

B.S. in Biochemistry

(120 Credits)

First Year

1st Semester		Credits
CHEM 121 or CHEM 125	Fundamentals of Chemical Principles I or General Chemistry I	3
CHEM 125A	General Chemistry Lab I	1
ENGL 101	English Composition: Introduction to Academic Writing	3
MATH 111	Calculus I ^a	4
FYS SEM	First-Year Student Seminar	0
BIOL 200	Concepts in Biology	4
Term Credits		15

2nd Semester

CHEM 122 or CHEM 126	Fundamentals of Chemical Principles II or General Chemistry II	3
CHEM 126A	Gen Chemistry Lab II	1
MATH 112	Calculus II	4
ENGL 102	English Composition: Introduction to Writing for Research	3
BIOL 201	Found of Biol: Cell & Molecula	3
BIOL 202	Found of Biol: Cell & Molecula	1
Term Credits		15

Second Year**1st Semester**

CHEM 222	Analytical Chemistry	3
CHEM 243	Organic Chemistry I	3
MATH 211	Calculus III A	3
PHYS 111	Physics I	3
PHYS 111A	Physics I Lab	1
History and Humanities GER 200 level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/)		3
Term Credits		16

2nd Semester

CHEM 244	Organic Chemistry II	3
CHEM 244A	Organic Chemistry I Laboratory	2
CHEM 221	Analytical Chemical Methods	2
PHYS 121	Physics II	3
PHYS 121A	Physics II Lab	1
BIOL 205	Foundations of Biology: Ecology and Evolution Lecture	3
BIOL 206	Foundations of Biology: Ecology and Evolution Lab	1
CHEM 210	Frontiers in Chemistry	1
Term Credits		16

Third Year**1st Semester**

CHEM 473	Biochemistry ¹	3
CHEM 475	Biochemistry Lab I ¹	2
CHEM 231	Physical Chemistry I	3
EPS 202	Society, Technology, and the Environment	3
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
Term Credits		14

2nd Semester

CHEM 235	Physical Chemistry II	3
CHEM 474	Biochemistry II ¹	3
BIOL 352	Genetics	3
CHEM 480	Instrumental Analysis ¹	2
BNFO 135	Programming for Bioinformatics	3

Term Credits	14
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Fourth Year**1st Semester**

MATH 225	Survey of Probability and Statistics	1
CHEM 339	Physical Chemistry Laboratory	2
R120 356	Molecular Biology ¹	3
EVSC 385	Environmental Microbiology ¹	3
Technical Elective ¹		3
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3

Term Credits	15
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2nd Semester

Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)		3
Technical Elective ¹		3
Technical Elective ¹		3
Technical Elective ¹		3
CHEM 491	Research and Independent Study I	3

Term Credits	15
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Total Credits	120
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¹ 33 credits of these courses must be taken at NJIT, Rutgers-Newark, or Essex County College by all students.

a Students who do not place initially into Math 111 must take the prerequisite(s) first and catch up to the math sequence ASAP.

b CS 113 is also acceptable, but it has a pre-requisite of CS 100, adding 3 more credits unless AP or transfer credit is obtained.

All students are required to satisfy the General Education Requirements (GER). Refer to the General Education Requirements (<http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/>) “Refer to the General Education Requirements for specific information for GER courses”

This curriculum represents the maximum number of credits per semester for which a student is advised to register. A full-time credit load is 12 credits.

First-year students are placed in a curriculum that positions them for success which may result in additional time needed to complete curriculum requirements. Continuing students should consult with their academic advisor to determine the appropriate credit load.