B.S. - Biology – Ecology and Environmental Biology concentration
(Effective Fall 2012, updated Fall 2016)

GENERAL EDUCATION PROGRAM

I. Required Skills and Competencies (16 cr.)

Fluency in Writing
ENG 114 - WIFYS (3) ___

Fluency in Speech
HCS 100 – Human Communication (3) ___

Historical Perspective
HIS 105 - His Foun Glob Cul (3) ___
HIS 106 - Thin His Glob Age (3) ___

Mathematical Competency –
MAT 211 - Calculus I (4) ___

Reading Comprehension (required only if the student needs additional instruction; credits do NOT count towards graduation)

II. Categories of Knowledge* (34 cr.)

A. Logic and Numbers for Rational Thinking
MAT 117 - Applied Statistics (3) ___

B. Linguistics, Literary, Artistic, Cultural Traditions (9)
_____________________________ (lit.)
_____________________________ (humanity)
_____________________________ (humanity)

C. Biological and Physical Sciences
BIO 161 – Principles of Biology: Cell Structure & Function (4) ___
CHM 121 - Chemical Bonding (Cat. C) with CHM 125 lab IIB (1) ___
PHY 121 - Intro. to Physics I (3) ___

D. Political, Economic, Geographic Sciences(6)
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ECN 101 - Macroeconomics is recommended

E. Social and Behavioral Sciences (6)
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* Refer to the Undergraduate Catalog to determine the courses that can be counted under each section.

MAJOR REQUIREMENTS

Biology Requirements* (37 cr.)

Core Courses:
BIO 161 – Princ. Bio: Cell Structure & Function (4) see Category C
BIO 162 – Princ. Bio: Organismal Diversity (4) ___
BIO 230 – Botany (3) ___
BIO 242 – Ecology (3) ___
BIO 260 – Genetics (4) ___
BIO 499 – Capstone Seminar in Biology (1) ___

Cellular elective (3-4 cr.) - choose:
BIO 220 – Microbiology (4) ___
BIO 385 – Cell Biology (3) ___

Physiology elective (4 cr.) - choose:
BIO 350 – Human Physiology (4) ___
BIO 351 – Animal Physiology (4) ___

Ecology and Conservation electives (9 cr.) - choose any 3:
BIO 362 – Invertebrate Zoology (3) ___
BIO 363 – Vertebrate Zoology (3) ___
BIO 406 – Mammalogy (3) ___
BIO 412 – Ichthyology (3) ___
BIO 417 – Herpetology (3) ___
BIO 419 – Ornithology (3) ___
BIO 430 – Princ. of Evolution (3) ___
BIO 442 – Aquatic Ecology (3) ___
BIO 444 – Conservation Biology (3) ___
BIO 448 – Field Botany and Plant Taxonomy (3) ___

Experiential Elective (3 cr.) - choose:
BIO 396-398 – Research ___
BIO 391-392 – Internship ___

Additional Biology Electives (2-3 cr.)

* Students must earn a C or higher in BIO 161 & 162 before upper division Biology courses may be taken. Only 3 credits of internship/research may be counted for Biology credit, with all additional internship/research credits counting as free elective credit.

COGNATE COURSES REQUIRED FOR THE BIOLOGY MAJOR

Chemistry Requirements (13 cr.)
CHM 121 – Chemical Bonding (Cat. C) with CHM 125 lab IIB (1) ___
CHM 122 – Chemical Dynamics (3) with CHM 126 lab IIB (1) ___
CHM 221 – Organic Chemistry I (3) with CHM 225 lab IIIB (1) ___
CHM 227 – Introduction to Biochemistry (4) ___
OR
CHM 222 – Organic Chemistry II (3) with CHM 226 lab IVB (1) ___

Physics Requirements (5 cr.)
PHY 121 – Introductory Physics I (Cat. C) with PHY 123 – Physics I lab (1) ___
PHY 122 – Introductory Physics II (3) with PHY 125 – Physics II lab (1) ___

Math Requirements (listed under the general education program)
MAT 117 - Applied Statistics
MAT 211 – Calculus I

Geography-Earth Science Requirement (3 cr.) - choose any 1:
ESS 110 – Intro. to Geology (3) ___
ESS 210 – Physical Geology (3) ___
GEO 202 – Introduction to GIS (3) ___
GEO 224 – Soils (3) ___
GEO 226 – Hydrology (3) ___

Free Electives (12 credits)
A minimum of 120 credits are required for graduation.

* Refer to the Undergraduate Catalog to determine the courses that can be counted under each section.

Revised Sept. 2016