

Name: \_\_\_\_\_

ID#: \_\_\_\_\_

Email: \_\_\_\_\_

**Biology Credits: 38**

**Total Credits: 128**

*All biology 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	
BIOL 205	Found of Ecol/Evol (3cr)	△□●	BIOL 200	
BIOL 206	Found of Ecol/Evol Lab (1cr)	△□●	BIOL 200	
R120:201	Found of Cell/Molec (3cr)	△□●	BIOL 200	
R120:202	Found of Cell/Molec 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	

**2D Computational Biology - 3cr (Choose one class)**

Math 371	Physiology & Medicine	△	Math 222	
Math 372	Population Biology		Math 222	
Math 373	Intro. Mathematical Biology	□	M211/337	
Math 430	Computational Neuroscience	△	M211++	

**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 Biology Electives - 6cr**

		Prereqs	Sem	Grade
↓ Choose Two (3cr) Classes ↓				
BIOL 225	Insects in Society		101/102	
R120:325	Animal Parasites		201/202+	
BIOL 338	Ecology of the Dining Hall	△	205/206	
BIOL 341	Introduction to Neurophysiology		201/202	
R120:342	Developmental Biology		201/202+	
BIOL 344	Physiological Mechanisms		340	
R120:345	Comparative Physiology	□	R120-355/6	
R120:346	Neurobiology	□	R120:201	
R120:350	Immunology	□	201/202	
R120:365	Human Ecology	□	201/202	
BIOL 368	Ecol & Evolution of Disease	□	201/202	
BIOL 375	Conservation Biology	□	202 & 206	
BIOL 383	Neural Basis of Behavior	△	201/202	
R120:402	Biology of Cancer	□	201/202	
R120:422	Biological Invasions		280 or 370 or 371	
BIOL 440	Cell Biology of Disease	△	340 & 355/356	
BIOL 445	Endocrinology	△	R120:340	
BIOL 447	Systems Neuroscience		201/202	
BIOL 448	Neuropathophysiology	□	340	
R120:455	Molecular Cell Biology		355 & 356	
R120:456	Virology	△□●	356	
R120:472	Environmental Assessment	△□●	370 or 371	
BIOL 491/2	Research and Independent Study			
R120:493/4	Seminar in Biology			
BIOL 495	Honors Seminar in Biology	△□	320	

**38 Required Biology Credits**

Current Total: \_\_\_\_\_

**5A Cognate Courses (Core Math and Science) - 30cr**

MATH 112	Calculus II (4cr)	△□●	Math 111	
MATH 211	Calculus IIIA (3cr)	△□●	Math 112	

CHEM 124	General Chem Lab (1cr)	△□●	Chem 125	
CHEM 125	General Chemistry I (3cr)	△□●	Placement	
CHEM 126	General Chemistry II (3cr)	△□●	Chem 125	
CHEM 243	Organic Chemistry I (3cr)	△□●	Chem 126	
CHEM 244	Organic Chemistry II (3cr)	△□●	Chem 243	
CHEM 244A	Organic Chemistry Lab (2cr)	△□●	Chem 243	

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	

**5B Cognate Computer Science Course - 3cr**

BNFO 136	Bioinformatics II	△□	BNFO 135	
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**5C Cognate Math Courses - 3 or 4cr (Choose one class)**

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

**36 Required Cognate Course Credits**

Current Total: \_\_\_\_\_

△ Fall   □ Spring   ● Summer

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GUR Credits: 54

Total Credits: 128

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

**General University Requirements for B.S. Biology Majors**

<b>6 English &amp; Cultural History GUR - 9cr</b>	<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 <sup>1</sup> (3cr)				

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

<b>7 Mathematics GUR - 7cr</b>	<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		

<b>8 Computer Science GUR - 3cr</b>	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
Programming for Bioinformatics I (3cr)	BNFO 135	Placement		

<b>9 Physical Education GUR - 2cr</b>	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
GUR Elective: Physical Education (1cr)				
GUR Elective: Physical Education (1cr)				

<b>10 Basic Social Sciences GUR - 6cr</b>	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
GUR Elective: Social Sciences <sup>2</sup> (3cr)				
GUR Elective: Social Sciences <sup>2</sup> (3cr)				

<sup>2</sup> Two Courses: EPS 202, ECON 201, ECON 265, ECON 266, STS 257, STS 258; or approved Social Science courses at Rutgers Newark.

<b>11 Management GUR - 3cr</b>	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
Principles of Management (3cr)	MGMT 390			

<b>12 Humanities and Social Science Upper Level GUR - 6cr</b>	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
GUR Elective: HSS Upper Level Elective <sup>3</sup> (3cr)				
GUR Elective: HSS Upper Level Elective <sup>3</sup> (3cr)				

<sup>3</sup> Two Courses: 300-level courses in COM, ENG, HIST, LIT, PHIL, STS, THTR; or approved 300-level or above HSS courses at Rutgers Newark.

<b>13 Humanities and Social Science Senior Seminar GUR - 3cr</b>	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
GUR Elective: HSS Senior Seminar <sup>4</sup> (3cr)				

<sup>4</sup> Choice of HSS 403, 404, 405, 406, 407, 408, 409, 491.

<b>14 Technical Electives - 6cr</b>	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
Technical Elective <sup>5</sup> (3cr)				
Technical Elective <sup>5</sup> (3cr)				

<sup>5</sup> Three Courses: Any course in biology, chemistry, math or physics beyond major requirements. Any course in environmental science, computer science or engineering.

<b>15 Free Electives - 9cr</b>	<i>Course</i>	<i>Prereqs</i>	<i>Sem</i>	<i>Grade</i>
1. Free Elective (3cr)				
2. Free Elective (3cr)				
3. Free Elective (3cr)				

**54 General University Requirement Credits** Current Total: \_\_\_\_\_

Notes and Comments: \_\_\_\_\_

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