

B.A. in Biology/Physician Assistant

(120 credit minimum)

First Year

1st Semester		Credits
BIOL 200	Concepts in Biology	4
CHEM 125 or CHEM 121	General Chemistry I ¹ or Fundamentals of Chemical Principles I	3
CHEM 125A	General Chemistry Lab I	1
MATH 138	General Calculus I	3
ENGL 101	English Composition: Introduction to Academic Writing	3
BNFO 135 or CS 101	Programming for Bioinformatics or Computer Programming and Problem Solving	3
FYS SEM	First-Year Student 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 126 or CHEM 122	General Chemistry II ¹ or Fundamentals of Chemical Principles II	3
CHEM 126A	Gen Chemistry Lab II	1
ENGL 102	English Composition: Introduction to Writing for Research	3
MATH 105	Elementary Probability and Statistics	3
PSY 210	Introduction to Psychology	3
Term Credits		17

Second Year**1st Semester**

BIOL 201	Found of Biol: Cell & Molecula	3
BIOL 202	Found of Biol: Cell & Molecula	1
CHEM 243	Organic Chemistry I	3
Social Science GER		3
History and Humanities GER 300+ level (https://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
Free Elective ²		3
Term Credits		16

2nd Semester

BIOL 340	Mammalian Physiology	4
BIOL 352 or R120 352	Genetics or Genetics	3
CHEM 244	Organic Chemistry II	3
CHEM 244A	Organic Chemistry I Laboratory	2
History and Humanities GER 300+ level (https://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
Free Elective ²		3
Term Credits		18

Third Year**1st Semester**

BIOL 421	Comparative Vertebrate Anatomy	4
R120 335	General Microbiology	4
Biology Ecology & Evolution Cluster Elective ³		3
PHYS 102	General Physics I	3
PHYS 102A	General Physics I Lab	1

Humanities and Social Science Senior Seminar GER (<https://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/>) 3

Term Credits		18
2nd Semester		
Biology Elective		3
Biology Elective 400 level		3
CHEM 473 or R120 360	Biochemistry or Biochemistry	3
PHYS 103	General Physics II	3
PHYS 103A	General Physics II Lab	1
Biology Elective		3
Term Credits		16
Total Credits		102

¹ CHEM 121 and CHEM 122 require permission from the academic adviser

² Free Elective - Any course at any level except MATH 107, 108, 110, HUM 099, 100.

³ Choice of Evolution (Biol 222 or R120:222), Ecology (R120:280), Animal Behavior (BIOL 382), Plant Ecology (R120:370)

Code	Title	Credits
Physical Assistant Courses Transferred to NJIT*		
Technical Elective	PHYA4139 Microbiology and Immunology	3
Technical Elective	PHYA4120 Anatomy and Physiology I	3
Free Elective	PHYA4180 Biochemistry	3
Free Elective	PHYA4161 Cell Biology & Histology	3
Technical Elective	PHYA 4150 Macromolecules and Cellular Components	3
Free Elective	PHYA 4151 Cells and Tissues	3
Total Credits		18

Code	Title	Credits
NJIT Credits		102
Transfer Credits		18
Biology Credits		42
Total Credits		120

Biology Electives

Code	Title	Credits
BIOL 222	Evolution	3
BIOL 280 or R216 280	Ecology Ecology	3
BIOL 315	Principles of Neurobiology	3
BIOL 320	Discovering Biological Research	3
BIOL 337	Collective Intel in Biol Syst	3
BIOL 338	Ecology of the Dining Hall	3
BIOL 342	Developmental Biology (Embryology)	3
BIOL 350	Immunology	3
BIOL 352 or R120 352	Genetics Genetics	3
R120 355	Cell Biology	3
R120 356	Molecular Biology	3
R216 365	Evolutions of Humans	3
R120 370	Plant Ecology	3
BIOL 375	Conservation Biology	3
BIOL 376	Biological Applications of Geographic Information Systems	3

BIOL 382	Animal Behavior	3
BIOL 383	Neural Basis of Behavior	3
BIOL 400	Biology in Science Fiction	3
R120 402	Biology of Cancer	3
R216 422	Biological Invasions	3
BIOL 423	Physiological Mechanisms	3
BIOL 424	Comparative Physiology	3
BIOL 432	Intro to Comp Neuroscience	3
BIOL 436	Advanced Neuroscience Modeling	3
BIOL 440	Cell Biology of Disease: Cells gone Bad!	3
BIOL 441	Neurophysiology	3
BIOL 443	Biology of Addiction	3
BIOL 445	Endocrinology	3
BIOL 447	Systems Neurobiology	3
BIOL 448	Neuropathophysiology: Nervous System Gone Bad!	3
BIOL 453	Applied Genetics & Genomics	3
R120 456	Virology	3
BIOL 462	Comparative Biomechanics	3
BIOL 468	Disease Ecology & Evolution	3
BIOL 470	Dynamic Princ in Systems BIOL	3
R120 472	Environmental Assessment	3
BIOL 475	Ecological Field Methods and Analysis	3
BIOL 491	Research and Independent Study	3
BIOL 492	Research and Independent Study	3
BIOL 495	Honors Seminar in Biology	3
BIOL 498	Special Topics in Biology	3