

Catalog Year 2017-2018

B.A. Biology

Concentration: Biology Education

A Major Academic Plan (MAP) illustrates one way to complete a degree in a recommended number of semesters. Below is an example of an efficient and recommended plan, but actual plans will vary by individual student needs. Program requirements are based on Catalog Year. See page two for a detailed summary of Major, General Education, Elective, and university requirements.

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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 & 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 Critical Reading and Writing | 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 |  |  |  |
| Electives | 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 | 4 |  | UM |  |  |  |
| GE Objective 2: COMM 1101 Principles of Speech | 3 |  | GE | F, S, SU |  |  |
|  |  |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Four |  |  |  |  |  |  |
| BIOL 2206 & 2207 Cell Biology & Lab | 4 |  |  | F, S | BIOL 1101 & 1102, CHEM 1111 & 1111L | CHEM 1112 & 1112L |
| Biology Elective (plant biology) | 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) | 4 |  |  |  |  |  |
| GE Objective 4: | 3 |  | GE |  |  |  |
| Electives  | 2 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Six |  |  |  |  |  |  |
| BIOL 4417 Organic Evolution | 3 |  | UM | F, S | BIOL 3358 & 2209 |  |
| Biology Elective (animal biology) Upper Division | 4 |  | UM |  |  |  |
| GE Objectives 7 or 8: | 3 |  | GE |  |  |  |
| Upper Division Electives | 5 |  | UU |  |  |  |
|  |  |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Seven |  |  |  |  |  |  |
| BIOL 4491 Seminar | 1 |  | UM | F, S, SU | Senior standing or permission of department  |  |
| Electives | 4 |  |  |  |  |  |
| GE Objective 9: | 3 |  | GE |  |  |  |
| Upper Division Electives | 4 |  | UU |  |  |  |
| Electives | 3 |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  Total  | 15 |  |  |  |  |  |
| Semester Eight |   |  |  |  |  |  |
| BIOL 4492 Seminar | 1 |  | UM | F, S, SU | Senior standing or permission of department |  |
| Upper Division Electives | 4 |  | UU |  |  |  |
| Electives | 3 |  |  |  |  |  |
| GE Objective 6: | 3 |  | GE |  |  |  |
| 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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| **2017-2018 Major Requirements** | **CR** | **2017-2018 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 (4 credits counted n Objective 5) | 2. Spoken English (3 cr. min) COMM 1101 | 3 |
| BIOL 1102 & 1102L 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 & 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 or MATH 1153 (3 credits counted in Objective 3) | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** |
| CHEM 1111 & 1111L General Chemistry I & Lab (5 credits counted in 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 4441 & 4441L Mammology & Lab | 4 | 8. Information Literacy  |
| BIOL 3304 & 3304L Comparative Vertebrate Morphology & Physiology & Lab | 5 | 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 4427 & 4427L Ichthyology & Lab | 4 |   |  |
| BIOL 4438 Ornithology  | 4 |  Total GE | 39 |
| BIOL 4459 & 4459L Fish Ecology & Lab | 4 | GE Objectives Courses: [*2017-2018 General Education Requirements (PDF)*](http://www.isu.edu/media/libraries/central-academic-advising/pdf-files/gened-requirements/2017-2018-General-Education-Requirements.pdf) |
| BIOL 3310 & 3310L Invertebrate Zoology & Lab | 4 |
| BIOL 4426 & 4426L Herpetology & Lab | 4 |  |  |
| BIOL 4431 & 4431L General Entomology & Lab | 4 | **MAP Credit Summary** | **CR** |
| BIOL 4495 Animal Behavior | 4 | Major  | 45-47 |
|  |  | General Education  | 39 |
| **Plant Biology Courses (2 courses)** | **6-8** | Free Electives to reach 120 credits | 34-36 |
| BIOL 2213 Fall Flora | 2 |  TOTAL | 120 |
| BIOL 4412 & 4412L Systematic Botany | 4 |  |
| BIOL 4405 & 4405L Plant Form and Function | 4 |
| BIOL 4442 Plant-Animal Interactions | 3 | **Graduation Requirement Minimum Credit Checklist** | **Confirmed** |
| BIOL 2214 Spring Flora | 2 | Minimum 36 cr. General Education Objectives (15 cr. AAS) | x |
| BIOL 4404 Plant Physiology | 3 | Minimum 16 cr. Upper Division in Major (0 cr. Associate) |  |  x |
| BIOL 4408 & 4408L Plant Ecology | 4 | 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) | **0 to 2** |  |  |
| **Advising Notes** | ***MAP Completion Status (for internal use only)*** |
|  |  | *Date* |
|  | *Department:*  |  |
|  | *CAA or COT:* | 5.11.2017jh |
|  | *Registrar:*  |  |
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 Form Revised: 4.14.2017