

Catalog Year 2017-2018

B.S. Biology

Ecology and Conservation

A Major Academic Plan (MAP) illustrates one way to complete a degree in a recommended number of semesters. Below is an example of an efficient and recommended plan, but actual plans will vary by individual student needs. Program requirements are based on Catalog Year. See page two for a detailed summary of Major, General Education, Elective, and university requirements.

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| **Course Subject and Title** | **Cr.** | **Min.**  **Grade** | **\*GE,**  **UU or UM** | **\*\*Sem. Offered** | **Prerequisite** | | **Co Requisite** | |
| Semester One | | | | | | | | |
| GE Objective 1: ENGL 1101 English Composition | 3 | C- | GE |  | Appropriate placement score | |  | |
| GE Objective 5: BIOL 1101, 1101L Biology I | 4 |  | GE | F,S,Su | MATH 1108 | MATH 1108 | | |
| GE Objective 5: CHEM 1111, 1111L General Chemistry I | 5 |  | GE | F,S,Su | MATH 1143 or 1147 | |  | |
| GE Objective 3: MATH 1160 Applied Calculus | 3 |  | GE | F,S,Su | MATH 1143 or 1147 | |  | |
| Total | 15 |  |  |  |  | |  | |
| Semester Two | | | | | | | | |
| GE Objective 1: ENGL 1102 Critical Reading and Writing | 3 | C- | GE |  | ENGL 1101 or equivalent | |  | |
| BIOL 1102, 1102L Biology II | 4 |  |  | F,S | BIOL 1101 | |  | |
| CHEM 1112, 1112L General Chemistry II | 4 |  |  | F,S,Su | CHEM 1111/L, MATH 1143 or 1147 | |  | |
| GE Objective 4: | 3 |  | GE |  |  | |  | |
| Electives | 1 |  |  |  |  | |  | |
| Total | 15 |  |  |  |  | |  | |
| Semester Three | | | | | | | | |
| BIOL 2209, 2209L General Ecology | 4 |  |  | F,S | BIOL 1101 and BIOL 1102 | |  | |
| CHEM 3301, 3303 Organic Chem I, Lab | 4 |  | UM | F | CHEM 1112/L or permission of instructor | | |  |
| GE Objective 2: COMM 1101 Principles of Speech | 3 |  | GE |  |  | |  | |
| GE Objective 6: | 3 |  | GE |  |  | |  | |
| Electives | 1 |  |  |  |  | |  | |
| Total | 15 |  |  |  |  | |  | |
| Semester Four |  |  |  |  |  | |  | |
| BIOL 2206, 2207 Cell Biology, Lab | 4 |  |  | F,S | BIOL 1101, 1102, CHEM 1111, 1112 | | CHEM 1112 | |
| Ecology Elective (Upper Division) | 5 |  | UM |  |  | |  | |
| CHEM 3302, 3304 Org Chem II, Lab | 4 |  | UM | S | CHEM 3301 or permission of instructor | | |  |
| GE Objective 7 or 8 | 3 |  | GE |  |  | |  | |
| Total | 16 |  |  |  |  | |  | |
| Semester Five |  |  |  |  |  | |  | |
| BIOL 3358 Genetics | 3 |  | UM | F,S | BIOL 2206 or BIOL 2235 | |  | |
| MATH 3350 Statistical Methods | 3 |  | UM | F,S | MATH 1160 or 1170 | |  | |
| BIOL 3316 Biometry Lab | 1 |  | UM | F,S | MATH 3350 | | MATH 3350 | |
| Biology Elective | 4 |  |  |  |  | |  | |
| GE Objective 6: | 3 |  | GE |  |  | |  | |
| Elective | 1 |  |  |  |  | |  | |
| Total | 15 |  |  |  |  | |  | |
| Semester Six |  |  |  |  |  | |  | |
| BIOL 4417 Organic Evolution | 3 |  | UM | F,S | BIOL 3358 and BIOL 2209 | |  | |
| Diversity or Evolutionary Elective (Upper Division) | 4 |  | UM |  |  | |  | |
| GE Objective 9: | 3 |  | GE |  |  | |  | |
| Elective | 5 |  |  |  |  | |  | |
| Total | 15 |  |  |  |  | |  | |
| Semester Seven |  |  |  |  |  | |  | |
| Ecology Elective | 4 |  |  |  |  | |  | |
| BIOL 4491 Senior Seminar | 1 |  | UM | F,S | Senior status or permission of department | | |  |
| PHYS 1111, 1113 General Physics I, Lab | 4 |  |  | F | MATH 1143 or 1147 | |  | |
| Diversity or Evolutionary Elective | 4 |  |  |  |  | |  | |
| Electives | 2 |  |  |  |  | |  | |
| Total | 14 |  |  |  |  | |  | |
| Semester Eight |  |  |  |  |  | |  | |
| BIOL 4489 Field Ecology | 4 |  | UM | S | BIOL 2209 and a course in statistics | | |  |
| OR BIOL 4493 Senior Thesis |  |  |  | F,S | Senior status, permission of department | | |  |
| BIOL 4432 Biochemistry | 3 |  | UM | F,S | BIOL 1101 and CHEM 3301 | |  | |
| BIOL 4492 Senior Seminar | 1 |  | UM | F,S | Senior status or permission of department | | |  |
| Electives | 4 |  |  |  |  | |  | |
| GE Objective 4: | 3 |  | GE |  |  | |  | |
| Total | 15 |  |  |  |  | |  | |
| \*GE=General Education Objective, UU=Upper Division University, UM= Upper Division Major  \*\*See Course Schedule section of Course Policies page in the e-catalog (or input F, S, Su, etc.) | | | | | | | | |

