

B.S. IN BIOLOGY

2008-09

College of Humanities and Sciences General Education Requirements

Foundational Courses

1. Writing : Complete each course.	Credits	Grade
UNIV 111 Focused Inquiry I	3	
UNIV 112 Focused Inquiry II (C grade or better required)	3	
ENGL 200 or academic research writing course (C grade or better required; must complete 24 credits before enrolling)	3	

2. Mathematics & Statistics: Take each course listed.	Credits	Grade
MATH 151 Precalculus	4	
STAT 210 Basic Practice of Statistics	3	
MATH 200 Calculus I (4 credits) or a STAT course above 212 (STAT 314 is recommended)		

Supporting Courses

3. Human, Social, and Political Behavior: Choose one course.	Credits	Grade
ANTH/INTL 103 Introduction to Anthropology HUMS 300 Great Questions of the Social Sciences POLI 103 U.S. Government PSYC 101 Introduction to Psychology SOCY 101 General Sociology		
Course Taken	3	

4. Science and Technology*: Choose one course.	Credits	Grade
BIOL 101 Biological Concepts (4 credits) * BIOL/ENVS 103 Environmental Science (4 credits) * CHEM 110 Chemistry and Society FRSC 202 Crime and Science INSC 201 Energy! (prerequisite: MATH 131, STAT 208 or higher level MATH or STAT) PHYS 103 Elementary Astronomy		
Course Taken		

5. Diverse and Global Communities: Choose one course.	Credits	Grade
INTL 101 Human Societies and Globalization MASC/INTL 151 Global Communication POLI/INTL 105 International Relations RELS 108 Human Spirituality WMNS 201 Introduction to Women's Studies		
Course Taken	3	

6. Literature and Civilization: Choose one course.	Credits	Grade
ENGL 215 Readings in Literature HIST 201 The Art of Historical Detection HUMS 250 Reading Film PHIL 201 Critical Thinking About Moral Problems WRLD 203 Cultural Texts and Contexts WRLD 230 Introduction to World Cinema		
Course Taken	3	

7. General Education Electives: Choose any 2 additional courses from boxes 3, 4, 5, or 6 (must be from two different boxes).	Credits	Grade
Course Taken		
Course Taken		

Experiential Courses

8. General Education Modules: Complete each.	Credits	Grade
Experiencing the Fine Arts: successfully complete one course from the School of the Arts (1-3 credits)		
HUMS 202 Choices in a Consumer Society	1	
Computer Literacy Requirement		

9. Foreign Language: Must demonstrate competency through the 102 level by previous high school background or placement test.	Credits	Grade
101 level		
102 level		

10. Senior Capstone: Taken in major within last 30 credit hours	Credits	Grade

 Has VCCS Associate Degree _____

* For the Science and Technology requirement, biology majors may take any of the approved courses. However, neither BIOL 101 nor BIOL 103 will apply to the 40 credits in BIOL courses required for the major.

NAME _____

Biology Collateral Requirements

LFSC 101: Required for all BS in Biology students.

LFSC 101 Intro to Life Sciences	3	
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General Chemistry: A grade of "C" or better is required in each course listed below. Prerequisites are in parentheses.

CHEM 101 General Chemistry I (CHEM 100 or placement and corequisite of MATH 151 or placement)	3	
CHEZ 101 General Chemistry I Lab (Pre/Corequisite of CHEM 101)	1	
CHEM 102 General Chemistry II (CHEM 101)	3	
CHEZ 102 General Chemistry I Lab (Pre/Corequisite of CHEM 101)	1	

Organic Chemistry: A grade of "C" or better is required in CHEM 301 and CHEZ 301. Prerequisites are in parentheses.

CHEM 301 Organic Chemistry I (CHEM 101-102 & CHEZ 101-102)	3	
CHEZ 301 Organic Chemistry I Lab (Pre/Corequisite of CHEM 301)	2	
CHEM 302 Organic Chemistry II (CHEM 301)	3	
CHEZ 302 Organic Chemistry II Lab (Pre/Corequisite of CHEM 302)	2	

Physics: Prerequisites are in parentheses.

