

Degree: BS College: College of Health Sciences & Human Services Major: Biology Major Code: BIOL Concentration: No Concentration

Minor: N/A Minor Code: N/A

# **General Education**

Ora	Communication	(3 Credits)	

Written Communication (3 Credits)

□ ENGL 1200 College Composition Quantitative Reasoning (3 Credits)

□ MATH 2320 Essentials of Calculus

Technological Literacy (3 Credits)

## Discoveries: (Credits 28)

### Art/Humanities (9 Credits)

ENGL 2230 Writing and Natural Sciences

## Social Sciences (9 Credits)

## Natural Sciences & Technology (10 Credits)

🗌 CHEM 1108 Gen Chem I

□ PHYS 1500 General Physics I

## Wellness & Personal Health: (3 Credits)

□ STAT 2020 Elements of Statistics

#### **Competencies:**

#### **Quantitative Applications**

Applied Methodologies

Intercultural Fluency

**Ethical Reasoning** 

Information Literacy

## Writing Intensive

## Keystone Experience

BIOL 4480 Topics in Field Biology or BIOL 4951 Internship in
 Biology or BIOL 4985 Biotechnology and DNA Methods or BIOL
 4999 Research in Biology

Program	Requi	rements
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### Required Major Courses: (16 Credits)

BIOL	1400	Intro	to	Ecology	and	Evolution
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- □ BIOL 1700 Intro to Organismal Biology
- BIOL 1900 Into to Cell and Molecular Biology
- □ BIOL 2202 Genetics

### Major Electives: (21 Credits)

- $\hfill\square$  One course in Cell and Molecular Bio Group A from list on next page
- $\hfill\square$  One course in Cell and Molecular Bio Group B from list on next page
- $\Box$  One course in Organismal Biology from list on next page
- $\hfill\square$  One course in Organismal Biology from list on next page
- $\Box$  One course in Ecology and Evolution from list on next page
- $\Box$  One course in Ecology and Evolution from list on next page
- One course in Research Design and Analyasis: BIOL 4570
  Biological Study Design and Data Analysis or BIOL 4800
  Vegetation Sample and Analysis or BIOL 4402 Biometry
  BIOL 4484 Quant Methods in Aq Bio or FWSC 4495 Applied
  Biological Methods and Science Communication

## **Required Concentration Courses:** (12 Credits)

- PHYS 1600 General Physics IILecture
- □ PHYS 1610 General Physics II Lab
- □ CHEM 1128 General Chemistry II
- □ CHEM 2200 Organic Chemistry I Lecture
- CHEM 2205 Organic Chemistry I Lab

#### Major Electives: (11 Credits)

- Any 3000 or 4000 level BIOL and FWSC or CHEM 2250/2255
  Organic Chemistry II or CHEM 4600/4605 Biochemistry and One or More of the Following: BIOL 4480 Topics in Field Biology or BIOL 4951 Internship in Biology or BIOL 4985 Biotechnology and DNA Methods or BIOL 4999 Research in Biology
- PHYS 1510 General Physics I Lab

#### Free Electives: (17 Credits)

**Program Notes:** Upper level electives are offered on a rotating basis, so they will not all be available each semester.

#### One Course in Cell and Molecular Bio Group A

- **BIOL3326** General Microbiology BIOL3330 Cell Biology BIOL4260 Cell Physiology **BIOL4320 Molecular Biology** One Course in Cell and Molecular Bio Group B **BIOL3020 Histology** BIOL3700 Systems Neuroscience **BIOL4046** Pathogenic Microbiology **BIOL4050 Immunology** BIOL4250 Molec Mechanisms Micro Path BIOL4270 Endocrinology BIOL4300 Biology of Cancer BIOL4310 Developmental Biology BIOL4985 Biotechnology and DNA Methods
- Two Courses in Organismal Biology from list below BIOL 2810 Human Anatomy and Physiology I Lecture BIOL 2811 Human Anatomy and Physiology I Lab **BIOL 3327 Parasitology BIOL 3337 Ornithology BIOL 3707 Plant Taxonomy** BIOL 3810 Human A&P II Lecture BIOL 3811 Human A&P II Lab **BIOL 3820 Vertebrate Zoology BIOL 3835 Plant Physiology** BIOL 4435 Ichthyology **BIOL 4442 Dendrology** BIOL 4700 Mycology BIOL 4720 Biology of the Higher Inverts BIOL 4740 Marine and Freshwater Invert **BIOL 4745 Entomology** BIOL 4750 Terrestrial Invertebrates **BIOL 4775 Mammalogy BIOL 4810 Herpetology BIOL 4850 Mammalian Reproductive Phys BIOL 4860 Comparative Animal Phys BIOL 4880 Pathophysiology** FWSC 4420 Prin of Wildlife Manag FWSC 4425 Aquaculture
- **Two Courses in Ecology and Evolution** from list below
- **BIOL 3335 Sustainable Agriculture BIOL 3399 Conservation Biology** BIOL 3500 Comparative Vertebrate Anatomy **BIOL 3607 Plant Anatomy BIOL 4414 Plant Ecology** BIOL 4421 Global Change Ecology **BIOL 4470 Field Zoology and Systematics** BIOL 4473 Freshwater Ecology **BIOL 4475 Wetlands Ecology** BIOL 4484 Quan Methods Aquatic Eco **BIOL 4550 Evolution** BIOL 4770 Forest Ecology and Management **BIOL 4992 Ethology** FWSC 4423 Wildlife Management Techniques FWSC 4492 Animal Population Dynamics

# **Suggested Four Year Course Sequence**

#### Year 1 Year 2 **Fall Semester Fall Semester BIOL 1400 Ecology & Evolution** BIOL 1900 Intro to Cellular & Molecular Biology ENGL 1200 College Composition CHEM 2200 Organic Chemistry I Lecture CHEM 1108 General Chemistry I CHEM 2205 Organic Chemistry I Laboratory Any Course Any Course Oral Communication **Spring Semester** Spring Semester **BIOL 1700 Introduction to Organismal Biology BIOL 2202 Genetics or Organismal Biology Elective** CHEM 1128 General Chemistry II MATH 2320 Essentials of Calculus Social Science Social Science Tech Literacy Any Course Any Course ENGL 2230 Writing and Natural Sciences Year 3 Year 4 **Fall Semester** Fall Semester **Ecology and Evolution Elective** Cell and Molec Group B **Research Design and Analysis Elective** Social Science

**BIOL 2202 Genetics or Organismal Biology Elective** PHYS 1500 General Physics I PHYS 1510 General Physics I Laboratory STAT 2020 Elements of Statistics

#### Spring Semester

Cell and Molec Group A Major Elective PHYS 1600 General Physics II PHYS 1610 General Physics II Laboratory Arts & Humanities

# Spring Semester

Any Course

Any Course

**Organismal Biology Elective Ecology and Evolution Elective** Natural Sciences & Tech Any Course