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| **Catalog Year 2023-2024**BA BiologyBiological Education Concentration (BioEd) | ***(For internal use only)***[x]  *No change*[ ]  *UCC proposal* |

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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 Applied Calculus | 3 |  | GE | F, S, SU | MATH 1143 or 1147 or equivalent |  |
| GE Objective 5: CHEM 1111/L General Chemistry I, Lab | 5 |  | GE | F, S, SU | MATH 1143 or 1147 or equivalent |  |
| GE Objective 5: BIOL 1101/L Biology I, Lab | 4 |  | GE | F, S, SU | Placement in MATH 1108 | MATH 1108 |
|  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 | BIOL 1102L |
| CHEM 1112/L General Chemistry II, Lab | 4 |  |  | F, S, SU | CHEM 1111/L and MATH 1143 or 1147  |  |
| GE Objective 4: | 3 |  | GE | F, S, SU |  |  |
|  Total | 14 |  |  |  |  |  |
| Semester Three |
| BIOL 2209/L General Ecology, Lab | 4 |  |  | F, S | BIOL 1101/L and BIOL 1102/L | BIOL 2209L |
| BIOL 2233/L Principles of Microbiology, Lab | 4 |  |  | F, S | CHEM 1101 or 1111/L and BIOL 1101/L  | BIOL 2233L |
| Biology Elective (Animal Biology) Upper Division | 3 - 4 |  | UM |  |  |  |
| GE Objective 2: COMM 1101 Principles of Speech | 3 |  | GE | F, S, SU |  |  |
| Free Electives | 1 |  |  |  |  |  |
|  Total | 16 |  |  |  |  |  |
| Semester Four |  |  |  |  |  |  |
| BIOL 2206, 2207 Cell Biology, Lab | 4 |  |  | F, S | BIOL 1101/L, BIOL 1102/L, CHEM 1111/L | CHEM 1112/L & BIOL 2207 |
| Biology Elective (Plant Biology) | 4 |  |  |  |  |  |
| GE Objective 6: | 3 |  | GE | F, S, SU |  |  |
| Upper Division Free Electives | 4 |  | UU |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Five |  |  |  |  |  |  |
| BIOL 3358 Genetics | 3 |  | UM | F, S | BIOL 2206/2207 or BIOL 2233/L |  |
| BIOL 4413 Teaching Methods | 3 |  | UM | F | 16 cr. of biology or permission of instructor |  |
| Biology Elective (Plant Biology) | 4 |  |  |  |  |  |
| GE Objective 4: | 3 |  | GE | F, S, SU |  |  |
| Free Electives  | 3 |  |  |  |  |  |
|  Total | 16 |  |  |  |  |  |
| Semester Six |  |  |  |  |  |  |
| BIOL 4417 Organic Evolution | 3 |  | UM | F, S | BIOL 3358, BIOL 2209/L |  |
| Biology Elective (Animal Biology) Upper Division | 3 - 4 |  | UM |  |  |  |
| GE Objectives 7 or 8: | 3 |  | GE | F, S, SU |  |  |
| Upper Division Free Electives | 5 |  | UU |  |  |  |
|  Total | 14 |  |  |  |  |  |
| Semester Seven |  |  |  |  |  |  |
| BIOL 4491 Seminar | 1 |  | UM | F, S, SU | Senior standing or permission of department  |  |
| Upper Division Free Electives | 4-6 |  | UU |  |  |  |
| GE Objective 9: | 3 |  | GE | F, S, SU |  |  |
| Free Electives | 5-6 |  |  |  |  |  |
|  Total  | 13 - 16  |  |  |  |  |  |
| Semester Eight |   |  |  |  |  |  |
| BIOL 4492 Seminar | 1 |  | UM | F, S, SU | Senior standing or permission of department |  |
| Upper Division Free Electives | 3-5 |  | UU |  |  |  |
| GE Objective 6: | 3 |  | GE | F, S, SU |  |  |
| Free Electives | 7-10 |  |  |  |  |  |
|  Total  | 14-17 |  |  |  |  |  |
| \*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.)  |

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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| **2023-2024 Major Requirements** | **CR** | **GENERAL EDUCATION OBJECTIVES****Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9** | **36 cr. min** |
| **MAJOR REQUIREMENTS** | 41-47 | 1. Written English (6 cr. min) ENGL 1101 | 3 |
| **Core Requirements** | **27** |  ENGL 1102 | 3 |
| BIOL 1101/L Biology I, Lab (4 credits counted n 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 2233/L Principles of Microbiology, Lab | 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/L Biology I, Lab | 4 |
| BIOL 4417 Organic Evolution | 3 | CHEM 1111/L General Chemistry I, Lab | 5 |
| BIOL 4491 and BIOL 4492 Seminars | 2 |  |  |
| MATH 1160 Applied Calculus or MATH 1153 (3 credits counted in Objective 3) | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** |
| CHEM 1111/L General Chemistry I, Lab (5 credits counted in Objective 5) |  |  |
| CHEM 1112/L 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 3303/L Principles of Animal Physiology, Lab | 4 | 8. Information Literacy  |
| BIOL 3310/L Invertebrate Zoology, Lab | 4 | 9. Cultural Diversity **(1 course; 3 cr. min)** |
| BIOL 3314/L Comparative Vertebrate Anatomy, Lab | 4 |  |
| BIOL 4423 General Parasitology  | 3 | General Education Elective to reach 36 cr. min. **(if necessary)** |
| BIOL 4426/L Herpetology, Lab  | 4 |   |  |
| BIOL 4427/L Ichthyology, Lab | 4 |  Total GE | 39 |
| BIOL 4431/L General Entomology, Lab | 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 4438 Ornithology | 4 |
| BIOL 4441/L Mammalogy, Lab | 4 |  |  |
| BIOL 4459/L Fish Ecology, Lab | 4 | **MAP Credit Summary** | **CR** |
| BIOL 4462/L Freshwater Ecology, Lab | 4 | Major  | 41-47 |
| BIOL 4495 Animal Behavior | 4 | General Education  | 39 |
| **Plant Biology Courses (2 courses)** | **6-8** | Upper Division Free Electives to reach 36 credits | 17-19 |
| BIOL 2213 Fall Flora | 2 | Free Electives to reach 120 credits | 17-21 |
| BIOL 2214 Spring Flora  | 2 |  TOTAL | 120 |
| BIOL 4404 Plant Physiology  | 3 |  |
| BIOL 4404L Plant Physiology Lab^ | 1 |  |
| BIOL 4405/L Plant Form and Function, Lab | 4 |  |
| BIOL 4408 Plant Ecology | 3 | **Graduation Requirement Minimum Credit Checklist** | **Confirmed** |
| BIOL 4408L Plant Ecology Lab^ | 1 | Minimum 36 cr. General Education Objectives (15 cr. AAS) | x |
| BIOL 4412/L Systematic Botany, Lab | 4 | Minimum 15 cr. Upper Division in Major (0 cr. Associate) |  x |
| BIOL 4442 Plant-Animal Interactions | 3 | Minimum 36 cr. Upper Division Overall (0 cr. Associate) | x |
|  |  | Minimum of 120 cr. Total (60 cr. Associate) | x |
| **Biology Electives** (any Biology Course to meet 45 cr. minimum) | **2-4** |  |  |
| **Advising Notes** | ***MAP Completion Status (for internal use only)*** |
| ^These are optional labs. |  | *Date* |
| Idaho teacher preparation requires 45 credits of Biology in the Single Subject Major. | *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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 BA Biology, Biological Education Concentration Page 2 Form Revised 9.10.2019