

B.A. in Biology/Physician Assistant

(120 credit minimum)

Course	Title	Credits
First Year		
1st Semester		
BIOL 200	Concepts in Biology	4
CHEM 125	General Chemistry I	3
MATH 138	General Calculus I	3
HUM 101	English Composition: Writing, Speaking, Thinking I	3
CHEM 125A	General Chemistry Lab I	1
BNFO 135	Programming for Bioinformatics	3
FRSH SEM	Freshman Seminar	0
Term Credits		17
2nd Semester		
BIOL 205	Foundations of Biology: Ecology and Evolution Lecture	3
BIOL 206	Foundations of Biology: Ecology and Evolution Lab	1
CHEM 126A	Gen Chemistry Lab II	1
CHEM 126	General Chemistry II	3
MATH 238	General Calculus II	3
HUM 102	English Composition: Writing, Speaking, Thinking II	3
Free Elective		3
Term Credits		17
Summer		
Select one of the following:		4
R120 141	Anatomy & Physiology ¹	
BIO 121		
Select one of the following:		4
R120 142	Anatomy & Physiology ¹	
BIO 122		
Term Credits		8
Second Year		
1st Semester		
R120 201	Foundations Of Biology	3
R120 202	Foundations Of Biology Lab	1
CHEM 243	Organic Chemistry I	3
MATH 105	Elementary Probability and Statistics	3
Social Science GER		3
STS 210	General Psychology	3
Term Credits		16
2nd Semester		
R120 360	Biochemistry	3
BIOL 340	Mammalian Physiology	4
CHEM 244	Organic Chemistry II	3
CHEM 244A	Organic Chemistry II Laboratory	2
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level)		3
Term Credits		15
Third Year		
1st Semester		
BIOL 285	Comparative Vertebrate Anatomy	4

R120 335	General Microbiology	4
Biology Ecology & Evolution Cluster Elective ²		3
PHYS 102	General Physics	3
PHYS 102A	General Physics Laboratory	1
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level)		3
Term Credits		18
2nd Semester		
R120 352	Genetics	3
Biology Elective		3
Biology Elective		3
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone)		3
PHYS 103	General Physics	3
PHYS 103A	General Physics Laboratory	1
Term Credits		16
Total Credits		107

¹ Anatomy and Physiology may be taken at Rutgers Newark (141/142) or Essex County College (121/122) or at another institution with approval from NJIT Biology Department

² Choice of Evolution (Biol 222 or R120:222), Ecology (R120:280), Animal Behavior (R120:282), Plant Ecology (R120:370)

Code	Title	Credits
Physical Assistant Courses Transferred to NJIT*		
Technical Elective	PHYA4139 Microbiology and Immunology	4
Technical Elective	PHYA4120 Anatomy and Physiology I	3
Free Elective	PHYA4180 Biochemistry	3
Free Elective	PHYA4161 Cell Biology & Histology	3
Total Credits		13

* Other courses may be substituted as necessary

Code	Title	Credits
NJIT Credits		107
Transfer Credits		13
Biology Credits		39
Total Credits		120

Biology Electives

Code	Title	Credits
R120 211	Plant Kingdom	4
BIOL 222	Evolution	3
or R120 222	Evolution	
R120 227	Biol Invertebrates	4
R120 230	Biology Of Seed Plants	4
R120 282	Animal Behavior	3
R120 280	Ecology	3
R120 311	Flora of New Jersey	4
R120 313	Mycology	4
BIOL 315	Principles of Neurobiology	3
R120 325	Animal Parasites	4
& R120 326	and Parasitology Lab	
R120 328	Ornithology	3
BIOL 337	Collective Intel in Biol Syst	3

R120 330	Plant Physiology	4
BIOL 338	Ecology of the Dining Hall	3
BIOL 341	Introduction to Neurophysiology	3
R120 342 & R120 343	Developmental Biology and Developmental Biology Lab	4
BIOL 344	Physiological Mechanisms	3
R120 345	Comparative Physiology	3
R120 346	Neurobiology	3
BIOL 347	Lab Approaches in Neuroscience	4
BIOL 350	Immunology	3
R120 355	Cell Biology	3
R120 356	Molecular Biology	3
R120 365	Evolutions of Humans	3
R120 370	Plant Ecology	3
R120 371	Field Study Plant Ecology	3
BIOL 375	Conservation Biology	3
R120 380	Field Ecology	3
R120 381	Ecological History of North Am	3
BIOL 383	Neural Basis of Behavior	3
BIOL 385	Evolution of Animal Behavior Laboratory	3
BIOL 400	Biology in Science Fiction	3
R120 402	Biology of Cancer	3
R120 404	Intro to Neuroanatomy	4
R120 405	Microanatomy of Cells	4
R120 422	Biological Invasions	3
R120 430	Plant Growth & Development	4
BIOL 440	Cell Biology of Disease: Cells gone Bad!	3
BIOL 445	Endocrinology	3
BIOL 447	Systems Neurobiology	3
BIOL 448	Neuropathophysiology: Nervous System Gone Bad!	3
BIOL 451	Cell Physiology and Imaging	4
R120 455	Molec Cell Biology	3
R120 456	Virology	3
BIOL 462	Comparative Biomechanics	3
R120 472	Environmental Assessment	3
BIOL 475	Ecological Field Methods and Analysis	3
BIOL 491 & BIOL 492	Research and Independent Study and Research and Independent Study	6
BIOL 495	Honors Seminar in Biology	3