



B.S. Biology: Organismal/Ecology Requirements

The curriculum in each of our tracks provide students with a sound academic foundation in all Formal and Natural Sciences, including Mathematics, Physics, Chemistry and, of course, Biology. Students in our program learn about fundamental biological concepts and principles, scientific thinking and experiment design. Students in our program will also become familiar with how Biology is learned – from molecules, to cells, to whole organisms – as well as their ecology and that of their ecosystems.

Note that all students must achieve 120 undergraduate credits and a minimum 2.0 overall GPA to graduate. The final GPA requirement for Biology: Molecular/Micro/Cell is 2.0. At least four courses in the major program must be at the 300- or 400-level. Students must earn a C or better in BIOL 104.

Required Biology Core Courses – 23 credits

BIOL 104 Principles of Biology (4 credits)
BIOL 106 Introduction to Zoology (4 credits)
BIOL 108 Introduction to Botany (4 credits)
BIOL 216 Genetics (3 credits)
BIOL 224 Applied Environmental Microbiology (3 credits)
BIOL 270 Research Methods (3 credits)
BIOL 380 Senior Seminar (2 credits)

Required Organismal/Ecology Core Courses – 13 to 14 credits

BIOL 244 Ecology (4 credits)

Physiology Course

Choose one course:

BIOL 122 Anatomy & Physiology II (3 credits)
BIOL 232 Plant Physiology (3 credits)
BIOL 235 General Physiology (4 credits)
BIOL 320 Physiological Ecology of Animals (3 credits)

Animal Course

Choose one course:

BIOL 218 Vertebrate Biology (3 credits)
BIOL 302 Entomology (3 credits)
BIOL 308 Ornithology (3 credits)
BIOL 316 Invertebrate Biology (3 credits)
BIOL 342 Herpetology (3 credits)

Plant Course

Choose one course:

BIOL 230 Taxonomy Vascular Plants (3 credits)
BIOL 232 Plant Physiology (3 credits)
BIOL 236 Plant Pathology (3 credits)
BIOL 324 Plant Ecology (3 credits)

Biology: Organismal/Ecology Major Electives – 12 to 13 credits

Select three courses from the following:

BIOL 218 Vertebrate Biology (3 credits)
BIOL 222 Environmental Biology (3 credits)
BIOL 226 Marine Biology (3 credits)
BIOL 230 Taxonomy Vascular Plants (3 credits)
BIOL 232 Plant Physiology (3 credits)
BIOL 236 Plant Pathology (3 credits)
BIOL 235 General Physiology (4 credits)
BIOL 302 Entomology (3 credits)
BIOL 308 Ornithology (3 credits)
BIOL 314 Animal Behavior (3 credits)
BIOL 316 Invertebrate Biology (3 credits)
BIOL 320 Physiological Ecology Animals (3 credits)
BIOL 322 Population and Community Ecology (3 credits)
BIOL 324 Plant Ecology (3 credits)
BIOL 326 Marine Ecology (3 credits)
BIOL 332 Aquatic Ecology (3 credits)
BIOL 334 Medical Parasitology (3 credits)
BIOL 342 Herpetology (3 credits)
BIOL 358 Conservation Biology (3 credits)
BIOL 370 Research (3 credits) or BIOL 390 Internship (3 credits)

Select one from the following:

BIOL, MRSC, or EVSC 200-, 300-, or 400-level (3-4 credits)

Other Required Courses – 11 to 12 credits

Note that CHEM 100 General Chemistry I and CHEM 102 General Chemistry II are included as part of Directed General Education requirements listed below.

CHEM 214 Organic Chemistry I (4 credits)
CHEM 216 Organic Chemistry II (4 credits)
MATH 106 Trigonometry (3 credits) or MATH 115 Precalculus (3 credits) or MATH 181 Calculus (4 credits)

Directed General Education Courses – 12 credits

These courses are required for the major and satisfy the general education requirement "Understanding Science and Technology."

CHEM 100 General Chemistry I – Category C1 (4 credits)
CHEM 102 General Chemistry II – Category C2 (4 credits)
PHYS 40 General Physics I (4 credits) or PHYS 100 Physics I – Category C3 (4 credits)

University Electives – 13 to 16 credits

Program Plan Code: BS_BIOL_ORGE

Effective Date: Spring 2020



B.S. Biology: Organismal/Ecology Check Sheet

Student Name:

Student ID Number:

This check sheet provides a mechanism for students and advisors to keep track of a student's progress in the program. Please refer to the program requirements for more details regarding options.

Note that all students must achieve 120 undergraduate credits and a minimum 2.0 overall GPA to graduate. The final GPA requirement for Biology: Organismal/Ecology is 2.0. At least four courses in the major program must be at the 300- or 400-level. Students must earn a C or better in BIOL 104.

