

Name: _____

ID#: _____

Email: _____

Biology Credits: 35 Chemistry Credits: 47 Total Credits: 136

All biology, chemistry and cognate courses require grades of C or better.

1 Core Biology Courses - 12cr (Required)

		Prereqs	Sem	Grade
BIOL 200	Concepts in Biology (4cr)	△□	None	
R120:201	Found of Cell/Molec (3cr)	△□●	BIOL 200	
R120:202	Found of Cell/Molec Lab (1cr)	△□●	BIOL 200	
BIOL 205	Found of Ecol/Evol (3cr)	△□●	BIOL 200	
BIOL 206	Found of Ecol/Evol Lab (1cr)	△□●	BIOL 200	

2A Ecology and Evolution - 3cr (Choose one class)

BIOL 222	Evolution	△	101/102	
R120:280	Ecology	□	101/102	
R120:282	Animal Behavior	△	101/102	
R120:370	Plant Ecology	□	101/102	

2B Functional Organism - 4cr (Choose one class)

R120:211	Plant Kingdom	□	101/102	
R120:230	Biology of Seed Plants	△	201/202	
R120:330	Plant Physiology	△	201/202	
R120:335	General Microbiology	△	101/102	
R120:340	Mammalian Physiology	△□●	201/202	
R120:342/3	Developmental Biol & Lab	△	201/202	

2C Molecular and Cellular - 3cr (Choose one class)

R120:352	Genetics	□●	201/202	
R120:355	Cell Biology	□	201/202	
R120:356	Molecular Biology	△	201/202	
R120:360	Biochemistry	△●	201/202	

3 Bio Laboratory Courses - 7cr (Choose at least one 4-credit lab class)

↓ Four Credit Laboratories (4cr) ↓				
R120:211	Plant Kingdom	□	101/102	
R120:227	Biology of Invertebrates	△●	101/102	
R120:230	Biology of Seed Plants	△	201/202	
R120:285	Comparative Vertebrate Anatomy	△	101/102	
R120:311	Taxonomy of Vascular Plants	△	211 or 230	
R120:313	Mycology	△	101/102	
R120:325/6	Animal Parasites & Lab	□	201/202	
R120:330	Plant Physiology	△	201/202	
R120:335	General Microbiology	△	101/102	
R120:340	Mammalian Physiology	△□●	201/202	
R120:342/3	Developmental Biol & Lab	△	201/202	
R120:405	Microanatomy of Cells & Tissues	□	201/202	
R120:430	Plant Growth & Development	△□	201/202	
BIOL 451	Cell Physiology & Imaging	□	355, Phys 111	
↓ Three Credit Laboratories (3cr) ↓				
R120:328	Ecology of Birds	□	280 or 270	
R120:380	Field Ecology	□	280	
R120:371	Field Studies Plant Ecol		280 or 270	
R120:381	Field Studies Animal Ecol	△	280	
BIOL 475	Analytical Field Methods	△	280 or 270	
R120:486	Tropical Field Biology	●		

4 Cognate Math Courses - 3 or 4cr (Choose one class) Prereqs Sem Grade

MATH 222	Differential Equations (4cr)	△□●	Math 112	
MATH 227	Mathematical Modeling (4cr)	△	Math 112	
MATH 337	Linear Algebra (3cr)	△□●	Math 112	
MATH 340	Applied Numerical Methods	△□	Math 211	

5 Biology Electives* - 3cr (Choose one class)

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35 Required Biology Credits

Current Total: _____

6 Core Chemistry Courses - 44cr (Required)

CHEM 124	General Chem Lab (1cr)	△□●	Chem 125	
CHEM 125	General Chemistry I (3cr)	△□●	Placement	
CHEM 126	General Chemistry II (3cr)	△□●	Chem 125	
CHEM 221	Analytical Chemical Mthds (2cr)	△□	C126/124	
CHEM 222	Analytical Chemistry (3cr)	△	C126/124	
CHEM 231	Physical Chemistry I (3cr)	△	C126/P111+	
CHEM 235	Physical Chemistry II (3cr)	□	Chem 231	
CHEM 235A	Physical Chemistry II Lab (2cr)	△□	C231/235	
CHEM 243	Organic Chemistry I (3cr)	△□●	Chem 126	
CHEM 244	Organic Chemistry II (3cr)	△□●	Chem 243	
CHEM 244A	Organic Chemistry Lab (2cr)	△□●	Chem 243	
CHEM 336	Physical Chemistry III (3cr)	□	Chem 235	
CHEM 412	Inorganic Chemistry (3cr)	□	Chem 231	
CHEM 473	Biochemistry I (3cr)	△	Chem 244	
CHEM 474	Biochemistry II (3cr)		Chem 473	
CHEM 475	Biochemistry Laboratory (2cr)		Chem 244	
CHEM 480	Instrumental Analysis (2cr)	△	Chem 221	

