

B.S. IN SCIENCE

2009-10

College of Humanities and Sciences General Education Requirements

Foundational Courses

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

2. Mathematics & Statistics: Choose one course.	Credits	Grade
Complete the course specified by your specific track.		
Course Taken		

Supporting Courses

3. Human, Social, and Political Behavior: Choose one course.	Credits	Grade
ANTH/INTL 103 Introduction to Anthropology ECON 101/INTL 102 Introduction to Political Economy HUMS 300 Great Questions of the Social Sciences POLI 103 U.S. Government PSYC 101 Introduction to Psychology (4 credits) SOCY 101 General Sociology		
Course Taken		

4. Science and Technology: Choose one course.	Credits	Grade
BIOL 101 Biological Concepts (3 or 4 credits) BIOL/ENVS 103 Environmental Science (4 credits) CHEM 110 Chemistry and Society FRSC 202 Crime and Science INSC 201 Energy! 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 POL/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	

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 as a senior (after at least 85 credits)	Credits	Grade

 Has VCCS Associate Degree _____

NAME

SCIENCE MAJOR: Core Requirements	Biology Track	Chemistry Track	Mathematics Track	General Science Track	Physics Track
Introductory Biology Course (4-5 credits)	BIOL 151 with Laboratory	BIOL 151 with Laboratory	BIOL 101, 102,103* or 151 with Laboratory	BIOL 101, 102, 103 or 151 with Laboratory	BIOL 101, 102, 103 or 151 with Laboratory
Introductory Chemistry Course (4 credits)	CHEM 101 with Laboratory	CHEM 101 with Laboratory	CHEM 101 or CHEM 110* with Laboratory	CHEM 101 or CHEM 110* with Laboratory	CHEM 101 with Laboratory
Introductory Physics Course (4-5 credits)	PHYS 201 or 207	PHYS 201 or 207	PHYS 101, L101 or 107*, or 201, or 207	PHYS 101, L101 or 107, or 201, or 207	PHYS 207
Science Course ** (3 credits)	Upper-Level Science or ENVS/GEOG 401	Upper-Level Science or ENVS/GEOG 401	Upper-Level Science	Upper-Level Science	Upper-Level Science or ENVS/GEOG 401
Additional Science Course (3 credits)	INSC 301 or ENVS/GEOG 411	INSC 301 or ENVS/GEOG 411	INSC 301	INSC 301	INSC 301 or ENVS/GEOG 411
Math Course (By placement or 4 credits)	MATH 151	MATH 151	MATH 151	MATH 151	MATH 151
Statistics Course (3 credits)	STAT 208 or 210	STAT 208 or 210	STAT 208 or 210	STAT 208 or 210	Satisfied by track requirements
Additional Math Course (3-4 credits)	MATH 200 or STAT beyond 210	MATH 200	MATH 200	MATH 200	MATH 200

* Recommended among Options

**Upper-Level Science selected with permission of advisor

NOTE: Depending on the Requirements of your chosen track, a "C" grade or better in each prerequisite course: BIOL 151, 152, BIOZ 151L-152L, CHEM 100, CHEM 101, CHEM 102, CHEM 301, CHEM 302 or their equivalent, is required for enrollment in all advanced courses.

TRACK

Biology Track

	Credits
<input type="checkbox"/> BIOL 152 and BIOZ 152L Introduction to Biological Sciences II and Laboratory	4
<input type="checkbox"/> BIOL 218 Cell Biology	3
<input type="checkbox"/> BIOL 310 and 310L Genetics	5
<input type="checkbox"/> BIOL 317 Ecology	3
<input type="checkbox"/> CHEM 102 and CHEZ 102L General Chemistry and Lab	4
<input type="checkbox"/> GEOG/ENVS 105 and GEOZ/ENVZ 105L Physical Geology and Lab	4
<input type="checkbox"/> PHYS 202 and PHYZ 202L General Physics and Laboratory OR PHYS 208 and PHYZ 208L University Physics and Laboratory	4 or 5
<input type="checkbox"/> One upper-level animal course with laboratory	4
<input type="checkbox"/> One upper-level plant course, with laboratory	4
	<u>35-36</u>