Required Biology Core Courses – 23 credits

BIOL 104 Principles of Biology (<i>must earn a C or better</i>)	4 credits	Grade:
BIOL 106 Introduction to Zoology	4 credits	Grade:
BIOL 108 Introduction to Botany	4 credits	Grade:
BIOL 216 Genetics	3 credits	Grade:
BIOL 224 Applied Environmental Microbiology	3 credits	Grade:
BIOL 270 Research Methods	3 credits	Grade:
BIOL 380 Senior Seminar	2 credits	Grade:
Total Credits	23 total credits	

Required Organismal/Ecology Core Courses – 13 to 14 credits

BIOL 244 Ecology	4 credits	Grade:
Physiology Course:	credits	Grade:
Animal Course:	3 credits	Grade:
Plant Course:	3 credits	Grade:
Total Credits	13-14 total credits	

Biology: Organismal/Ecology Major Electives – 12 to 13 credits

Course 1:	credits	Grade:
Course 2:	credits	Grade:
Course 3:	credits	Grade:
BIOL, MRSC, or EVSC 200-400 level elective	credits	Grade:
Total Credits	12-13 total credits	

Other Required Courses – 11 to 12 credits

CHEM 100, CHEM 102, and PHYS are required and are included as part of Directed General Education.

CHEM 214 Organic Chemistry	4 credits	Grade:
CHEM 216 Organic Chemistry II	4 credits	Grade:
MATH 106 or MATH 115 or MATH 181	3-4 credits	Grade:
Total Credits	11-12 total credits	

Directed General Education Courses

These courses are required for the major and satisfy the general education requirement "Understanding Science and Technology."

CHEM 100 General Chemistry I	4 credits	Grade:
CHEM 102 General Chemistry II	4 credits	Grade:
PHYS 40 General Physics I or PHYS 100 Physics I	4 credits	Grade:

University Electives – 13 to 16 credits

Course 1:	credits	Grade:
Course 2:	credits	Grade:
Course 3:	credits	Grade:
Course 4:	credits	Grade:
Course 5:	credits	Grade:
Course 6:	credits	Grade:
Total Credits	13-16 total credits	

Summary of Graduation Requirements

Total credits from major courses	60-63
Total credits from general education program	44
Total credits from university electives	13-16
Minimum total credits to graduate	120
Minimum overall GPA	2.0
Minimum GPA in major program	2.0

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B.S. Biology: Organismal/Ecology Track

8-Semester Planner

Student Name:

Student ID Number:

Notes: Each semester listed below provides information including course categories, typical credit hours (CH.), and space to add specific course selections. This planner is only a suggested path. Consult with your program advisor regarding your unique plans and interests as you make choices about your schedule.

First Semester Plan

Gen Ed	CHEM 100 (Category C2)	4 CH.	Selection:
Gen Ed	Required MATH course (Category C3)	3 CH.	Selection:
Gen Ed	FYSM 100	3 CH.	Selection: FYSM 100
Major	BIOL 104	4 CH.	Selection:
Total		14 CH.	

Second Semester Plan

Gen Ed	Category A1	3 CH.	Selection:
Gen Ed	Category B	3 CH.	Selection:
Major	CHEM 102	4 CH.	Selection:
Major	BIOL 106	4 CH.	Selection:
Total		14 CH.	

Third Semester Plan

Gen Ed	Category A3	3 CH.	Selection:
Elective	University Elective	3 CH.	Selection:
Major	CHEM 214	4 CH.	Selection:
Major	BIOL 108	4 CH.	Selection:
Major	BIOL 224	3 CH.	Selection:
Total		17 CH.	

Fourth Semester Plan

Gen Ed	Category B	3 CH.	Selection:
Elective	University Elective	3 CH.	Selection:
Major	BIOL Plant or Animal Course or BIOL Elective	3 CH.	Selection:
Major	CHEM 216	4 CH.	Selection:
Major	BIOL 270	3 CH.	Selection:
Total		16 CH.	

Fifth Semester Plan

Gen Ed	Category C1	3 CH.	Selection:
Gen Ed	PHYS 40 <i>or</i> PHYS 100	4 CH.	Selection:
Gen Ed	Category A2	3 CH.	Selection:
Major	BIOL Plant or Animal Course <i>or</i> BIOL Elective	3 CH.	Selection:
Major	BIOL 244	4 CH.	Selection:
Total		17 CH.	

Sixth Semester Plan

Gen Ed	Category A4	3 CH.	Selection:
Gen Ed	Category D	3 CH.	Selection:
Elective	University Elective	3-4 CH.	Selection:
Major	BIOL Physiology Course <i>or</i> BIOL Elective	3 CH.	Selection:
Major	BIOL 216	3-4 CH.	Selection:
Total		15-17 CH.	

Seventh Semester Plan

Gen Ed	Category B	3 CH.	Selection:
Gen Ed	Category D	3 CH.	Selection:
Major	BIOL Plant or Animal Course <i>or</i> BIOL Elective	3 CH.	Selection:
Major	BIOL Plant or Animal Course <i>or</i> BIOL Elective	3 CH.	Selection:
Major	BIOL Elective	3 CH.	Selection:
Total		15 CH.	

Eighth Semester Plan

Gen Ed	Category D	3 CH.	Selection:
Elective	University Elective	3 CH.	Selection:
Major	BIOL Plant or Animal Course <i>or</i> BIOL Elective	3 CH.	Selection:
Major	BIOL Plant or Animal Course <i>or</i> BIOL Elective	3 CH.	Selection:
Major	BIOL 380	2 CH.	Selection:
Total		14 CH.	

Additional Notes:

1. MATH 105 or Math placement score greater than 60 is a prerequisite for MATH 106, MATH 140, and MATH 150.
2. Elective courses should be chosen in consultation with the student's academic advisor.
3. No single course can count toward more than one category. At least four BIOL courses must be at 300-400 level.

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