

2011 – 2012 B.S. Biology – Environmental Biology Concentration

NAME _____ ID# _____

UNIVERSITY CORE

COLLEGE CORE

A. Core Foundations

CORE 101 _____ 3
 CORE 102 _____ 3
 CORE 103* _____ 3
 CORE 201 _____ 3
 CORE 202 _____ 3

NOTE: Courses listed in multiple areas can only be used to fulfill a single area requirement.

Students can use only one course with their major prefix to fulfill core requirements.

* Honors course – will replace CORE 101 & 102 for those students in the RU honors program

B. Core Skills & Knowledge

Courses must be from different disciplines:

MATHEMATICAL SCIENCES (3SH)
 MATH 137,138, or 151 _____ 3

NATURAL SCIENCES (4 SH)
 CHEM 101 _____ 4

HUMANITIES (3 SH)
 _____ 3

One of the following: ENGL 200, HIST 101, 102 PHIL 111, 112, 114 POSC 110; RELN 111, 112, 203, 206

VISUAL & PERFORMING ARTS (3 SH)
 _____ 3

One of the following: ART 111, 215, 216 CVPA 266 DNCE 111 MUSC 100, 121, 123 THEA 100, 180

SOCIAL/BEHAV. SCIENCES (3 SH)
 _____ 3

One of the following: ANSC 101, APST 200 ECON 105, 106 GEOG 101, 102, 103 HIST 111, 112 POSC 120 PSYC 121 RELN 205 SOCY 110, 121

A. National & International

Perspectives Courses must be from different disciplines:

U. S. PERSPECTIVES (3 SH)
 ECON 106 recommended _____ 3

One of the following: APST 200 ECON 101, 105, 106, ENGL 203 GEOG 201, 202, 203 HIST 111, 112 POSC 120, SOCY 110

GLOBAL PERSPECTIVES (3SH)
 GEOG 140 recommended _____ 3

One of the following: CVPA 266, ENGL 201, FORL 103 GEOG 101, 102, 140, 280 HIST 101, 102 INST 101 ITEC 112 PEAC 200 RELN 112, 205, SOCY 121, THEA 180 WMST 101

B. Supporting Skills & Knowledge

NATURAL SCI. OR MATHEMATICAL SCIENCES (3-4 SH)

STAT 200 _____ 3

HUMANITIES, VISUAL & PERFORMING ARTS, OR FOREIGN LANGUAGES (3-4 SH)

_____ 3-4

One of the following: ENGL 200 HIST 101, 102 PHIL 111, 112, 114 POSC 110; RELN 111, 112, 203, 206 Or ART 111, 215, 216; CVPA 266; DNCE 111 MUSC 100, 121, 123 THEA 100, 180 Or CHNS 101: 102, 201: 202 FORL 100, 109, 200, 209, 210, 309, 409; FREN 100, 200:210, 300, 320 GRMN 100, 200: 210, 300 LATN 101, 201, 350; RUSS 100, 200, 210, 300; SPAN 101: 102, 201, 202

SOCIAL/ BEHAV. SCI. OR HEALTH & WELLNESS (3SH)

_____ 3

One of the following: ANSC 101, APST 200 ECON 105, 106 GEOG 101, 102, 103 HIST 111, 112 POSC 120; PSYC 121 RELN 205 SOCY 110, 121 HLTH 111,200 NURS 111 NUTR 214; RCPT 200

Environmental Biology

Prerequisites
 BIOL 160 _____ (2)
 BIOL 460 _____ (2)

OR

2 semesters of BIOL 460 Advanced Seminar in Biology (2:2)

BIOL 131 _____ (4) Ecology and Adaptation F/S
 BIOL 132 _____ (4) Biology of Cells and Microorganisms F/S
 BIOL 231 _____ (4) Genetics, Evolution, and Development F/S
 BIOL 232 _____ (4) Organismal Biology F/S
 BIOL 390 _____ (3) Conservation Biology S
 GEOG 250 _____ (4) Introduction to GIS F/S
 CHEM 101 _____ (4) General Chemistry F/S/SU
 CHEM 102 _____ (4) General Chemistry S/SU
 STAT 200 _____ (3) Introduction to Statistics F/S/SU
 MATH 137/138/151 _____ (3) Math Core Curriculum see above F/S/SU

Three to six credit hours in total completed from any combination of hours in the following:

BIOL 495 _____ Internship in Biology F/S 2.5 BIOL GPA, 16 cr. hrs of lab science, Permission of department chair
 AND/OR _____ (3-6)
 BIOL 491/492 _____ Undergraduate Research F/S

One of the below courses:

BIOL 333 _____ Population and Community Ecology (4) TBD BIOL 131 and STAT 200
 OR _____ (4)
 BIOL 476 _____ Forest and Wetland Ecology (4) F'10 every other F BIOL 131 and STAT 200

One of the below courses:

GEOG 241 _____ Environmental Regulation (3) S GEOG 140
 GEOG 340 _____ International Environmental Problems (3) TBD GEOG 140 and 241
 ECON 375 _____ (3) Environmental Economics (3) TBD ECON 106

One of the below courses:

BIOL 392 _____ Environmental Toxicology (4) F'11 every other F 8 credits of BIOL & 8 credits CHEM
 OR _____ (3-4)
 CHEM 215 _____ Environmental Chemistry (3) F'11 Fall Only CHEM 102 or 103

11-12 credit hours chosen from the below courses:

