BIOLOGY, B.S.ED.

Major in Biology, BSE

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 101</td>
<td>Foundations of Biology</td>
<td>4</td>
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REQUIRED BIOLOGY COURSES

Biology majors must earn grades of C- (C minus) or higher in BIOL 101, 211, 221, 343, 362 and 364.

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<tr>
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<tr>
<td>BIOL 211</td>
<td>Concepts of Zoology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 221</td>
<td>Concepts of Botany</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 343</td>
<td>Principles of Ecology &amp; Evolution</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 362</td>
<td>Cell and Developmental Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 364</td>
<td>Foundations of Genetics &amp; Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 375</td>
<td>Biometry</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 473</td>
<td>Methods/Teaching Biological Issues in the Secondary School</td>
<td>1</td>
</tr>
</tbody>
</table>

ELECTIVES

undefined - Choose 4 hours from:

- Any BIOL course(s)

Note: This requirement may not be satisfied with BIOL 100, BIOL 204, BIOL 205, BIOL 207, BIOL 208, BIOL 247, BIOL 281, or BIOL 340.

Total Hours 32

Professional Education

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDFN 211</td>
<td>Foundations Modern Education</td>
<td>3</td>
</tr>
<tr>
<td>EDFN 241</td>
<td>Psychological Foundations of Teaching</td>
<td>3</td>
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REQUIRED EDUCATION COURSES

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<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>EDSE 321</td>
<td>Issues in Secondary Education</td>
<td>3</td>
</tr>
<tr>
<td>EDFN 330</td>
<td>Instructional Technology, Design &amp; Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDSE 435</td>
<td>Teaching of Science in Secondary Schools</td>
<td>3</td>
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ACCOMMODATIONS AND ADAPTATIONS

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>EDSE 340</td>
<td>Content Area Literacy for Diverse Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>SPED 346</td>
<td>Secondary Students w/Disabilities in Inclusive Settings</td>
<td>3</td>
</tr>
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STUDENT TEACHING

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>EDSE 471</td>
<td>Student Teaching Seminar</td>
<td>3</td>
</tr>
<tr>
<td>EDSE 461</td>
<td>Student Teaching in Science</td>
<td>9</td>
</tr>
</tbody>
</table>

Total Hours 28-35

Advanced Professional Studies, BSE

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<tr>
<th>Code</th>
<th>Title</th>
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- English Composition - Choose 1 of the following: 3
- ENGL 110 | English Composition                          | 3     |
- ENGL 110H | Hnrs:English Composition                    | 3     |
- English Literature - Choose 1 of the following: 3
- ENGL 230 | Introduction to Literature                  | 3     |
- ENGL 231 | World Literature 1                          | 3     |
- ENGL 232 | World Literature 2                          | 3     |
- ENGL 233 | Early British Literature                    | 3     |
- ENGL 234 | Later British Literature                    | 3     |
- ENGL 235 | American Literary Tradition I               | 3     |
- ENGL 236 | American Literary Tradition II              | 3     |
- ENGL 241H | H:Explorations in World Lit                 | 3     |
- ENGL 242 | Reading Our World:                          | 3     |
- ENGL 292 | Science Fiction                             | 3     |

CHEM 111 | Introductory Chemistry 1                    | 4     |
CHEM 112 | Introductory Chemistry 2                    | 4     |

Organic Chemistry - Choose 1 of the following options 1-2: 4-8

Option 1. Organic Chemistry I and II
- CHEM 231 | Organic Chemistry 1                         | 4     |
- CHEM 232 | Organic Chemistry 2                         | 4     |

Option 2. Short Course in Organic Chemistry
- CHEM 235 | Organic Chemistry                           | 4     |

Biochemistry

- CHEM 326 | Biochemistry 1                              | 4     |

CHEMISTRY

A C- or higher in CHEM 111 and 112 is a pre-requisite for CHEM 235.
A C- or higher in CHEM 231 is a pre-requisite for CHEM 232. Students considering going to graduate school for an advanced degree in Biology should take CHEM 231 + 232.

For Biology Majors the G2 block of the Liberal Arts Core will be fulfilled by your required related coursework.

*Clearances are valid for one year from the date that appears in the header of this degree audit in the field 'Clearance Date.' Clearances cannot expire in the middle of a semester.

APS REQUIREMENTS

English Composition - Choose 1 of the following: 3
- ENGL 110 | English Composition                          | 3     |
- ENGL 110H | Hnrs:English Composition                    | 3     |

English Literature - Choose 1 of the following: 3
- ENGL 230 | Introduction to Literature                  | 3     |
- ENGL 231 | World Literature 1                          | 3     |
- ENGL 232 | World Literature 2                          | 3     |
- ENGL 233 | Early British Literature                    | 3     |
- ENGL 234 | Later British Literature                    | 3     |
- ENGL 235 | American Literary Tradition I               | 3     |
- ENGL 236 | American Literary Tradition II              | 3     |
- ENGL 241H | H:Explorations in World Lit                 | 3     |
- ENGL 242 | Reading Our World:                          | 3     |
- ENGL 292 | Science Fiction                             | 3     |
ENGL 333  African-American Literature 1
ENGL 333H  Hnrs:African American Lit 1
ENGL 334  African American Literature 2
ENGL 334H  Hnrs:African American Lit 2
ENGL 336  New Dimensions to World Lit
ENGL 338  Folklore and Literature
ENGL 401  Old Eng Lang and Literature
ENGL 402  Middle Eng Lang and Literature

Mathematics
Two Mathematics courses are required for BSE students. You have taken 0 course(s). It is preferable to take two courses designated as G2. Click here to search for MATH courses on the current web schedule. BIOL 375 will fulfill one Mathematics course for BSE BIOL students.

EDFN 211 & EDFN 241  Foundations Modern Education and Psychological Foundations of Teaching 6

48 earned (transcript) credit hours are required

APS registration status
You ARE NOT eligible to register for courses requiring APS status.

ACT 126 - Educator Ethics Training
You must submit your Educator Ethics Training.

Pre-Service Testing Required
Pre-Service Testing Status is indicated by one of the following: 1.) PSTA - Pre-Service Testing Accomplished: Verified passing pre-service test scores meet the requirement. 2.) PSTI - Pre-Service Testing Incomplete: Non-passing pre-service test scores were submitted prior to the August 1, 2015 policy change. Passing scores must still be achieved in order to meet the PA certification requirements. 3.) PSTU - Pre-Service Testing Unverified: Unofficial copies of pre-service test scores were submitted. Official scores must be sent from the testing company in order to meet PA certification requirements. 4.) PSTX - Pre-Service Testing Waived: Per PDE - ACT 136, the Pre-Service Testing Requirement has been waived.

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Your GPA is below 3.0 - please see an advisor
If you are given the 2.8 GPA Exception for graduation and you graduate with a GPA lower than 3.0, you must have higher certification test scores in order to meet PA state certification requirements.

No dispositions-related holds
If the requirement above is checked as complete, then there are currently no dispositions-related holds on your APS Status. Registration for APS courses is permitted when all APS requirements have been met. If it is incomplete, you have a hold and APS registration will not be allowed.

Full Admission to APS
When all requirements are met, you must submit application for admission to APS status. Click here for the application.

Total Hours 12