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| **Catalog Year 2022-2023**  BA Biology  Natural History Concentration (NatHist) | ***(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 3: MATH 1160  or MATH 1153 Statistics | 3 |  | GE | F, S, SU | MATH 1143 or equivalent  Math 1108 or equivalent | |  | | |
| GE Objective 5: BIOL 1101/L Biology I, Lab | 4 |  | GE | F, S, SU | Placement in MATH 1108 | | MATH 1108 | | |
| Free Electives | 5 |  |  |  |  | |  | | |
| 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/L | |  | | |
| GE Objective 4: | 3 |  | GE | F, S, SU |  | |  | | |
| GE Objective 6: | 3 |  | GE | F, S, SU |  | |  | | |
| Free Electives | 2 |  |  |  |  | |  | | |
| Total | 15 |  |  |  |  | |  | | |
| Semester Three | | | | | | | | | |
| BIOL 2209/L General Ecology, Lab | 4 |  |  | F, S | BIOL 1101/L, BIOL 1102/L | | |  | |
| GE Objective 5: CHEM 1111/L General Chemistry, Lab | 5 |  | GE | F, S, SU | MATH 1143 or 1147 or equivalent | |  | | |
| GE Objective 2: COMM 1101 Principles of Speech | 3 |  | GE | F, S, SU |  | |  | | |
| Free Electives | 3 |  |  |  |  | |  | | |
| Total | 15 |  |  |  |  | |  | | |
| Semester Four |  |  |  |  |  | |  | | |
| BIOL 2206, 2207 Cell Biology, Lab | 4 |  |  | F, S | BIOL 1101/L,BIOL 1102/L, CHEM 1111/L | CHEM 1112/L | | | |
| Plant Biology course | 3 - 4 |  |  |  |  | |  | | |
| GE Objective 4: | 3 |  | GE | F, S, SU |  | |  | | |
| CHEM 1112/L General Chemistry II, Lab | 4 |  |  | F, S, SU | CHEM 1111/L and MATH 1143 or 1147 | | | |  |
| Free Electives | 0 - 1 |  |  |  |  | | | |  |
| Total | 15 |  |  |  |  | |  | | |
| Semester Five |  |  |  |  |  | |  | | |
| BIOL 3358 Genetics | 3 |  | UM | F, S | BIOL 2206/2207 or BIOL 2235/L | |  | | |
| Biology Electives | 3 |  |  |  |  | |  | | |
| Biology Electives | 3 |  |  |  |  | |  | | |
| Animal Biology (Upper Division) | 3 - 4 |  | UM |  |  | |  | | |
| Upper Division Free Electives | 0 - 1 |  | UU |  |  | |  | | |
| Free Electives | 3 |  |  |  |  | |  | | |
| Total | 16 |  |  |  |  | |  | | |
| Semester Six |  |  |  |  |  | |  | | |
| BIOL 4417 Organic Evolution | 3 |  | UM | F, S | BIOL 3358, BIOL 2209/L | |  | | |
| Animal Biology course (Upper Division) | 4 |  | UM |  |  | |  | | |
| BIOL 4491 Seminar | 1 |  |  | F, S, SU | Senior standing, or permission of department | | | |  |
| Upper Division Free Electives | 6 |  | UU |  |  | |  | | |
| Free Electives | 1 |  |  |  |  | |  | | |
| Total | 15 |  |  |  |  | |  | | |
| Semester Seven |  |  |  |  |  | |  | | |
| Plant Biology course (Upper Division) | 4 |  | UM |  |  | |  | | |
| Biology Electives | 2 - 4 |  |  |  |  | |  | | |
| GE Objective 6: | 3 |  | GE | F, S, SU |  | |  | | |
| GE Objective 9: | 3 |  | GE | F, S, SU |  | |  | | |
| Free Electives | 0 - 2 |  |  |  |  | |  | | |
| Total | 14 |  |  |  |  | |  | | |
| Semester Eight |  |  |  |  |  | |  | | |
| BIOL 4492 Seminar | 1 |  | UM | F, S, SU | Senior standing or permission of department | | | |  |
| GE Objective 7 or 8 | 3 |  | GE | F, S, SU |  | |  | | |
| Upper Division Free Electives | 11 |  | UU |  |  | |  | | |
| 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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| **2022-2023 Major Requirements** | **CR** | **GENERAL EDUCATION OBJECTIVES**  **Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9** | | | | | | **36 cr. min** |
| **MAJOR REQUIREMENTS** | 46-50 | 1. Written English (6 cr. min) ENGL 1101 | | | | | | 3 |
| **Core Requirements** | **24** | ENGL 1102 | | | | | | 3 |
| BIOL 1101/L Biology I, Lab (4 credits counted in Objective 5) | | 2. Spoken English (3 cr. min) COMM 1101 | | | | | | 3 |
