

# BIOLOGY WITH TEACHER CERTIFICATION (BIOLOGY), B.A.

Completion of this major prepares one to assume the responsibilities of a biology teacher in elementary, middle, or high schools in which science is taught as a separate subject. Continued study may include a Master's degree in biology or a related discipline or a Master's degree and doctorate in education.

THE REQUIREMENTS FOR ADMISSION TO THIS CONCENTRATION ARE:

- A minimum cumulative undergraduate grade point average (CGPA) of 3.0.
- A minimum of B- or better on all education courses
- Passing scores on the Praxis CORE, or 560 verbal, 540 Math on the SAT, or 23 or higher on the ACT, or 155 verbal, 156 quantitative on the GRE.

Passing scores on the Praxis CORE Academic Skills for Educators Tests, as of 9/1/15:

- Math Test#5732 Passing Score 150
- Reading Test#5712 Passing Score 156
- Writing Test#5722 Passing Score 162

For more information on Praxis exams: <https://www.ets.org/praxis/nj/requirements> (<https://www.ets.org/praxis/nj/requirements/>)

THE REQUIREMENTS FOR COMPLETION OF THIS DEGREE TRACK ARE:

- Completion of NJCU General Education requirements or equivalent
- Passing scores on appropriate Praxis II Exam
- A minimum cumulative GPA of 3.0
- Successful completion of clinical experience and clinical practice (student teaching)

This includes successful submission of the performance assessment, edTPA, as required by the New Jersey Department of Education.

*Note: For the most updated information on this teaching certification program, students are directed to contact the College of Education as changes may have occurred since publication.*

Code	Title	Credits
<b>Required</b>		
BIOL 130	Principles Biology I	4
BIOL 131	Principles Biology II	4
BIOL 230	Cell Biology	4
BIOL 236	Anatomy & Physiology I	4
BIOL 237	Anatomy & Physiology II	4
BIOL 304	Genetics	4
BIOL 402	Ecology	4
BIOL 440	Biology Seminar	1
CHEM 105	General Chemistry I Lecture	3
CHEM 1105	General Chemistry I Recitation/Laboratory	2
CHEM 106	General Chemistry II Lecture	3

CHEM 1106	General Chemistry II Recitation/Laboratory	2
PHYS 101	Basic Concepts of Physics	3
EESC 109	Principles of Environmental Science	3
MATH 175	Enhanced Precalculus	4
INTD 180	Computers Tools for Science and Math	3
or MATH 140	Statistics I	
or PSYC 230	Statistics for Social Sciences	

<b>Electives</b>		
Select a minimum of seven credits of Biology courses numbered 300 or higher, at least three of which must be numbered 400 or higher		7

<b>Required General Studies Program Courses</b>		
WGST 110	Diversity and Difference: Identities, Communities, and Cultures	3
MATH 215	Problem Solving in Mathematics	3
LTED 160	Languages of Power and Social Justice	3

<b>Required Education Courses</b>		
Phase I :		
EDU 280	Challenges in Urban Education	3
LTED 230	Focus: Reading Language & Literacy	3
Phase II:		
EDU 330	Focus: Development, Behavior and Learning	3
EDU 371	Grades 7-12 Methods/Materials	3

Phase III: Courses should be taken concurrently; offered fall semester only		
LTED 370	Secondary:Reading & Language Workshop	2
EDU 3372	Methods and Materials of Teaching Science in Middle and Secondary Schools	3
EDU 331	Clinical Practice I	2
Phase IV:		
EDU 470	Concurrent Student Teaching Seminar	2
EDU 480	Clinical Practice II	8
EDU 485	Classroom Management and Assessment Internship Seminar	2

1. Required of students who have yet to meet Praxis Core Math requirement.
2. Strongly recommended for students who have yet to meet Praxis Core Writing and Reading requirements.
3. Students must successfully complete a minimum of 5 Biology major courses at NJCU.
4. Credits earned for Biology courses more than 10 years ago may not satisfy department requirements.
5. A minimum grade of "C" is required in each Biology, Chemistry, Physics and Mathematics course in order to receive the BA in Biology.
6. Students must achieve an average of "C" (2.0) or better in Principles of Biology I & II before enrolling in higher-level Biology courses.
7. Students must successfully complete each required course within three attempts to remain in the BA in Biology program.
8. Students must successfully complete both Anatomy & Physiology I and II to earn Biology elective credits.
9. Students may apply up to 6 credits of Biology Research or Coop Education toward the BA in Biology requirements.

10. Biology electives should be selected from courses numbered higher than BIOL 230.

<b>Freshman</b>		
<b>Semester 1</b>		<b>Credits</b>
ENGL 101 or ESL 101	English Composition I or English Composition I for English as a Second Language Students	4
INTD 101	Orientation to College <small>First time freshman only</small>	1
MATH 175	Enhanced Precalculus	4
BIOL 130	Principles Biology I	4
WGST 110	Diversity and Difference: Identities, Communities, and Cultures	3
<b>Credits</b>		<b>16</b>
<b>Semester 2</b>		
ENGL 102 or ESL 101	English Composition II or English Composition I for English as a Second Language Students	4
BIOL 131	Principles Biology II	4
MATH 140	Statistics I	3
EESC 109	Principles of Environmental Science	3
<b>Credits</b>		<b>14</b>
<b>Sophomore</b>		
<b>Semester 1</b>		
BIOL 230	Cell Biology	4
CHEM 105	General Chemistry I Lecture	3
CHEM 1105	General Chemistry I Recitation/Laboratory	2
EDU 280	Challenges in Urban Education	3
LTED 230	Focus: Reading Language & Literacy	3
<b>Credits</b>		<b>15</b>
<b>Semester 2</b>		
BIOL 304	Genetics	4
CHEM 106	General Chemistry II Lecture	3
CHEM 1106	General Chemistry II Recitation/Laboratory	2
PHYS 101	Basic Concepts of Physics	3
General Education Tier II course		3
<b>Credits</b>		<b>15</b>
<b>Junior</b>		
<b>Semester 1</b>		
BIOL 236	Anatomy & Physiology I	4
EDU 330	Focus: Development, Behavior and Learning	3
EDU 371	Grades 7-12 Methods/Materials	3
Biology Major Elective		3
General Education Tier II course		3
<b>Credits</b>		<b>16</b>
<b>Semester 2</b>		
BIOL 237	Anatomy & Physiology II	4
Biology Major Elective		4
General Education Tier II Course		3
General Education Tier II Course		3
General Education Tier II Course		3
<b>Credits</b>		<b>17</b>

**Senior****Semester 1**

BIOL 402	Ecology	4
EDU 331	Clinical Practice I	2
EDU 3372	Methods and Materials of Teaching Science in Middle and Secondary Schools	3
LTED 370	Secondary:Reading & Language Workshop	2
General Education Tier III Capstone Course		3
<b>Credits</b>		<b>14</b>

**Semester 2**

BIOL 440	Biology Seminar	1
EDU 470	Concurrent Student Teaching Seminar	2
EDU 480	Clinical Practice II	8
EDU 485	Classroom Management and Assessment Internship Seminar	2
<b>Credits</b>		<b>13</b>
<b>Total Credits</b>		<b>120</b>