Courses taken for requirements listed above may not be counted as electives:

BIOL 215 General Botany (4)	BIOL 361 Parasitology (4)	BIOL 464 Vertebrate Zoology (4)	BIOL 333 Population and Community Ecology (4)
BIOL 216 General Zoology (4)	BIOL 380 Ornithology (4)	CHEM 215 Environmental Chemistry (3)	
BIOL 217 Flora of Virginia (4)	BIOL 392 Environmental Toxicology (4)	GEOG 474 Hydrogeology (4)	
BIOL 351 Comparative Physiology (4)	BIOL 408 Principles of Microbiology (4)	GEOG 335 Biogeography (3)	
BIOL 353 Comparative Behavior (4)	BIOL 462 Invertebrate Zoology (4)	BIOL 476 Forest and Wetland Ecology (4)	

BS Requirements: CHEM 301 and CHEM 302 _____ (4) _____ (4)

CONCENTRATION

F/S Freshmen only
 F/S BIOL 131, 132, 231 and 232
 F/S "C" or better in BIOL 131 (BIOL majors) or "C" or better in CHEM 101
 F/S "C" or better in BIOL 132
 F/S BIOL 131, 132, and 231
 S BIOL 231, OR BIOL 103 & (104 or 105)
 F/S Introduction to GIS
 F/S/SU General Chemistry
 S/SU General Chemistry CHEM 101
 F/S/SU Introduction to Statistics
 F/S/SU Math Core Curriculum see above
 F/S Internship in Biology 2.5 BIOL GPA, 16 cr. hrs of lab science, Permission of department chair
 F/S Undergraduate Research
 TBD Population and Community Ecology (4) BIOL 131 and STAT 200
 F'10 every other F Forest and Wetland Ecology (4) BIOL 131 and STAT 200
 S Environmental Regulation (3) GEOG 140
 TBD International Environmental Problems (3) GEOG 140 and 241
 TBD Environmental Economics (3) ECON 106
 F'11 every other F Environmental Toxicology (4) 8 credits of BIOL & 8 credits CHEM
 F'11 Fall Only Environmental Chemistry (3) CHEM 102 or 103
 BIOL 464 Vertebrate Zoology (4) BIOL 333 Population and Community Ecology (4)
 CHEM 215 Environmental Chemistry (3)
 GEOL 474 Hydrogeology (4)
 GEOG 335 Biogeography (3)
 BIOL 476 Forest and Wetland Ecology (4)

Sample Schedule B.S. Biology – Environmental Biology Concentration 11/12

Fall Semester		Spring Semester	
Freshman Year	Cr.	Freshman Year	Cr.
University Core A: Core 101	3	University Core A: Core 102	3
BIOL 131	4	BIOL 132 "C" or better in 131(majors) or C or better in CHEM 101	4
CHEM 101	4	CHEM 102 (S ONLY) CHEM 101	4
BIOL 160	2	STAT 200	3
Math 137, 138 or 151	3		
University 100	1		
	17		14
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. Students who enter the major as a freshman must take BIOL 160, those who transfer or change majors after their freshman year will take (4) hours of BIOL 460 instead.			
Sophomore Year	Cr.	Sophomore Year	Cr.
University Core A: Core 201	3	University Core A: Core 202	3
BIOL 231 "C" or better in BIOL 132	4	BIOL 232 "C" or better in BIOL 231	4
CORE (GEOG 140 recommended) CCA: Global Perspectives	3	GEOG 250	3
CORE (ECON 106 recommended) CCA: U.S. Perspectives	3	BIOL 390 (S Only) BIOL 231 OR BIOL 103 & (104 or 105)	3
CORE	3	CORE	3
	16		16
CORE 101, 102, 201, and 202 must be completed in succession. Students should complete CORE 202 prior to their Junior year.			
Junior Year	Cr.	Junior Year	Cr.
CHEM 301 (F Only) CHEM 102 B. S. Requirement	4	CHEM 302 CHEM 301 B.S. Requirement	4
BIOL 476 (Every other F) OR BIOL 333 BIOL 131 and STAT 200	4	GEOG 241 OR GEOG 340 OR ECON 375	3
Required BIOL/CHEM/GEOL/GEOG elective	3-4	Required BIOL/CHEM/GEOL/GEOG elective	4
CORE	3	CORE	3
	14-15		14
Senior Year	Cr.	Senior Year	Cr.
BIOL 460 BIOL 131, 132, 231 and 232	2	Required BIOL/CHEM/GEOL/GEOG elective	4
BIOL 392 (Every other F) or CHEM 215 (F ONLY)	4	CORE	3
BIOL 491 OR 495	3-6	General Elective to reach 120 credit hours	3
General Elective to reach 120 credit hours	3	General Elective to reach 120 credit hours	3
		General Elective to reach 120 credit hours if needed	3
	12-15		13-16

B.S. Requirements (8 hours)

CHEM 301 _____ (4)	Organic Chemistry	F	CHEM 102
CHEM 302 _____ (4)	Organic Chemistry	S	CHEM 301

Graduation Requirements: Students must attain a minimum 2.0 in major and overall GPA in order to graduate. Major GPA is calculated using grades received in Biology 131, 132, all Biology courses 200 level or higher, all courses outside of Biology used as electives (including: Chem 471:472 and Physics if used as elective) and/or any course used as an elective by academic petition. Students are required to complete a minimum of 120 credit hours.