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| **2017-2018 Major Requirements** | **CR** | **2017-2018 GENERAL EDUCATION OBJECTIVES**  **Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9** | | | | | | **36 cr. min** |
| **MAJOR REQUIREMENTS** | **66** | 1. Written English (6 cr. min) ENGL 1101 | | | | | | 3 |
| **ECOLOGY CONSERVATION BIOLOGY REQUIREMENTS** |  | ENGL 1102 | | | | | | 3 |
| **CORE REQUIREMENTS** | **36** | 2. Spoken English (3 cr. min) COMM 1101 | | | | | | 3 |
| BIOL 1101, 1101L Biology I, Lab (4 credits counted in Objective 5) | | 3. Mathematics (3 cr. min) MATH 1160 | | | | | | 3 |
| BIOL 1102,1102L Biology II, Lab | 4 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** | | | | | | |
| BIOL 2206, 2207 Cell Biology and Lab | 4 |  | | | | | |  |
| BIOL 2209, 2209L General Ecology, Lab | 4 |  | | | | | |  |
| BIOL 3316 Biometry Lab | 1 | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** | | | | | | |
| BIOL 3358 Genetics | 3 | CHEM 1111, 1111L General Chem I, Lab | | | | | | 5 |
| BIOL 4417 Organic Evolution | 3 | BIOL 1101, 1101L Biology I, Lab | | | | | | 4 |
| BIOL 4491/4492/4496 Seminars | 2 |  | | | | | |  |
| MATH 1160 Applied Calculus (3 credits counted in Objective 3) | | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** | | | | | | |
| MATH 3350 Statistical Methods | 3 |  | | | | | |  |
| CHEM 1111, 1111L General Chem I, Lab (5 cr. counted in Objective 5) | |  | | | | | |  |
| CHEM 1112, 1112L General Chemistry II, Lab | 4 | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** | | | | | | |
| CHEM 3301/3303 Organic Chemistry I, Lab | 4 | 7. Critical Thinking | | | | | |  |
| PHYS 1111, 1113 General Physics I, Lab | 4 | 8. Information Literacy | | | | | |
| **\*CHOOSE Two Courses (minimum of 7 cr):** | **7** | 9. Cultural Diversity **(1 course; 3 cr. min)** | | | | | | |
| PHYS 1112,1114 Gen Phys II, Lab 4 cr  BIOL 4432 Biochemistry 3 cr  CHEM 3302,3304 Organic Chem II, Lab 4cr |  |  | | | | | |  |
| **Field Research (Select one course from the following)** | **4** | General Education Elective to reach 36 cr. min. **(if necessary)** | | | | | | |
| BIOL 4489 Field Ecology 4 cr. or BIOL 4493 Senior Thesis 4 cr. | |  | | | | | |  |
| **Ecology Electives (Select a minimum of 8 cr.)** | **8** | Total GE | | | | | | 39 |
| BIOL 1192 Careers in Ecology & Conservation Biol; BIOL 3337 Conservation Biol | | GE Objectives Courses:  [*2017-2018 General Education Requirements (PDF)*](http://www.isu.edu/media/libraries/central-academic-advising/pdf-files/gened-requirements/2017-2018-General-Education-Requirements.pdf) | | | | | | |
| BIOL 4408, 4408L Plant Ecology 3 cr, Lab; BIOL 4416, 4416L PopEcology, Lab | |
| BIOL 4459, 4459L Fish Ecology, Lab; BIOL 4462, 4462L Freshwater Ecology, Lab | |  | | | | |  | |
| BIOL 4418 Ecological Topics; Biol 4442 Plant-Animal Interactions | | **MAP Credit Summary** | | | | | **CR** | |
| BIOL 4490 Ecosystem Ecology & Global Change |  | Major | | | | | 66 | |
| **Diversity or Evolutionary Courses** | | General Education | | | | | 39 | |
| **(Select a minimum of 8 cr.)** | **8** | Free Electives to reach 120 credits | | | | | 15 | |
| BIOL 2213 Fall Flora; BIOL 2214 Spring Flora; BIOL 3310, 3310L Invert Zoo, Lab; | | TOTAL | | | | | 120 | |
| BIOL 4406, 4406L Plant Div. & Evol, Lab; BIOL 4412, 4412L Sys. Botany, Lab; | |  | | | | | | |
| BIOL 4423 General Parasitology; BIOL 4426, 4426L Herpetology, Lab; | |
| BIOL 4427, 4427L Ichthyology, Lab; BIOL 4438 Ornithology; | | **Graduation Requirement Minimum Credit Checklist** | | | **Confirmed** | | | |
| BIOL 4441, 4441L Mammalogy, Lab; BIOL 4495 Animal Behavior; | | Minimum 36 cr. General Education Objectives (15 cr. AAS) | | | x | | | |
| BIOL 4431, 4431L Gen. Entomology; BIOL 4434, 4434L Microbiol. Diversity, Lab | | Minimum 16 cr. Upper Division in Major (0 cr. Associate) | | |  | x | | |
| **Biology Electives (any Biology course)** | **3** | Minimum 36 cr. Upper Division Overall (0 cr. Associate) | | |  | x | | |
|  |  | Minimum of 120 cr. Total (60 cr. Associate) | | |  | x | | |
|  |  |  | |  | | | | |
| **Advising Notes** | | ***MAP Completion Status (for internal use only)*** | | | | | | |
| BIOL 2235 and 2235L can substitute for BIOL 2206 and BIOL 2207 in the ECB option. | |  | *Date* | | | | | |
|  | | *Department:* | 10.10.2017 JL | | | | | |
|  | | CAA/COT | 9.11.2017 jh | | | | | |
|  | | *Registrar:* |  | | | | | |
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Form Revised: 4.14.2017