**College of Science and Technology**

**Biology Department**

**B.A./B.S. Biology**

**General Biology Concentration**

**2008-2009 Catalog**

**The General Biology Concentration is appropriate for students desiring a broad foundation in biology, including those students planning to enter graduate, medical, dental, or veterinary schools and those students planning to seek teacher licensure.Students planning to enter graduate school programs in Biotechnology or Environmental should consider those concentrations rather than the General Biology concentration.**

**Required Biology Courses (All concentrations): 20 Hours**

**BIOL 131 Ecology and Adaptation ( Fall only)**  **(4)**

*Prerequisite: none*

**BIOL 132 Biology of Cells and Microorganisms**  **(4)**

*Prerequisite: BIOL 132*

**BIOL 231 Genetics, Evolution and Development ( Fall Only)**  **(4)**

*Prerequisite: BIOL 132*

**BIOL 232 Organismal Biology** **(4)**

*Prerequisite: BIOL 131, 132, and 231*

**BIOL 160 Introductory Seminar in Biology** **(2)**

*Prerequisite: None*

**BIOL 460 Advanced Seminar in Biology**  **(2)**

*Prerequisite: BIOL 131, 132, 160, 231, and 232*

\*Declared Biology majors must earn a grade of “C” or better in BIOL 131, 132, 231, 232, before admission to biology electives requiring these courses as prerequisites. They must also earn a grade of “C” or better in BIOL 160 before admission to any Biology electives\*\*

*\*\*\* Special Note: Declared Biology majors normally take BIOL 131 and 132. Students who receive a grade of “B” or higher in BIOL 103, or an equivalent transfer course and decide to become Biology majors may substitute BIOL 103 or the equivalent transfer course for BIOL 131. Similarly, students who receive a “B” or higher in BIOL 105 or an equivalent transfer course may substitute BIOL 105 or the equivalent transfer course for BIOL 132\*\*\**

**Other Required Core Courses: 19 Hours**

**CHEM 101\* General Chemistry**   **(4)**

**CHEM 102\* General Chemistry**   **(4)**

**CHEM 301 Organic Chemistry (BS Requirement) (Fall Only)**  **(4)**

**CHEM 302 Organic Chemistry (BS Requirement) (Spring Only)**   **(4)**

**STAT 200\* Introduction to Statistics**  \_ **(3)**

\* May double count for General Education

**General Biology Concentration Requirements: 22 - 26 Hours**

**Students must take one elective from each of the following groups:**

**Ecology and Adaptation Electives:** \_\_\_\_(4-3 hrs)

|  |  |
| --- | --- |
| BIOL 215: Plants & Society (4) | BIOL 464: Vertebrate Zoology ( 4) |
| BIOL 216: General Zoology (4) | BIOL 462: Invertebrate Zoology ( 4) |
| BIOL 353/PSYC 353: Comparative Behavior (3) | BIOL 476: Field Botany ( 4) |
| BIOL 361: Parasitology (4) |
| BIOL 380: Ornithology (4) |
| BIOL 390: Conservation Biology (3) |
| BIOL 392: Pollution Biology (4) |
| BIOL 423: General Ecology (4) |

**Biology of Cells and Microorganisms Electives:** \_\_\_ ( 4-3 hrs)

|  |  |
| --- | --- |
| BIOL 222: Cell Biology (4) | BIOL 405: Histology (4) |
| BIOL 334: Microbiology (4) | BIOL 450: Molecular Biology (4) |
| BIOL 337: Immunology (4) | BIOL/CHEM 471: Biochemistry I (4:3) |

**Genetics, Evolution, Development Electives:** \_\_\_(4 hrs)

|  |  |
| --- | --- |
| BIOL 221: Genetics (4) | BIOL 430: Developmental Biology ( 4) |
| BIOL 425: Evolution ( 4) | BIOL 450: Molecular Biology ( 4) |

**Organismal Biology Electives:** \_\_\_\_(4-6 hrs)

|  |  |
| --- | --- |
| BIOL 353/PSYC 353: Comparative Behavior (3) | BIOL 337: Immunology (4) |
| BIOL 310: Human Structure & Function I (4) | BIOL 216: General Zoology (4) |
| BIOL 311: Human Structure & Function II (4) | BIOL 215: Plants & Society (4) |
| BIOL 322: Human Anatomy & Physiology (6) | BIOL 361: Parasitology (4) |
| BIOL 351: Comparative Animal Physiology  ( 4) | BIOL 476: Field Botany ( 4) |

**Additional Science Electives:** ( 2 options)

Students must select two additional biology courses ( for a total of 22 credits of electives)

Biology elective \_\_\_\_ (4)

Biology elective \_\_\_\_ (4)

**Or**

Students must select one additional biology course and 8 hours of Physics courses ( totaling 26 hrs of electives)

Biology elective \_\_\_ ( 4)

Physics \_\_\_\_(4)

Physics \_\_\_\_(4)

These additional Biology electives may be chosen from any **of the Biology course number 200 or above**, including courses not listed above. Students are advised to consider all the department electives and to choose the most appropriate for their goals.

**B.S. Requirements** **B.A. Requirements**

**(12 hours** **of one foreign language)**

**CHEM 301 Organic Chemistry\_\_\_\_\_\_(4)**  ( )

*Prerequisite: Chem 102*  ( )

( )

**CHEM 302 Organic Chemistry\_\_\_\_\_\_(4)**  ( )

*Prerequisite: Chem 102*

**Teaching Licensure:** A Biology major in the General Biology Concentration seeking teaching licensure should contact the College of Education and Human Development for information concerning the necessary courses.

**General Education Hours: 50**

Some of these 50 hours are satisfied by major requirements

**Graduation Requirements:**

To graduate with a major in Biology a student must attain an overall major grade point average of 2.0 or higher. Major G.P.A. is calculated by using BIOL 131, BIOL 132, all biology courses 200 level or higher, all courses outside of Biology used as electives

( including CHEM 471: 472, Physics is used an elective, Geography used as an environmental concentration elective), and any course used as an elective by academic petition.

**TOTAL CREDITS NEEDED FOR DEGREE: 120**