

CORE 42

| | | | | |
|-----|------|-----|--------------------------------------|---|
| ___ | CHEM | 101 | General Chemistry I | 3 |
| ___ | CHEM | 102 | General Chemistry II | 3 |
| ___ | ENGL | 150 | English Composition I | 3 |
| ___ | ENGL | 151 | English Composition II | 3 |
| ___ | ENGL | 218 | Technical Writing | 3 |
| ___ | ENGL | 250 | World Literature I OR | 3 |
| ___ | ENGL | 251 | World Literature II | 3 |
| ___ | COPA | 250 | Arts & Human Experience I | 3 |
| ___ | COPA | 251 | Arts & Human Experience II OR | 3 |
| ___ | CINE | 302 | Cinema Authors | 3 |
| ___ | HIST | 150 | Intro Study of History | 3 |
| ___ | MATH | 180 | College Algebra | 3 |
| ___ | NSET | 101 | Intro Nat. Sc. & Eng. Tech | 3 |
| ___ | POLS | 250 | Intro to Gov. Systems OR | 3 |
| ___ | POLS | 102 | American National Gov | 3 |
| ___ | PSYC | 150 | Psychological Foundations | 3 |
| ___ | SOC | 150 | Sociological Foundations OR | 3 |
| ___ | SOC | 111 | World Cultures OR | 3 |
| ___ | SOC | 105 | Marriage and Family | 3 |

DEPARTMENT GENERAL REQUIREMENTS 25

| | | | | |
|-----|------|-----|--------------------------|---|
| ___ | BIOL | 101 | General Biology I | 3 |
| ___ | BIOL | 102 | General Biology II | 3 |
| ___ | BIOL | 103 | General Biology Lab I | 1 |
| ___ | BIOL | 104 | General Biology Lab II | 1 |
| ___ | CHEM | 103 | General Chemistry Lab I | 1 |
| ___ | CHEM | 104 | General Chemistry Lab II | 1 |
| ___ | MATH | 175 | Elementary Statistics | 3 |
| ___ | MATH | 190 | Calculus I | 4 |
| ___ | PHYS | 101 | Physics I | 3 |
| ___ | PHYS | 102 | Physics II | 3 |
| ___ | PHYS | 103 | Physics Laboratory I | 1 |
| ___ | PHYS | 104 | Physics Laboratory II | 1 |

Directed Electives

(required with each concentration)

| | | | | |
|-----|-----|-----|-------|---|
| ___ | ___ | ___ | _____ | 3 |
| ___ | ___ | ___ | _____ | 3 |
| ___ | ___ | ___ | _____ | 3 |

GENERAL ELECTIVES 6

| | | | | |
|-----|-----|-----|-------|--|
| ___ | ___ | ___ | _____ | |
| ___ | ___ | ___ | _____ | |

**BACHELOR OF SCIENCE
BIOLOGICAL SCIENCES**

2011-2012

Student's Name: _____

Entrance Date: _____

DEPARTMENT MAJOR REQUIREMENTS 26

Required:

| | | | | |
|-----|------|-----|---|---|
| ___ | BIOL | 216 | Intro to Microbiology | 4 |
| ___ | BIOL | 222 | Intro to Genetics | 4 |
| ___ | BIOL | 350 | Molecular/Cellular Biology | 4 |
| ___ | CHEM | 221 | Organic Chemistry | 3 |
| ___ | CHEM | 222 | Organic Chem/Biochemistry | 3 |
| ___ | CHEM | 223 | Organic Chemistry Lab | 2 |
| ___ | BIOL | 205 | Botany OR | 3 |
| ___ | BIOL | 210 | Biological Evolution OR | 3 |
| ___ | BIOL | 235 | Introduction to Ecology (except Env. Science Conc.) | 3 |
| ___ | BIOL | 206 | Zoology OR | 3 |
| ___ | BIOL | 211 | Human Biology | 3 |

Choose One Concentration:

1. MOLLECULAR/CELLULAR

| | | | | |
|-----|-----------|-----|-----------------------|---|
| ___ | BIOL/CHEM | 320 | Biochemistry | 3 |
| ___ | BIOL | 324 | Human Genetics | 3 |
| ___ | BIOL | 365 | Developmental Biology | 3 |
| ___ | BIOL | 420 | Immunology | 3 |
| ___ | BIOL | 449 | Biology Seminar | 3 |

2. ORGANISMAL

| | | | | |
|-----|-----------|-----|---------------------------|---|
| ___ | BIOL | 225 | Anatomy and Physiology I | 4 |
| ___ | BIOL | 226 | Anatomy and Physiology II | 4 |
| ___ | BIOL/CHEM | 320 | Biochemistry | 3 |
| ___ | BIOL | 410 | Comparative Vert. Anatomy | 3 |
| ___ | BIOL | 449 | Biology Seminar | 3 |

3. ENVIRONMENTAL SCIENCE

| | | | | |
|-----|------|-----|-------------------------------|---|
| ___ | BIOL | 235 | Intro to Ecology | 3 |
| ___ | CET | 206 | Environ Eng. Tech | 3 |
| ___ | BIOL | 341 | Environmental Health | 3 |
| ___ | BIOL | 443 | Applied Env. Science | 3 |
| ___ | BIOL | 447 | Environmental Science Seminar | 3 |

Program Objectives

B.S. in Biological Sciences

Upon successful completion of this program, a student will be able to:

1. Comprehend the breadth of cellular and organismal systems:
 - a. Compare and contrast eukaryotic and prokaryotic cells
 - b. Investigate relevant biological concepts of organelles and organ systems
 - c. Express an understanding of organ systems and identify functions of all major organ systems
2. Comprehend concepts of genetics and genetic engineering
 - a. Recall principles of Mendelian genetics
 - b. Appreciate the mathematical basis of genetics
 - c. Recognize concepts of genetic engineering
 - d. Recall methods of genetic engineering and biotechnology
3. Appreciate and understand the chemical basis of life
 - a. Define molecular concepts of atoms, molecules and chemical bonds
 - b. Relate importance of biologically relevant molecules
 - c. Describe and discuss major cellular processes of photosynthesis and respiration
4. Understand the relevance of microbial organisms and differences of biological process between prokaryotic and eukaryotic organisms
 - a. Compare and contrast prokaryotic and eukaryotic cell structure
 - b. Discuss similarities and differences between prokaryotic and eukaryotic genetics
 - c. Identify methods of prokaryotic genetic exchange
 - d. Recall methods of microbial control, including physical, chemical and chemotherapeutic
 - e. Demonstrate an understanding of the biology of viruses and fungi
5. Communicate through written and oral expression
 - a. Interpret and communicate results of scientific research
 - b. Prepare original written compositions on a variety of topics
 - c. Create and present results of scientific projects