BIOLOGICAL SCIENCE EDUCATION (K-12)
Five-Year Teacher Education Program (GSE)
Revised January, 2016 – For students earning a bachelor's degree in May, 2017

New requirements forthcoming for students applying after February, 2016

I. MAJOR: Every candidate for certification in Biological Sciences Education must complete a full major in a life science (animal science, biotechnology, biological science, cell biology and neuroscience, ecology and natural resources, environmental science [life science option], food science, genetics and microbiology, marine science [life science option], molecular biology, nutritional sciences, plant science, physiology). Regardless of the major chosen, at least 30 credits of coursework in the life sciences must be included. Major:

The program has four major goals:
1. To help students develop a view of science as a knowledge building enterprise and understand the scientific practices associated with scientific inquiry.
2. To help students learn pedagogical content knowledge of biological sciences, i.e., content specific teaching methods in these disciplines.
3. To familiarize students with current state and national standards in life science education.
4. To provide students with the knowledge and skills of integrating technology into biological science instruction.

II. GENERAL EDUCATION: Students are required to take coursework in each of the following areas by completion of the program; fulfillment of these courses is not required for admission into the program. It is highly recommended that you coordinate the elements of this list with those of the general distribution requirements of your undergraduate college to make the most efficient use of your time.

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>Course Number—Course Title—Term/Year—Grade</th>
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</thead>
<tbody>
<tr>
<td>1. Arts (music theory, art history or appreciation theater appreciation, film appreciation, or dance appreciation)</td>
<td>1.</td>
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<tr>
<td>2. Humanities (languages, linguistics, religion, literature, philosophy, classics, history)</td>
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<td>4. Science (life, earth and space, physical, or environmental)</td>
<td>4.</td>
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<td>5. Technology</td>
<td>05:300:462 Demonstration and Technology in Science Teaching (to be taken ONLY after admission into program)</td>
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<td>6. Foreign Language (two semesters or demonstrated competence equal to the second semester)</td>
<td>6.</td>
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</table>
### III. PROFESSIONAL EDUCATION REQUIREMENTS—BIOLOGICAL SCIENCE EDUCATION

<table>
<thead>
<tr>
<th>YEAR</th>
<th>COURSE #</th>
<th>TITLE OF COURSE</th>
<th>CRs</th>
<th>Undergrad Credits</th>
<th>Graduate Credits</th>
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</thead>
<tbody>
<tr>
<td>First</td>
<td></td>
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<tr>
<td>Sophomore or Junior</td>
<td>05:300:200</td>
<td>Introduction to Education*</td>
<td>3</td>
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<td></td>
<td>05:300:306</td>
<td>Educational Psychology: Principles of Classroom Learning</td>
<td>3</td>
<td></td>
<td>6</td>
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<tr>
<td>Senior Fall</td>
<td>05:300:401</td>
<td>Individual and Cultural Diversity in the Classroom</td>
<td>3</td>
<td></td>
<td>6</td>
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<tr>
<td></td>
<td>11:300:450</td>
<td>Biology &amp; Society</td>
<td>3</td>
<td></td>
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<td></td>
<td>(15:256:550)</td>
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<tr>
<td>Senior Spring</td>
<td>05:300:462</td>
<td>Demonstration and Technology in Science Teaching</td>
<td>3</td>
<td></td>
<td>6</td>
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<tr>
<td></td>
<td>11:300:453</td>
<td>Teaching Life Science*</td>
<td>3</td>
<td></td>
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<tr>
<td></td>
<td>(15:256:553)</td>
<td></td>
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<tr>
<td>Summer (Ed.M.)</td>
<td>15:255:533</td>
<td>Assessment and Measurement for Teachers</td>
<td>2</td>
<td></td>
<td>5</td>
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<tr>
<td></td>
<td>Grad Level</td>
<td>Elective in Life Science or Science Education*</td>
<td>3</td>
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<tr>
<td>Fifth (Ed.M.)</td>
<td>15:255:534</td>
<td>Classroom Organization</td>
<td>1</td>
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<tr>
<td>Fall</td>
<td>15:255:535</td>
<td>Teaching Internship**</td>
<td>9</td>
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<td>13</td>
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<tr>
<td></td>
<td>15:255:536</td>
<td>Teaching Internship Seminar</td>
<td>3</td>
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<tr>
<td>Spring</td>
<td>15:255:539</td>
<td>The Teaching Professional</td>
<td>3</td>
<td></td>
<td>12</td>
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<tr>
<td></td>
<td>15:293:523</td>
<td>Inclusive Teaching in Education</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>15:256:556</td>
<td>Understanding Evolution: A Classroom Perspective</td>
<td>3</td>
<td></td>
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<tr>
<td></td>
<td>Grad Level</td>
<td>Elective in Life Science or Science Education*</td>
<td>3</td>
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**TOTAL CREDITS** 18 30

* This course has a field experience component.
** One semester of supervised full-time teaching in the classroom of a cooperating teacher.
# Course must be 300-level or above to count towards graduate credits. 300- and 400-level courses must be registered for with a G-prefix.

### IV. LIBERAL ARTS: The total number of credits in coursework in Liberal Arts, including the major, must be at least 90. Neither Education courses, nor any other vocationally-oriented coursework (accounting, engineering, etc.) may be counted toward the 90 liberal arts credits; no School 05, School 15, or E-credit courses may be included. Please see Degree Navigator for a complete list of liberal arts courses.

### V. PORTFOLIO: Students will be participating in an on-line instructional and evaluation system that will archive artifacts from classes to be specified by the faculty. Students must submit artifacts for this on-line portfolio throughout their program as directed by their program faculty. Details of this portfolio are specified in the Student Policy and Procedures Handbook.

### VI. PRAXIS II: Students seeking certification in biological sciences must achieve passing scores on the Biology: Content Knowledge (test code 0235/5235) and General Science: Content Knowledge (test code 0435/5435) Praxis II examinations.

### VII. HIB TRAINING: All candidates for teacher certification must complete pre-service training in the prevention of harassment, intimidation, and bullying (HIB) prior to teaching internship.

### VIII. PHYSIOLOGY, HYGIENE, AND SUBSTANCE ABUSE ISSUES: During their final semester, students must pass the official New Jersey Department of Education examination addressing issues of human physiology, hygiene, and substance abuse.