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| **Catalog Year 2019-2020**B.A. BiologyBiology Education | ***(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 3: MATH 1160 Applied Calculus | 3 |  | GE | F, S, SU | MATH 1143 or 1147 or equivalent |  |
| GE Objective 5: CHEM 1111 & 1111L General Chemistry I | 5 |  | GE | F, S, SU | MATH 1143 or 1147 or equivalent |  |
| GE Objective 5: BIOL 1101, 1101L Biology I & Lab | 4 |  | GE | F, S, SU | MATH 1108 | MATH 1108 |
|  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 & Lab | 4 |  |  | F, S | BIOL 1101 |  |
| CHEM 1112 & 1112L General Chemistry II & Lab | 4 |  |  | F, S, SU | CHEM 1111 & 1111L and MATH 1143 or 1147  |  |
| GE Objective 4: | 3 |  | GE |  |  |  |
| Free Elective | 1 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Three |
| BIOL 2209 & 2209L General Ecology & Lab | 4 |  |  | F, S | BIOL 1101 & 1101L and BIOL 1102 & 1102L |  |
| BIOL 2221 & 2221L Introduction to Microbiology & Lab | 4 |  |  | F, S | CEHM 1101 or 1111 & 1111L and BIOL 1101 |  |
| Biology Elective (animal biology) Upper Division | 3-5 |  | UM |  |  |  |
| GE Objective 2: COMM 1101 Principles of Speech | 3 |  | GE | F, S, SU |  |  |
| Free Electives | 0-2 |  |  |  |  |  |
|  Total | 16 |  |  |  |  |  |
| Semester Four |  |  |  |  |  |  |
| BIOL 2206 & 2207 Cell Biology & Lab | 4 |  |  | F, S | BIOL 1101 & 1102, CHEM 1111 & 1111L | CHEM 1112 & 1112L |
| Biology Elective (plant biology) | 2-4 |  |  |  |  |  |
| GE Objective 6: | 3 |  | GE |  |  |  |
| Upper Division Electives | 4 |  | UU |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Five |  |  |  |  |  |  |
| BIOL 3358 Genetics | 3 |  | UM | F, S | BIOL 2206 or 2235 |  |
| BIOL 4413 Teaching Methods | 3 |  | UM | F | 16 cr. of biology and EDUC 3302 or permission of instructor |  |
| Biology Elective (plant biology) | 2-4 |  |  |  |  |  |
| GE Objective 4: | 3 |  | GE |  |  |  |
| Electives  | 2-4 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Six |  |  |  |  |  |  |
| BIOL 4417 Organic Evolution | 3 |  | UM | F, S | BIOL 3358 & 2209 |  |
| Biology Elective (animal biology) Upper Division | 3-5 |  | UM |  |  |  |
| GE Objectives 7 or 8: | 3 |  | GE |  |  |  |
| Upper Division Electives | 5-7 |  | UU |  |  |  |
|  Total | 16 |  |  |  |  |  |
| Semester Seven |  |  |  |  |  |  |
| BIOL 4491 Seminar | 1 |  | UM | F, S, SU | Senior standing or permission of department  |  |
| Free Electives | 6-8 |  |  |  |  |  |
| GE Objective 9: | 3 |  | GE |  |  |  |
| Upper Division Electives | 2-4 |  | UU |  |  |  |
|  Total | 14 |  |  |  |  |  |
| Semester Eight |  |  |  |  |  |  |
| BIOL 4492 Seminar | 1 |  | UM | F, S, SU | Senior standing or permission of department |  |
| Upper Division Electives | 4 |  | UU |  |  |  |
| Free Electives | 6 |  |  |  |  |  |
| GE Objective 6: | 3 |  | GE |  |  |  |
|  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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| B.A. Biology, Biology Education |
| **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** | **45-47** | 1. Written English (6 cr. min) ENGL 1101 | 3 |
| **Core Requirements** | **31** |  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 or MATH 1153 | 3 |
| BIOL 2206, 2207 Cell Biology & Lab | 4 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** |
| BIOL 2209 & 2209L General Ecology & Lab | 4 |  |  |
| BIOL 2221 & 2221L Intro to Microbiology | 4 |  |  |
| BIOL 3358 Genetics | 3 | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** |
| BIOL 4413 Biology Teaching Methods | 3 | BIOL 1101 & 1101L Biology I & Lab | 4 |
| BIOL 4417 Organic Evolution | 3 | CHEM 1111 & 1111L General Chemistry I & Lab | 5 |
| BIOL 4491 and BIOL 4492 Seminars | 2 |  |  |
| MATH 1160 Applied Calculus  |  | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** |
|  OR MATH 1153 Statistical Reasoning (Counted in GE Objective 3) |  |  |
| CHEM 1111 & 1111L General Chem I & Lab (Counted in GE Objective 5) |  |  |
| CHEM 1112 & 1112L General Chemistry II & Lab | 4 | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** |
| **Animal Biology Courses (2 courses)** | **6-8** | 7. Critical Thinking |  |  |
| BIOL 3304 & 3304L Comparative Vertebrate Morphology &  | 5 | 8. Information Literacy  |
| Physiology & Lab | 9. Cultural Diversity **(1 course; 3 cr. min)** |
| BIOL 3310 & 3310L Invertebrate Zoology & Lab | 4 |  |  |
| BIOL 4423 General Parasitology  | 3 | General Education Elective to reach 36 cr. min. **(if necessary)** |
| BIOL 4426 & 4426L Herpetology & Lab | 4 |   |  |
| BIOL 4427 & 4427L Ichthyology & Lab | 4 |  |  |
| BIOL 4431 & 4431L General Entomology & Lab | 4 |  Total GE | 39 |
| BIOL 4438 Ornithology  | 4 | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/)  *http://coursecat.isu.edu/undergraduate/programs/* |
| BIOL 4441 & 4441L Mammology & Lab | 4 |
| BIOL 4459 & 4459L Fish Ecology & Lab | 4 |  |  |
| BIOL 4462 & 4462L Freshwater Ecology and lab | 4 | **MAP Credit Summary** | **CR** |
| BIOL 4495 Animal Behavior | 4 | Major  | 45-47 |
| **Plant Biology Courses (2 courses)** | **6-8** | General Education | 39 |
| BIOL 2213 Fall Flora | 2 | Upper Division Free Electives to reach 36 credits | 15-19 |
| BOL 2214 Spring Flora | 2 | Free Electives to reach 120 credits | 15-21 |
| BIOL 4412 & 4412L Systematic Botany | 4 |  TOTAL | 120 |
| BIOL 4405 & 4405L Plant Form and Function | 4 |  |
| BIOL 4442 Plant-Animal Interactions | 3 | **Graduation Requirement Minimum Credit Checklist** | **Confirmed** |
| BIOL 4404 Plant Physiology | 3 | Minimum 36 cr. General Education Objectives (15 cr. AAS) | x |
| BIOL 4408 & 4408L Plant Ecology | 4 | Minimum 15 cr. Upper Division in Major (0 cr. Associate) | x |
| **Biology Electives** (any Biology Course to meet 45 cr minimum) | **0 to 2** | Minimum 36 cr. Upper Division Overall (0 cr. Associate) |  | x |
|  |  | Minimum of 120 cr. Total (60 cr. Associate) |  | x |
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|  |  | ***MAP Completion Status (for internal use only)*** |
| **Advising Notes** |  | *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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 Form Revised 9.10.2019