Chemistry II	4
BIOL 2300 Science Communication	3
University Core Curriculum	3
Hours	13-14

Third Year

Fall

BIOL 2416 Genetics or BIOL 2421 or Microbiology or BIOL 2371 or Principles of Evolution	3-4
BIOL 3428 Principles of Ecology	4
BIOL Core Topical Area Requirement	4
Upper Level BIOL Electives	4
Hours	15-16

Spring

MATH 3342 Applied Probability and Statistics	3
BIOL Core Topical Area Requirement	4

Ecology CT Core Advanced Ecology	4
Upper Level BIOL Electives	4
Hours	15

Fourth Year

Fall

BIOL Core Topical Requirement	4
Ecology CT Core Advanced Ecology	4
Upper Level BIOL Electives	4
Hours	12

Spring

Upper Level BIOL Electives	12-14
Hours	12-14
Total Hours	120-125

Marine Biology Track

First Year

	Hours
Fall	
BIOL 1406 Biology I	4
CHEM 1411 General Chemistry I	4
ENGL 1301 Writing and Rhetoric I	3
University Core Curriculum	3
USSE 1201 University Seminar	2
Hours	16

Spring

BIOL 1407 Biology II	4
CHEM 1412 General Chemistry II	4
ENGL 1302 Writing and Rhetoric II	3
University Core Curriculum	3
Hours	14

Summer

MATH 2413 Calculus I	4
University Core Curriculum	3
University Core Curriculum	3
Hours	10

Second Year

Fall

BIOL 2416 Genetics or BIOL 2421 or Microbiology or BIOL 2371 or Principles of Evolution	3-4
CHEM 3411 Organic Chemistry I	4
BIOL 2300 Science Communication	3
University Core Curriculum	3
University Core Curriculum	3
Hours	16-17

Spring

CHEM 3412 Organic Chemistry II	4
BIOL 2416 Genetics or BIOL 2421 or Microbiology or BIOL 2371 or Principles of Evolution	4
University Core Curriculum	3
MATH 3342 Applied Probability and Statistics	3
Hours	14

Third Year**Fall**

BIOL 2416	Genetics	3-4
or BIOL 2421	or Microbiology	
or BIOL 2371	or Principles of Evolution	
BIOL 3428	Principles of Ecology	4
BIOL Core Topical Area Requirement		4
Upper Level BIOL Elective		4
Hours		15-16

Spring

BIOL 4336	Marine Ecology	3
MAR Biol CT Core Topical Requirement		3-4
BIOL Core Topical Area Requirement		4
Hours		10-11

Fourth Year**Fall**

Biol Core Topical Requirement		4
MAR Biol CT Core Topical Requirement		3-4
Upper Level BIOL Elective		4
Math course		3
Hours		14-15

Spring

Upper Level BIOL Electives		11-14
Hours		11-14
Total Hours		120-127

Cell/Molecular Biology Track**First Year****Fall**

BIOL 1406	Biology I	4
CHEM 1411	General Chemistry I	4
ENGL 1301	Writing and Rhetoric I	3
HIST 1301	U.S. History to 1865	3
or HIST 1302	or U.S. History Since 1865	
or HIST 2301	or Texas History	
USSE 1201	University Seminar	2
Hours		16

Spring

BIOL 1407	Biology II	4
CHEM 1412	General Chemistry II	4
ENGL 1302	Writing and Rhetoric II	3
HIST 1301	U.S. History to 1865	3
or HIST 1302	or U.S. History Since 1865	
or HIST 2301	or Texas History	
Hours		14

Summer

MATH 2413	Calculus I	4
Hours		4

Second Year**Fall**

CHEM 3411	Organic Chemistry I	4
POLS 2305	U.S. Government and Politics	3
BIOL 2416	Genetics	4

University Core Curriculum		6
Hours		17

Spring

CHEM 3412	Organic Chemistry II	4
BIOL 2421	Microbiology	4
BIOL 2300	Science Communication	3
POLS 2306	State and Local Government	3
ARTS 1301	Art and Society	3
or ARTS 1303	or Art History Survey I	
or MEDA 1305	or Film and Culture	
	or Understanding and Enjoying Music	
	or Elements of Musical Style	
or MUSI 1306	or Theatre Appreciation	
or MUSI 1307		
or THEA 1310		
Hours		17

Third Year**Fall**

BIOL 3428	Principles of Ecology	4
BIOL 3410	Cell Biology	4
BIOL 2371	Principles of Evolution	3
Biology Requirement		4
Hours		15

Spring

CHEM 4401	Biochemistry I	4
BIOL 3403	Molecular Biology	4
MATH 3342	Applied Probability and Statistics	3
or BIOL 3325	or Biostatistics	
Hours		11

Fourth Year**Fall**

BIOL 4340	Genomics, Proteomics and Bioinformatics	3
ECON 1301	Introduction to Economics	3
or ECON 2301	or Macroeconomics Principles	
or ECON 2302	or Microeconomics Principles	
or PSYC 2301	or General Psychology	
or SOCI 1301	or Introduction to Sociology	
ENGL 2316	Literature and Culture	3
or ENGL 2332	or Literature of the Western World: From	
or ENGL 2333	the Classics to the Renaissance	
or PHIL 1301	or Literature of the Western World: From	
or PHIL 2306	the Enlightenment to the Present	
	or Introduction to Philosophy	
	or Introduction to Ethics	

