### Biological Sciences

#### BIOLOGY 120 BIOLOGICAL FOUNDATIONS (GL)...
A terminal course designed to introduce basic principles of life, such as structure and function, reproduction, evolution, diversity, and adaptation, leading to a broader understanding of man and his biological environment. Not applicable to biology emphases or minors. Three lectures and two hours of laboratory per week.

**COREQ:** MATH 141 OR MATH 140 OR WAIVER

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#### BIOLOGY 141 INTRODUCTORY BIOLOGY I (GL)...
An introduction to biology emphasizing the chemistry of life, the cell, metabolism, genetics, bacteria and protists. Three hours of lecture and one hour of discussion and two hours of laboratory per week. This course is prerequisite to all advanced courses in biology for majors and minors. Offered every term.

**PREREQ:** MATH 141 WITH A GRADE OF C OR BETTER OR WAIVER.

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#### BIOLOGY 214 ECOLOGY AND SOCIETY (GM)...
A study of basic ecological concepts and their application to the identification, understanding, and abatement of contemporary environmental problems. Special emphasis is given to those problems resulting from man and his activities. This course is accepted as a course in conservation required for teacher licensure in the sciences.

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#### BIOLOGY 250 ECOLOGY & GEOLOGY OF YELLOWSTONE NATL. PARK & UPPER GREAT PLAINS (GL)...
An interdisciplinary introduction to field methods, geology, ecology and natural history. Involves on-line work with additional lectures and labs at Yellowstone National Park and locations en route. Additional course fees apply. Students with disabilities may be accommodated. Biology or Geology/Geography majors take Bio/Geo 451 or see Department Chair. Summers only.

**COREQ:** MATH 140 OR MATH 141

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#### BIOLOGY 253 INTRODUCTION TO CELL BIOLOGY...
Introduction to the chemical and physical bases of life; bacterial and eukaryotic cell structure and function; cellular respiration; photosynthesis; and molecular biology. Three hours of lecture per week. Offered every semester.

**PREREQ:** BIOLOGY 142 WITH A GRADE OF C OR BETTER AND CHEM 102 WITH A GRADE OF C OR BETTER. **COREQ:** CHEM 104

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#### BIOLOGY 257 INTRODUCTION TO ECOLOGY...
A survey of ecosystems and animal and plant populations and communities. Topics include review of the Earth’s major biomes and the physical factors that influence them, the ecology and evolution of populations, the nature of biotic communities, the structure and function of ecosystems, and the status and protection of biodiversity. Three hours of lecture per week. Optional field trip. Offered every semester.

**PREREQ:** BIOLOGY 141 AND BIOLOGY 142 WITH A GRADE OF C OR BETTER; **UNREQ:** BIOLOGY 214

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#### BIOLOGY 258 FIELD EXPERIENCE...
Introduction to regional terrestrial and aquatic biological communities and field techniques for studying these communities. Field work and lectures will emphasize recognition of biotic community types, interpretation of their dynamics, and methods for identifying and surveying organisms. Weekend field trip required. Weekend field trip given to Ecology/Field majors.

**PREREQ:** BIOLOGY 141 AND BIOLOGY 142 WITH A GRADE OF "C" OR BETTER; **COREQ:** BIOLOGY 257

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### BIOLOGY 303 BIOSTATISTICS

**Course Description:** Students will learn fundamentals of hypothesis formation and testing, using a variety of univariate statistical methods. Consideration of experimental design and the evaluation of research methodologies presented in the biological literature are explored in detail. Students will gain practical experience with implementation of statistical analyses using real world databases and communicating these results effectively.

**Prerequisites:** BIOLOGY 141 AND BIOLOGY 142 WITH A GRADE OF C OR BETTER AND MATH 141 WITH A GRADE OF C OR BETTER

**Meeting Times:**
- 06/19-07/29
- Arranged

**Location:** WEB BASED

**Instructor:** Robert Kuzoff

**Course Fee:** $200

### BIOLOGY 354 FIELD BOTANY

**Course Description:** A study of the identification and ecology of flowering plants, conifers and ferns. Emphasis will be given to the plants and plant communities in the vicinity of the course location. A collection of local plants is required of all students. Field trips required. Summer session only.