Chemistry Track

	Credits
<input type="checkbox"/> BIOL 152 and BIOZ 152L Introduction to Biological Sciences II and Laboratory	4
<input type="checkbox"/> BIOL 317 Ecology	3
<input type="checkbox"/> CHEM 102 and CHEZ 102L General Chemistry and Lab	4
<input type="checkbox"/> CHEM 301-302 Organic Chemistry	6
<input type="checkbox"/> CHEZ 301L and CHEZ 302L Organic Chemistry Lab	5
<input type="checkbox"/> CHEM 309 and CHEZ 309L Quantitative Analysis	4
<input type="checkbox"/> GEOG/ENVS 105 and GEOZ/ENVZ 105 L Physical Geology and Lab	4
<input type="checkbox"/> PHYS 202 and PHYZ 202L General Physics and Lab OR PHYS 208 and PHYZ 208L Univ. Physics and Lab	4 or 5
	<u>34-35</u>

General Science Track

	Credits
<input type="checkbox"/> BIOL 315/ENVS 314 Man and Environment, BIOL 332/ENVS 330 Environmental Pollution OR BIOL 317 Ecology	3
<input type="checkbox"/> ENVS/GEOG 401 Meteorology and Climatology	3
<input type="checkbox"/> ENVS/GEOG 411 Oceanography	3
<input type="checkbox"/> PHYS 103 and PHYZ 103L Astronomy Lab	4
<input type="checkbox"/> GEOG/ENVS 105 and GEOZ/ENVZ 105L Physical Geology and Lab OR GEOG 204 and GEOZ 204L Physical Geography and Laboratory	4
<input type="checkbox"/> A second introductory course i(with laboratories) in TWO of the	

following areas: Biology, Physics and Chemistry courses. 8

Two additional courses at the 200 level or higher in mathematics, science, teaching mathematics and/or science with adviser's approval. Recommended upper level courses are BIOL 320, ENVS 335, EDUS 300 and/or 301 6
31-33

Mathematics Track

	Credits
<input type="checkbox"/> MATH 131 Contemporary mathematics	3
<input type="checkbox"/> MATH 211 Mathematical Structures or MATH 300	3
<input type="checkbox"/> MATH 255 Introduction to Computational Math or CMSC 255 Introduction to Programming	3
<input type="checkbox"/> MATH 303 Geometry	3
<input type="checkbox"/> MATH 310 Linear Algebra	3
<input type="checkbox"/> MATH/OPER 327 Mathematical Modeling	3
<input type="checkbox"/> MATH 554 Using Technology in Teaching Math	3
<input type="checkbox"/> MATH 351 Applied Abstract Algebra	3
<input type="checkbox"/> Two additional courses at the 200 level or higher in mathematics, science, teaching mathematics and/or science with adviser's approval. EDUS 300 and/or 301 may be used if student is preparing for teaching	<u>6</u> 30

Physics track

	Credits
<input type="checkbox"/> PHYS 208 University Physics II	5
<input type="checkbox"/> PHYS 320 Modern Physics	3
<input type="checkbox"/> PHYZ 320L Modern Physics Laboratory	1
<input type="checkbox"/> PHYS 301 Classical Mechanics I	3
<input type="checkbox"/> PHYZ 450 Senior Physics Laboratory (WI)	3
<input type="checkbox"/> MATH 201 Calculus and Analytic Geometry	4
<input type="checkbox"/> MATH 301 Differential Equations	3
<input type="checkbox"/> MATH 307 Multivariate Calculus	3
<input type="checkbox"/> An additional 9 credits taken from any of the following: PHYS 307 The physics of Sound and Music, PHYS 103 Elementary Astronomy, PHYZ103L Elementary Astronomy Laboratory, CHEM 102 General Chemistry II, CHEM/FRSZ102L General Chemistry Laboratory II, MATH 327 Mathematical Modeling, or any courses for the bachelor of science in Physics	<u>9</u> 34

Additional degree requirements

- Cumulative 2.00 GPA
- 120 Total Earned Hours
- 45 credits in upper level courses or the equivalent

- At least 30 of the last 45 credits taken at VCU
- 2.00 GPA in major