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| **Catalog Year 2020-2021**  BS Biology  Ecology & Conservation Biology Concentration (ECB) | ***(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 only one strategy. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Electives, 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 English Composition | 3 | C- | GE | F,S, Su | Appropriate placement score | |  | |
| GE Objective 5: BIOL 1101/L Biology I, Lab | 4 |  | GE | F,S, Su | MATH 1108 | MATH 1108 | | |
| GE Objective 5: CHEM 1111/L General Chemistry I, Lab | 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 Critical Reading and Writing | 3 | C- | GE | F,S, Su | ENGL 1101 or equivalent | |  | |
| BIOL 1102/L Biology II, Lab | 4 |  |  | F,S | BIOL 1101 | |  | |
| CHEM 1112/L General Chemistry II, Lab | 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/L 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 | 2 |  |  |  |  | |  | |
| Total | 16 |  |  |  |  | |  | |
| 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 | 3 |  |  |  |  | |  | |
| Total | 14 |  |  |  |  | |  | |
| \*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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| **2020-2021 Major Requirements** | **CR** | **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/L Biology I, Lab (4 credits counted in Objective 5) | | 3. Mathematics (3 cr. min) MATH 1160 | | | | 3 |
| BIOL 1102/L Biology II, Lab | 4 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** | | | | |
| BIOL 2206, 2207 Cell Biology, 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/L General Chem I, Lab | | | | 5 |
| BIOL 4417 Organic Evolution | 3 | BIOL 1101/L 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/L General Chem I, Lab (5 cr. counted in Objective 5) | |  | | | |  |
| CHEM 1112/L 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 General Physics II, Lab | 4 |  | | | |  |
| BIOL 4432 Biochemistry | 3 | General Education Elective to reach 36 cr. min. **(if necessary)** | | | | |
| CHEM 3302, 3304 Organic Chemistry II, Lab | 4 |  | | | |  |
| **Field Research (Select one course from the following)** | **4** | **Total GE** | | | | **39** |
| BIOL 4489 Field Ecology 4 cr. or BIOL 4493 Senior Thesis 4 cr. | | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/)  *http://coursecat.isu.edu/undergraduate/programs/* | | | | |
| **Ecology Electives (Select a minimum of 8 cr.)** | **8** |
| BIOL 1192 Careers in Ecology & Conservation Biol; BIOL 3337 Conservation Biol | |  | | | | |
| BIOL 4408, 4408L Plant Ecology 3 cr, Lab; BIOL 4416/L Pop Ecology, Lab | |
| BIOL 4459/L Fish Ecology, Lab; BIOL 4462/L 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/L Invert Zoo, Lab; | | Free Electives to reach 120 credits | | | | 15 |
| BIOL 4406/L Plant Div. & Evol, Lab; BIOL 4412/L Sys. Botany, Lab; | | TOTAL | | | | 120 |
| BIOL 4423 General Parasitology; BIOL 4426/L Herpetology, Lab; | |  | | | | |
| BIOL 4427/L Ichthyology, Lab; BIOL 4438 Ornithology; | |
| BIOL 4441/L Mammology, Lab; BIOL 4495 Animal Behavior; | |
| BIOL 4431/L Gen. Entomology, Lab; BIOL 4434/L Microbiol. Diversity, Lab | |
| **Biology Electives** | **3** | **Graduation Requirement Minimum Credit Checklist** | | | **Confirmed** | |
| Students must fulfill a minimum of an additional 3 credits of biology electives for 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, [BIOL 2280](https://next.coursecat.isu.edu/search/?P=BIOL%202280) and/or [BIOL 4480](https://next.coursecat.isu.edu/search/?P=BIOL%204480)). | | Minimum 36 cr. General Education Objectives (15 cr. AAS) | | | Yes | |
| Minimum 15 cr. Upper Division in Major (0 cr. Associate) | | | Yes | |
| Minimum 36 cr. Upper Division Overall (0 cr. Associate) | | | Yes | |
| Minimum of 120 cr. Total (60 cr. Associate) | | | Yes | |
|  |  |  | |  | | |
| **Advising Notes** | | ***MAP Completion Status (for internal use only)*** | | | | |
| BIOL 2235/L can substitute for BIOL 2206 and BIOL 2207 in the ECB option. | |  | *Date* | | | |
|  | |  |  | | | |
|  | | *CAA or COT:* |  | | | |
|  | |  |  | | | |
|  | | **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 | | | | |

BS Biology, Ecology & Conservation Biology Concentration Page 2