PHYS 201 General Physics I (MATH 151) OR PHYS 207 University Physics I (MATH 200)		
PHYS 202 General Physics I (PHYS 201) OR PHYS 208 University Physics I (PHYS 208)		

Biology Major Requirements

The Bachelor of Science curriculum in Biology requires a minimum of 40 credits in biology or other approved courses. The core courses: BIOL 151, BIOZ 151, BIOL 152, BIOZ 152, BIOL 218, BIOL 310, and BIOL 317 are required of all majors. A "C" grade or better in BIOL 151, 152, BIOZ 151L, 152L, or their equivalent, is required for enrollment in all advanced biology courses (BIOL 218 and higher). A "C" grade or better in BIOL 218 is required for enrollment in all courses for which it is a prerequisite.

Organismal course requirement

Courses which fulfill the Animal organismal requirement are:

BIOL 301 Comparative Vertebrate Anatomy (5), **BIOL 302** Embryology (5), **BIOL 309** Entomology (4), **BIOL 312** Invertebrate Zoology (3), **BIOZ 312** Invertebrate Zoology Laboratory (1), **BIOL 313** Vertebrate Natural History (3), **BIOZ 313** Vertebrate Natural History Laboratory (1), **BIOL 416** Ornithology (3), **BIOZ 416** Ornithology Laboratory (1), **BIOL 417** Mammalogy (4), **BIOL 435** Herpetology (3), **BIOL 445** Neurobiology and Behavior (4), and **BIOL 503** Fish Biology (4).

Courses which fulfill the Plant organismal requirement are:

BIOL 320 Biology of the Seed Plant (4), **BIOL 321** Plant Development (3), **BIOZ 321** Plant Development Laboratory (2), **BIOL 322** Economic Botany (3), **BIOL 391** Plant Physiology (3), and **BIOL 512** Plant Diversity and Evolution (4).

Writing Significant requirement

One full unit of Writing Significant coursework in the major is required. This can be fulfilled with 2 ½ Writing Intensive courses, or 1 full Writing Intensive course. Courses which fulfill the Writing Significant requirements are: **BIOL 300** Biotechniques (2) - .5 WI unit; **BIOL 309** Entomology (4) - .5 WI unit; **BIOZ 310** Laboratory in Genetics (2) - .5 WI unit; **BIOZ 312** Invertebrate Zoology Laboratory (1) - .5 WI unit; **BIOZ 317** Ecology Laboratory (2) - 1 WI unit; **BIOL 320** Biology of the Seed (4) - .5 WI unit; **BIOZ 321** Plant Development Laboratory (2) - 1 WI unit; **BIOL 392** Introduction to Research (1) - 1 WI unit; **BIOL 445** Neurobiology and Behavior (4) - .5 WI unit; **BIOL 514** Stream Ecology (4) - .5 WI unit; **BIOL 518** Plant Ecology (4) - .5 WI unit; **BIOL 522** Evolution and Speciation (3) - 1 WI unit; **BIOL 541/BNFO 541** Laboratory in Molecular Genetics (2) - 1 WI unit.

Courses not applicable to the major

BIOL/BIOZ courses not applicable to the biology major, thus will not count towards the 40 required credits in biology, are as follows:

BIOL 101 Biological Concepts (4), **BIOL 103** Environmental Science (4), **BIOL 201** Human Biology (3), **BIOZ 201** Human Biology Laboratory (1), **BIOL 205** Human Anatomy (4), **BIOL/PHIS 206** Human Physiology (3), **BIOZ/PHIZ 206** Human Physiology Laboratory (1), **BIOL 209** Medical Microbiology (3), **BIOZ 209** Medical Microbiology Laboratory (1), **BIOL 217** Principles of Nutrition (3), **BIOL 332/ENVS 330** Environmental Pollution (3), **BIOL 341/ANTH 301** Human Evolution (3) and **BIOL/ANTH 403** Primatology (3).