7 Chemistry Electives* - 3cr (Choose one class)

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47 Required Chemistry Credits

Current Total: _____

8 Cognate Courses (Core Math and Science) - 15cr

MATH 112	Calculus II (4cr)	△□●	Math 111	
MATH 211	Calculus IIIA (3cr)	△□●	Math 112	
PHYS 111	Physics I Lab (3cr)	△□●		
PHYS 111A	Physics I Lab (1cr)	△□●		
PHYS 121	Physics II (3cr)	△□●	Phys 111	
PHYS 121A	Physics II Lab (1cr)	△□●	Phys 111A	

Phys 105, 106 and 121 are equivalent to Phys 111 and 121.

Placement test results determine the appropriate sequence of courses.

15 Required Cognate Course Credits

Current Total: _____

△ Fall □ Spring ● Summer

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General University Requirements for Biology-Chemistry Double Majors

9 English & Cultural History GUR - 9cr

	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
English Composition: Writing, Speaking, Thinking I (3cr)	HUM 101	Placement		
English Composition: Writing, Speaking, Thinking II (3cr)	HUM 102	HUM 101		
GUR Elective: English and Cultural History ¹ (3cr)				

¹ Choice of HUM 211, HUM 212 or HIST 213; or any approved 200-level History course at Rutgers Newark.

10 Mathematics GUR - 7cr

	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
Calculus I (4cr)	Math 111	Placement		
Probability & Statistics (3cr)	Math 333	Math 112		

11 Computer Science GUR - 3cr

	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
Programming for Bioinformatics I (3cr)	BNFO 135	Placement		

12 Physical Education GUR - 2cr

	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
GUR Elective: Physical Education (1cr)				
GUR Elective: Physical Education (1cr)				

13 Basic Social Sciences and Environmental Policy Studies GUR - 6cr

	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
Society, Technology, and the Environment (3cr)	EPS 202	HUM 101		
Economics	SS 201	HUM 102		

14 Management GUR - 3cr

	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
Principles of Management (3cr)	MGMT 390			

15 Lit/Hist/Phil/STS GUR - 3cr

	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
GUR Elective: Lit/Hist/Phil/STS Elective (3cr)				

16 Humanities and Social Science Senior Seminar GUR - 3cr

	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
GUR Elective: HSS Senior Seminar ² (3cr)				

² Choice of HSS 403, 404, 405, 406, 407, 408, 409, 491.

17 GUR Open Elective - 3cr

	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
1. Free Elective (3cr)				

39 General University Requirement Credits

Current Total: _____

5 Biology Electives* - 3cr (Choose one class)

7 Chemistry Electives* - 3cr (Choose one class)

The courses listed below may be used to complete the 35 credits of biology course work and 47 credits of chemistry course work, once approved by the Advisor:

Insects and Human Society (BIOL 225)
 Neurobiology (BIOL/R120:346)
 Human Ecology (R120:365)
 Physiology and Medicine (Math 371)
 Population Biology (Math 372)
 Introduction to Math Biology (Math 373)

Conservation Biology (BIOL 375)
 Biological Ultrastructure (R120:403)
 Light & Elect Microscope (R120:404)
 Biological Invasions (R120:422)
 Comp Neuroscience (Math 430)
 Immunology (R120:443)

Endocrinology (R120:445)
 Cell & Systems Neurosci (Biol 447)
 Neuropathophysiology (BIOL 448)
 Cell Physiology & Imaging (Biol 451)
 Cellular Biophysics-4cr (R120:451)
 Molecular Biotechnology-4cr (R120:452)

Molecular Cell Biology (R120:455)
 Ecological Physiology (R120:471)
 Systems Ecology (R120:487)
 Problems in Biology-6cr (BIOL 491/492)

Notes and Comments: _____