**Prerequisites:** BIOLOGY 141 OR EQUIVALENT OR CONSENT OF INSTRUCTOR

**Meeting Times:**
- 06/19-07/08
- MTWRF
- 10:45 AM - 01:35 PM
- UH0360

**Instructor:** Nicholas Tippery

**Course Fee:** $25

### BIOLOGY 451 NATURAL HISTORY OF YELLOWSTONE NP AND THE UPPER GREAT PLAINS

**Course Description:** This is an introductory, multi-disciplinary, summer field course open to all. It is held at Yellowstone National Park and locations in route. Students will learn field methods, geology, ecology and natural history. It is suitable for biology and geology majors and anyone interested in field science or natural history.

**Prerequisites:** BIOLOGY 120 OR BIOLOGY 141 AND CONSENT OF INSTRUCTOR

**Meeting Times:**
- 07/24-08/11
- Arranged

**Location:** OFF CAMPUS

**Instructor:** George Clokey

### BIOLOGY 492 LABORATORY TEACHING EXPERIENCE

**Course Description:** This course provides teaching experience at the college level for undergraduate students. Undergraduate teaching experience students will assist faculty members in preparing, delivering, and tearing down laboratory or discussion section instructional units in biology courses, conducting review sessions, and tutoring students under the direct supervision of a faculty mentor. S/NC only.

**Prerequisites:** GRADE OF B OR BETTER IN ASSIGNED COURSE AND A GPA OF 3.0 OR BETTER. APPROVAL OF FACULTY MENTOR AND THE BIOLOGICAL SCIENCES DEPARTMENT.

**Meeting Times:**
- 05/30-06/17
- Arranged

**Location:** Arranged

**Instructor:** Kerry Katovich

### BIOLOGY 493 INTERNSHIP IN BIOLOGY

**Course Description:** Variable topics.

**Meeting Times:**
- 05/30-08/19
- Arranged

**Location:** Arranged

**Instructor:** Bruce Eshelman

### BIOLOGY 498 INDEPENDENT STUDY

**Course Description:** Typical projects may include helping researchers in conducting research projects or helping instructors develop pedagogical tools for their courses. Eligible students who are conducting their own research projects should enroll in Biology 498R. Repeatable for a maximum of 6 credits in major and degree or 2 units in the minor.

**Prerequisites:** BIOLOGY 141, BIOLOGY 142 AND A 2.0 GRADE POINT AVERAGE IN BIOLOGY

**Meeting Times:**
- 05/30-08/19
- Arranged

**Location:** Arranged

**Instructor:** Karry Katovich

### BIOLOGY 498R INDEPENDENT STUDY - UNDERGRADUATE RESEARCH

**Course Description:** Students will complete and present an undergraduate research project under the direction of a faculty mentor. Projects may require more than one semester to complete. Repeatable for a maximum of 6 units in major and degree or 2 in the minor.

**Prerequisites:** BIOLOGY 141 AND BIOLOGY 142 AND 2.75 GPA IN BIOLOGY.

**Meeting Times:**
- 05/30-08/19
- Arranged

**Location:** Arranged

**Instructor:** Karry Katovich

### ***GRADUATE LEVEL COURSES***

### BIOLOGY 651 NATURAL HISTORY OF YELLOWSTONE NP AND THE UPPER GREAT PLAINS

**Course Description:** This is an introductory, multi-disciplinary, summer field course open to all. It is held at Yellowstone National Park and locations in route. Students will learn field methods, geology, ecology and natural history. It is suitable for biology and geology majors and anyone interested in field science or natural history.

**Prerequisites:** BIOLOGY 120 OR BIOLOGY 141 AND CONSENT OF INSTRUCTOR

**Meeting Times:**
- 05/30-06/17
- Arranged

**Location:** Arranged