BIOL 3000:4999		4
BIOL 3000:4999		4
Hours		17

Spring

CHEM 4402	Biochemistry II	4
BIOL 3000:4999		4
BIOL 3000:4999		4
BIOL 3000:4999		4
Hours		16

Total Hours		127
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Microbiology Track**First Year**

Fall		Hours
BIOL 1406	Biology I	4
CHEM 1411	General Chemistry I	4
ENGL 1301	Writing and Rhetoric I	3
HIST 1301	U.S. History to 1865	3
or HIST 1302	or U.S. History Since 1865	
or HIST 2301	or Texas History	
USSE 1201	University Seminar	2
Hours		16

Spring

BIOL 1407	Biology II	4
CHEM 1412	General Chemistry II	4
ENGL 1302	Writing and Rhetoric II	3
HIST 1301	U.S. History to 1865	3
or HIST 1302	or U.S. History Since 1865	
or HIST 2301	or Texas History	
Hours		14

Summer

MATH 2413	Calculus I	4
Hours		4

Second Year**Fall**

CHEM 3411	Organic Chemistry I	4
BIOL 2416	Genetics	3-4
or BIOL 2421	or Microbiology	
or BIOL 2371	or Principles of Evolution	
POLS 2305	U.S. Government and Politics	3
ARTS 1301	Art and Society	3
or ARTS 1303	or Art History Survey I	
or MEDA 1305	or Film and Culture	
	or Understanding and Enjoying Music	
or MUSI 1306	or Elements of Musical Style	
or MUSI 1307	or Theatre Appreciation	
or THEA 1310		
Hours		13-14

Spring

CHEM 3412	Organic Chemistry II	4
BIOL 2416	Genetics	3-4
or BIOL 2421	or Microbiology	
or BIOL 2371	or Principles of Evolution	
MATH 3342	Applied Probability and Statistics	3
or BIOL 3325	or Biostatistics	
ECON 1301	Introduction to Economics	3
or ECON 2301	or Macroeconomics Principles	
or ECON 2302	or Macroeconomics Principles	
or PSYC 2301	or General Psychology	
or SOCI 1301	or Introduction to Sociology	
Hours		13-14

Summer

POLS 2306	State and Local Government	3
Hours		3

Third Year**Fall**

BIOL 3428	Principles of Ecology	4
BIOL 2416	Genetics	3-4
or BIOL 2421	or Microbiology	
or BIOL 2371	or Principles of Evolution	
PHYS 1401	General Physics I	4
or PHYS 2425	or University Physics I	
Biology Requirement		4
Hours		15-16

Spring

BIOL 2300	Science Communication	3
BIOL 4406	Immunology	4
BIOL 3403	Molecular Biology	4
ENGL 2316	Literature and Culture	3
or ENGL 2332	or Literature of the Western World: From the Classics to the Renaissance	
or ENGL 2333	or Literature of the Western World: From the Enlightenment to the Present	
or PHIL 1301	or Introduction to Philosophy	
or PHIL 2306	or Introduction to Ethics	
PHYS 1402	General Physics II	4
or PHYS 2426	or University Physics II	
Hours		18

Fourth Year**Fall**

BIMS 4374	Medical Microbiology	3
CHEM 4401	Biochemistry I	4
BIOL 3410	Cell Biology	4
Biology Requirement		4
Hours		15

Spring

CHEM 4402	Biochemistry II	4
BIMS 3000:4999		4
BIOL 3000:4999		4
BIOL 3000:4999		4
Hours		16

Total Hours 127-130**Organismal-Animal Biology Track****First Year****Fall**

		Hours
BIOL 1406	Biology I	4
CHEM 1411	General Chemistry I	4
ENGL 1301	Writing and Rhetoric I	3
HIST 1301	U.S. History to 1865	3
or HIST 1302	or U.S. History Since 1865	
or HIST 2301	or Texas History	
USSE 1201	University Seminar	2
Hours		16

Spring

BIOL 1407	Biology II	4
CHEM 1412	General Chemistry II	4
ENGL 1302	Writing and Rhetoric II	3

HIST 1301	U.S. History to 1865	3
or HIST 1302	or U.S. History Since 1865	
or HIST 2301	or Texas History	

Hours **14**

Summer

MATH 2413	Calculus I	4
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Hours **4**

Second Year

Fall

CHEM 3411	Organic Chemistry I	4
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BIOL 2416	Genetics	3-4
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or BIOL 2421 or Microbiology
or BIOL 2371 or Principles of Evolution

ENGL 2316	Literature and Culture	3
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or ENGL 2332 or Literature of the Western World: From
the Classics to the Renaissance
or ENGL 2333 or Literature of the Western World: From
the Enlightenment to the Present
or PHIL 1301 or Introduction to Philosophy
or PHIL 2306 or Introduction to Ethics

POLS 2305	U.S. Government and Politics	3
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Hours **13-14**

