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| **Degree Requirements for a BS in Biological Sciences – Fish and Wildlife Ecology and Management Option** | | | | | | |
| **2018 - 2019 Catalog** | | **Name:** | | | **Date:** | |
| **Subject/#** | **Course Title** | | **Credits** | **Semester** | | **Year** |
| **Freshman Year** | | |  |  | |  |
| WILD 201 | Introduction to Fish and Wildlife | | 1 | F | |  |
| BIOB 170IN | Principles of Biological Diversity | | 4 | F S (F) | |  |
| CHMY 121IN | Intro to General Chemistry *(placement in M121 required\*)* | | 4 | F S Su (F) | |  |
| BIOB 160 | Principles of Living Systems *(CHMY 121IN prereq\*)* | | 4 | F S (S) | |  |
| BIOE 103CS | Environmental Science and Society | | 3 | F S Su | |  |
| COMX 111US or | Public Speaking | | 3 | F S Su | |  |
| CLS 101US | Knowledge & Community | | 3 | F S | |  |
| WRIT 101W | College Writing I *(semester assigned by MSU)* | | 3 | F S Su | |  |
| University Core/Math Prereqs | Check with advisor | | 6-12 | F S Su | |  |
| **\*\*Note:**  Students should maintain an average of 30 credits per academic year **TOTAL:** | | |  |  | |  |
| **Sophomore Year** | | | **Credits** | **Semester** | | **Year** |
| BIOO 230 | Identification of Seed Plants | | 4 | S | |  |
| Take one of the following: |  | |  |  | |  |
| WRIT 201 | College Writing II | | 3 | F S Su | |  |
| WRIT 221 | Intermediate Tech Writing | | 3 | F S | |  |
| CHMY 123 | Intro to Organic Chemistry & Biochemistry *(CHMY 121 or 143 prereq\*)* | | 4 | F S Su | |  |
| M 161Q | Survey of Calculus | | 4 | F S Su | |  |
| Take one of the following: |  | |  |  | |  |
| GPHY 284 | Intro to GIS Science & Cartography *(recommended)* | | 3 | F S (F) | |  |
| ENSC 272CS | Water Resources | | 3 | F S | |  |
| ENSC 245IN | Soils | | 3 | F | |  |
| ERTH 101IN | Earth System Sciences | | 4 | F S Su | |  |
| University Core and Electives | Check with advisor | | 6-12 | F S Su | |  |
| **\*\*Note:**  Students should maintain an average of 30 credits per academic year **TOTAL:** | | |  |  | |  |
| **Junior Year** | | | **Credits** | **Semester** | | **Year** |
| BIOO 310 | Comparative Vertebrate Anatomy | | 4 | F | |  |
| BIOO 412 | Animal Physiology | | 3 | F | |  |
| BIOE 370 | General Ecology | | 3 | F S | |  |
| Take one of the following: |  | |  |  | |  |
| BIOB 318 | Biometry *(recommended)* | | 3 | F | |  |
| STAT 216Q | Introduction to Statistics | | 3 | F S Su | |  |
| Take one of the following: |  | |  |  | |  |
| BIOB 375 | General Genetics | | 3 | F S Su | |  |
| BIOB 377 | Practical Genetics | | 3 | S | |  |
| WILD 301 | Principals of Fish & Wildlife Management *(BIOB 160 & 170IN prereq\*)* | | 3 | S | |  |
| University Core and Electives | Check with advisor | | 6-12 | F S Su | |  |
| **\*\*Note:**  Students should maintain an average of 30 credits per academic year **TOTAL:** | | |  |  | |  |
| **Senior Year** | | | **Credits** | **Semester** | | **Year** |
| WILD 401RN | Fish & Wildlife Capstone *(WILD 301 prereq\*)* | | 4 | S | |  |
| BIOB 420 | Evolution | | 3 | S | |  |
| Take one of the following pairs: |  | |  |  | |  |
| BIOE 455 &  BIOE 408 | Plant Ecology  Rocky Mountain Vegetation | | 3 | S | |  |
| 3 | F | |  |
| BIOE 427RN &  BIOE428 | Research in Freshwater Ecology *(Prior or concurrent reg. in BIOE 428)*  Freshwater Ecology | | 3 | F | |  |
| 3 | F | |  |
| Take two of the following: |  | |  |  | |  |
| BIOO 415 | Ichthyology | | 3 | S | |  |
| BIOO 475 | Mammalogy | | 3 | F | |  |
| BIOO 470 | Ornithology | | 3 | S | |  |
| Required upper division electives | Check with advisor | | 6-9 | F S Su | |  |
| **\*\*Note:**  Students should maintain an average of 30 credits per academic year **TOTAL:** | | |  |  | |  |

\* Most required courses have prerequisites; check the course catalog for current prerequisites or ask your academic advisor.

