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| **Catalog Year 2019-2020**  B.S., Biology  Ecology and Conservation | ***(For internal use only)***  *No change*  *UCC proposal* |

A Major Academic Plan (MAP) is one way to complete a degree in a set number of semesters. The *example* below is an efficient strategy only. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Elective, and university requirements (see pg.2) are based on Catalog Year.

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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 Writing and Rhetoric I | 3 | C- | GE | F, S, Su | 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 | C- | GE | F,S, Su | MATH 1143 or 1147 |  | | | | | |
| Total | 15 |  |  |  |  |  | | | | | |
| Semester Two | | | | | | | | | | | |
| GE Objective 1: ENGL 1102 Writing and Rhetoric II | 3 | C- | GE | F, S, Su | 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 | F,S, Su |  |  | | | | | |
| Free 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 | F,S, Su |  |  | | | | | |
| GE Objective 6: | 3 |  | GE | F,S, Su |  |  | | | | | |
| Free 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) | 4 |  | UM |  | See Catalog |  | | | | | |
| CHEM 3302, 3304 Org Chem II, Lab | 4 |  | UM | S | CHEM 3301 or permission of instructor | | | |  | | |
| GE Objective 7 or 8 | 3 |  | GE | F,S, Su |  |  | | | | | |
| Total | 15 |  |  |  |  |  | | | | | |
| 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 in grade C- |  | | | | | |
| BIOL 3316 Biometry Lab | 1 |  | UM | F,S | MATH 3350 | MATH 3350 | | | | | |
| Biology Elective | 3 |  |  |  | See Catalog |  | | | | | |
| GE Objective 6: | 3 |  | GE | F,S, Su |  |  | | | | | |
| Free Electives | 2 |  |  |  |  |  | | | | | |
| 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 |  | See Catalog |  | | | | | |
| GE Objective 9: | 3 |  | GE | F,S, Su |  |  | | | | | |
| Free Electives | 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 |  |  |  | See Catalog |  | | | | | |
| Free Electives | 2 |  |  |  |  |  | | | | | |
| Total | 15 |  |  |  |  |  | | | | | |
| 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 | | | | | |  |
| GE Objective 4: | 3 |  | GE | F,S, Su |  |  | | | | | |
| Free Electives | 4 |  |  |  |  |  | | | | | |
| 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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| B.S., Biology, Ecology and Conservation | | | | | | | | |
| **2019-2020 Major Requirements** | **CR** | **2018-2019 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 |
| **CORE REQUIREMENTS** | **36** | ENGL 1102 | | | | | | 3 |
| BIOL 1101, 1101L Biology I, Lab (Counted in GE Objective 5) | | 2. Oral Communication (3 cr. min) COMM 1101 | | | | | | 3 |
| BIOL 1102,1102L Biology II, Lab | 4 | 3. Mathematics (3 cr. min) MATH 1160 | | | | | |  |
| BIOL 2206, 2207 Cell Biology and Lab | 4 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** | | | | | | |
| BIOL 2209, 2209L General Ecology, Lab | 4 |  | | | | | |  |
| BIOL 3316 Biometry Lab | 1 |  | | | | | |  |
| BIOL 3358 Genetics | 3 | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** | | | | | | |
| BIOL 4417 Organic Evolution | 3 | CHEM 1111, 1111L General Chem I, Lab | | | | | | 5 |
| BIOL 4491/4492/4496 Seminars | 2 | BIOL 1101, 1101L Biology I, Lab | | | | | | 4 |
| MATH 1160 Applied Calculus (Counted in GE Objective 3) | |  | | | | | |  |
| MATH 3350 Statistical Methods | 3 | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** | | | | | | |
| CHEM 1111, 1111L General Chem I, Lab (Counted in GE Objective 5) | |  | | | | | |  |
| CHEM 1112, 1112L General Chemistry II, Lab | 4 |  | | | | | |  |
| CHEM 3301/3303 Organic Chemistry I, Lab | 4 | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** | | | | | | |
| PHYS 1111, 1113 General Physics I, Lab | 4 | 7. Critical Thinking | |  | | | |  |
| **\*CHOOSE Two Courses (minimum of 7 cr):** | **7** | 8. Information Literacy | |
| PHYS 1112, 1114 General Physics II and Lab | 4 | 9. Cultural Diversity **(1 course; 3 cr. min)** | | | | | | |
| BIOL 4432 Biochemistry | 3 |  | | | | | |  |
| CHEM 3302, 3304 Organic Chemistry II and Lab | 4 | General Education Elective to reach 36 cr. min. **(if necessary)** | | | | | | |
| **Field Research (Select one course from the following)** | **4** |  | | | | | |  |
| 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 | | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/)  *http://coursecat.isu.edu/undergraduate/programs/* | | | | | | |
| BIOL 4408, 4408L Plant Ecology 3 cr, Lab; BIOL 4416, 4416L Pop Ecology, 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** | Upper Division Free Electives to reach 36 credits | | | | | 0 | |
| BIOL 2213 Fall Flora; BIOL 2214 Spring Flora; BIOL 3310, 3310L Invert Zoo, Lab; | | Free Electives to reach 120 credits | | | | | 15 | |
| BIOL 4406, 4406L Plant Div. & Evol, Lab; BIOL 4412, 4412L Sys. Botany, Lab; | | TOTAL | | | | | 120 | |
| 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 Mammology, 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 15 cr. Upper Division in Major (0 cr. Associate) | | | x | | | |
| **Biology Electives** | **3** | Minimum 36 cr. Upper Division Overall (0 cr. Associate) | | |  | x | | |
| Students must fulfill a minimum of an additional 3 credits of biology electives for | | Minimum of 120 cr. Total (60 cr. Associate) | | |  | x | | |
| which they can select any course in Biology, including Independent Problems | |  | | | | | | |
| ([BIOL 4481](https://next.coursecat.isu.edu/search/?P=BIOL%204481) and/or [BIOL 4482](https://next.coursecat.isu.edu/search/?P=BIOL%204482)) and AMOEBA (Mentored Research Alliance, | | ***MAP Completion Status (for internal use only)*** | | | | | | |
| [BIOL 2280](https://next.coursecat.isu.edu/search/?P=BIOL%202280) and/or [BIOL 4480](https://next.coursecat.isu.edu/search/?P=BIOL%204480)). | |  | *Date* | | | | | |
| **Advising Notes** | | *Department:* |  | | | | | |
| BIOL 2235 and 2235L can substitute for BIOL 2206 and BIOL 2207 in the | | *CAA or COT:* |  | | | | | |
| ECB option. | | *Registrar:* |  | | | | | |
|  | | **Complete College American Momentum Year**  **Math and English course in first year-Specific GE MATH course identified**  **9 credits in the Major area in first year**  **15 credits each semester (or 30 in academic year)**  **Milestone courses** | | | | | | |
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Form Revised 9.10.2019