Spring

CHEM 3412	Organic Chemistry II	3-4
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or BIOL 2421 or Microbiology
or BIOL 2371 or Principles of Evolution

BIOL 2300	Science Communication	3
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BIOL 2416	Genetics	3-4
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or BIOL 2421 or Microbiology
or BIOL 2371 or Principles of Evolution

POLS 2306	State and Local Government	3
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ARTS 1301	Art and Society	3
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or ARTS 1303 or Art History Survey I
or MEDA 1305 or Film and Culture
or Understanding and Enjoying Music
or MUSI 1306 or Elements of Musical Style
or MUSI 1307 or Theatre Appreciation
or THEA 1310

Hours **15-17**

Third Year

Fall

BIOL 3428	Principles of Ecology	4
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BIOL 2416	Genetics	4
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or BIOL 2421 or Microbiology
or BIOL 2371 or Principles of Evolution

BIOL 4315	Animal Behavior	3
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BIOL 3413	Invertebrate Zoology	4
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Hours **15**

Spring

BIOL 3414	Vertebrate Zoology	4
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BIOL 2472	Principles of Botany	4
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Biology Requirement		4
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MATH 3342	Applied Probability and Statistics	3
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or BIOL 3325 or Biostatistics

BIOL 3000:4999		3
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Hours **18**

Fourth Year

Fall

BIOL 3000:4999		3
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ECON 1301	Introduction to Economics	3
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or ECON 2301 or Macroeconomics Principles
or ECON 2302 or Microeconomics Principles
or PSYC 2301 or General Psychology
or SOCI 1301 or Introduction to Sociology

BIOL 3000:4999		3
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BIOL 3000:4999		3
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BIOL 3000:4999		3
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Hours **15**

Spring

Biology Requirement		4
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BIOL 3000:4999		4
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BIOL 3000:4999		4
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BIOL 3000:4999		4
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Hours **16**

Total Hours **126-129**

Integrative Biology Track

First Year

Fall

BIOL 1406	Biology I	4
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CHEM 1411	General Chemistry I	4
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ENGL 1301	Writing and Rhetoric I	3
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HIST 1301	U.S. History to 1865	3
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or HIST 1302 or U.S. History Since 1865
or HIST 2301 or Texas History

USSE 1201	University Seminar	2
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Hours **16**

Spring

BIOL 1407	Biology II	4
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CHEM 1412	General Chemistry II	4
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ENGL 1302	Writing and Rhetoric II	3
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HIST 1301	U.S. History to 1865	3
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or HIST 1302 or U.S. History Since 1865
or HIST 2301 or Texas History

Hours **14**

Summer

MATH 2413	Calculus I	4
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Hours **4**

Second Year

Fall

CHEM 3411	Organic Chemistry I	4
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BIOL 2416	Genetics	3-4
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or BIOL 2421 or Microbiology
or BIOL 2371 or Principles of Evolution

POLS 2305	U.S. Government and Politics	3
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ARTS 1301	Art and Society	3
or ARTS 1303	or Art History Survey I	
or MEDA 1305	or Film and Culture	
	or Understanding and Enjoying Music	
or MUSI 1306	or Elements of Musical Style	
or MUSI 1307	or Theatre Appreciation	
or THEA 1310		

Hours 13-14

Spring

CHEM 3412	Organic Chemistry II	4
BIOL 2416	Genetics	3-4
or BIOL 2421	or Microbiology	
or BIOL 2371	or Principles of Evolution	
MATH 3342	Applied Probability and Statistics	3
or BIOL 3325	or Biostatistics	
POLS 2306	State and Local Government	3
ECON 1301	Introduction to Economics	3
or ECON 2301	or Macroeconomics Principles	
or ECON 2302	or Microeconomics Principles	
or PSYC 2301	or General Psychology	
or SOCI 1301	or Introduction to Sociology	

Hours 16-17

Third Year**Fall**

BIOL 2416	Genetics	3-4
or BIOL 2421	or Microbiology	
or BIOL 2371	or Principles of Evolution	
PHYS 1401	General Physics I	4
or PHYS 2425	or University Physics I	
BIOL 3000:4999		3
Biology Requirement		4

Hours 14-15

Spring

BIOL 2300	Science Communication	3
BIOL 3425	Comparative Vertebrate Anatomy	4
PHYS 1402	General Physics II	4
or PHYS 2426	or University Physics II	
ENGL 2316	Literature and Culture	3
or ENGL 2332	or Literature of the Western World: From	
or ENGL 2333	the Classics to the Renaissance	
or PHIL 1301	or Literature of the Western World: From	
or PHIL 2306	the Enlightenment to the Present	
	or Introduction to Philosophy	
	or Introduction to Ethics	

Hours 14

Fourth Year**Fall**

BIOL 3410	Cell Biology	4
BIOL 3430	Physiology	4
Biology Requirement		4
BIOL 3000:4999		3

Hours 15

Spring

BIOL 3000:4999		4
BIOL 3000:4999		4

BIOL 3000:4999	3
BIOL 3000:4999	3
BIOL 3000:4999	3
Hours	17
Total Hours	123-126