\*\* SEE MORE INFORMATION ON DEGREE REQUIREMENTS ON BACK PAGE ( ) Indicates Semester Suggestion

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| **Degree Requirements for a BS in Biological Sciences – Fish and Wildlife Ecology and Management Option** | | | |
| **2018 - 2019 Catalog** | | | |
| **CORE 2.0 REQUIREMENTS - Must be a grade C- or better** | **Course** | **Semester** | **Year** |
| Seminar (US)\* | COMX 111US or CLS 101US or CLS 201US |  |  |
| College Writing (W)\* | WRIT 101W\*\* |  |  |
| Quantitative Reasoning (Q)\* | M 161Q or STAT 216Q |  |  |
| Diversity (D) |  |  |  |
| Contemporary Issues in Science (CS)\* | BIOE 103CS & CHMY 121IN |  |  |
| Arts (IA or RA) |  |  |  |
| Humanities (IH or RH) |  |  |  |
| Social Sciences (IS or RS) |  |  |  |
| Natural Science (IN or RN)\* | BIOB 170IN |  |  |
| Research & Creative Experience (R, RA, RH, RN or RS)\* | WILD 401RN | S |  |

\*Satisfied by departmental requirements

Notes:

1. A grade of C- or better is required in all Core 2.0 courses.
2. Completion of at least two approved natural science courses with a grade of C- or better satisfies both the Contemporary Issues in Science and the Inquiry Natural Science requirements.
3. Courses designated RA RH, RN, or RS count as two Core 2.0 requirements.

\*\*Students with an ACT English score of 28 or higher or an SAT Critical Reading score of 650 or higher are exempt from the College Writing Core 2.0 requirement. Students are told at orientation in which semester they should take WRIT 101W. Please refer to your academic advisor to determine if you should take an additional writing course.

**Information on Core 2.0 can be found at** [**www.montana.edu/core2/students.html**](http://www.montana.edu/core2/students.html)

ELECTIVES & GRADUATION REQUIREMENTS

* A minimum of 120 credits are required for graduation; 42 of these credits must be in upper division courses (those numbered 300 and above). The curriculum includes at minimum 41 upper division credits, so additional courses may need to be selected.
* Required upper division electives must be taken in biology, fish and wildlife, or a related field (AGSC, ANSC, ERTH, GPHY, HORT, NRSM, and STAT). Consult with your advisor about the appropriateness of potential upper division electives taken outside the BIOE, BIOO, BIOB or WILD rubrics. A list of suggested classes appropriate for this option is available from your advisor and the Ecology Department office.
* Graduates from this option should be aware that the requirements to qualify for Federal positions in Wildlife Biology (OPM 486) include at least 9 credits in botany. The course title should contain either the word “plant” or “botany”.
* To qualify for Federal positions in Fish Biology (OPM 482) 12 credits of zoology beyond introductory biology are required as well as aquatic science coursework.
* Students are expected to be aware of all requirements for graduation, including university core requirements and to ensure that they meet these requirements (D, IA, IH, and IS are not included in the major program).
* The University requires a cumulative GPA of at least 2.0 (C average) to graduate.

PREREQUISITES

For admission to upper division (numbered 300 or higher) Biology (BIOB, BIOE, BIOO, BIOM) and Fish and Wildlife Management (WILD) courses, students must have completed at least 45 total university credits with a cumulative GPA of at least 2.5 for all courses and have also earned a "C-"or better for any prerequisite courses. Limited exceptions may be made by consent of instructor. Any student who obtains enrollment in an upper division biology course without satisfying these requirements will be required to withdraw from the course. Individual courses may have additional pre-requisites (such as math level) as listed in the catalog.