| BIOL 1102/L Biology II, Lab | 4 | 3. Mathematics (3 cr. min) MATH 1160 or 1153 | | | | | | 3 |
| BIOL 2206, 2207 Cell Biology, Lab | 4 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** | | | | | | |
| BIOL 2209/L General Ecology, Lab | 4 |  | | | | | |  |
| BIOL 3358 Genetics | 3 |  | | | | | |  |
| BIOL 4417 Organic Evolution | 3 | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** | | | | | | |
| BIOL 4491/4492 Seminars | 2 | BIOL 1101/L Biology I, Lab | | | | | | 4 |
|  |  | CHEM 1111/L General Chemistry I, Lab | | | | | | 5 |
| MATH 1160 Applied Calculus or MATH 1153 (3 credits counted in Objective 3) | |  | | | | | |  |
| CHEM 1111/L General Chemistry I, Lab (5 credits counted in Objective 5) | | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** | | | | | | |
| CHEM 1112/L General Chemistry II, Lab | 4 |  | | | | | |  |
|  |  |  | | | | | |  |
| **Diversity, Ecology, Evolution Courses** |  | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** | | | | | | |
|  |  | 7. Critical Thinking | | | | | |  |
| **Animal Biology (2 courses)** | **7 - 8** | 8. Information Literacy | | | | | |
| BIOL 3303/L Principles of Animal Physiology, Lab | 4 | 9. Cultural Diversity **(1 course; 3 cr. min)** | | | | | | |
| BIOL 3310/L Invertebrate Zoology , Lab | 4 |  | | | | | |  |
| BIOL 3314/L Comparative Vertebrate Anatomy, Lab | 4 | General Education Elective to reach 36 cr. min. **(if necessary)** | | | | | | |
| BIOL 4423 General Parasitology | 3 |  | | | | | |  |
| BIOL 4426/L Herpetology , Lab | 4 | Total GE | | | | | | 39 |
| BIOL 4427/L Ichthyology , Lab | 4 | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/) | | | | | | |
| BIOL 4438 Ornithology | 4 |
| BIOL 4431/L General Entomology , Lab | 4 |  | | | | |  | |
| BIOL 4441/L Mammalogy , Lab | 4 | **MAP Credit Summary** | | | | | **CR** | |
| BIOL 4459/L Fish Ecology , Lab | 4 | Major | | | | | 46-50 | |
| BIOL 4462/L Freshwater Ecology , Lab | 4 | General Education | | | | | 39 | |
| BIOL 4495 Animal Behavior | 4 | Upper Division Free Electives to reach 36 credits | | | | | 17-18 | |
| **Plant Biology (2 courses)** | **7 - 8** | Free Electives to reach 120 credits | | | | | 14-17 | |
| BIOL 2213 Fall Flora | 2 | TOTAL | | | | | 120 | |
| BIOL 2214 Spring Flora | 2 |  | | | | | | |
| BIOL 4412/L Systematic Botany | 4 |  | | | |  | | |
| BIOL 4404/L Plant Physiology, Lab^ | 4 | **Graduation Requirement Minimum Credit Checklist** | | | | **Confirmed** | | |
| BIOL 4405/L Plant Form Function and Lab | 4 | Minimum 36 cr. General Education Objectives (15 cr. AAS) | | | Yes | | | |
| BIOL 4408/L Plant Ecology, Lab^ | 4 | Minimum 15 cr. Upper Division in Major (0 cr. Associate) | | | Yes | | | |
| BIOL 4442 Plant-Animal Interactions | 3 | Minimum 36 cr. Upper Division Overall (0 cr. Associate) | | | Yes | | | |
| **Biology Electives (3 courses)** | **8 - 10** | Minimum of 120 cr. Total (60 cr. Associate) | |  | Yes | | | |
| Consult with Biology advisor for appropriate Biology electives. |  |  | |  | | | | |
| **Suggested Supporting Courses from Other Departments** | | ***MAP Completion Status (for internal use only)*** | | | | | | |
| GEOL 1100 The Dynamic Earth; GEOL 1101 Physical Geology;  MUSE 4411 Introduction to Museum Studies;  HPSS 3386 Outdoor Leadership;  HPSS 4440 Survey of Outdoor Education Lit.;  HPSS 4445 Methods of Teaching Outdoor Activities and Practicum | |  | *Date* | | | | | |
| *Department:* |  | | | | | |
| *CAA or COT:* |  | | | | | |
| *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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| **Advising Notes** | |
| ^ includes optional 1-credit lab | |

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