Biology, A.A.

Degree Offered
• Associate of Arts

Nature of the Program
The associates program in biology is intended to provide students with a core foundation in biology, chemistry and math so they can be successful in a bachelor degree program. While there is only one associate degree program in biology, students planning to enter a bachelor degree program may choose to receive either a bachelor of science or a bachelor of arts in biology. The bachelor programs vary predominately in their foreign language and math requirements. If pursuing a bachelor of arts degree, six credit-hours of a foreign language at the intermediate level are required. If pursuing a bachelor of science degree, foreign language is not required. Students should discuss the differences with their academic advisor.

The associate degree program provides the initial four-semester core sequence in the biological sciences required to complete a bachelor program in biology at West Virginia University. Students planning to enter a bachelor program at another institution should determine the transfer equivalencies for the courses offered at Potomac State College of WVU and the institution they plan to attend following completion of the associate degree program.

Career Opportunities
An associate degree followed by a bachelor degree in biology provides excellent preparation for students planning to apply to graduate programs in the biological sciences or to professional schools/programs, such as medical, osteopathic, dental, physical or occupational therapy, optometry, pharmacy, veterinary medicine, physician assistant, and chiropractic. In addition, a bachelor degree in biology prepares students for a variety of careers including medicine, biotechnology, genetics, forensics, ecology, environmental biology, and other biologically-related technical fields in government and private industry. Furthermore, with the appropriate electives, a student with a bachelor degree in biology may also choose to enter the fields of law, journalism, education, business, health care administration, pharmaceutical sales, or work for a variety of federal agencies. Due to the variety of careers and opportunities available with a degree in biology, students should discuss their interests with their academic advisor, who can help advise them in selecting appropriate elective courses.

FACULTY
CHAIR
• Vicki Huffman - Ph.D. Biomedical Science
  Year @ PSC (2005)

PROFESSOR
• Vicki Huffman - Ph.D. Biomedical Science
  Year @ PSC (2005)

ASSOCIATE PROFESSORS
• Sheri Chisholm - Ph.D. Institutional Leadership and Biology Education
  Year @ PSC (2009)
• Erin Cunningham - M.S. Biology
  Year @ PSC (2007)

ASSISTANT PROFESSOR
• Viktor Frazier - M.S. Biology
  Year @ PSC (2018)

General Education Foundations
Please use this link to view a list of courses that meet each GEF requirement. (http://registrar.wvu.edu/gef/)

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

General Education Foundations
F1 - Composition & Rhetoric

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Introduction to Composition and Rhetoric</td>
</tr>
<tr>
<td>&amp; ENGL 102</td>
<td>and Composition, Rhetoric, and Research</td>
</tr>
</tbody>
</table>
or ENGL 103

F2A/F2B - Science & Technology 4-6
F3 - Math & Quantitative Reasoning 3-4
F4 - Society & Connections 3
F5 - Human Inquiry & the Past 3
F6 - The Arts & Creativity 3
F7 - Global Studies & Diversity 3
F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) 9

Total Hours 31-37

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

Curriculum Requirements

A GPA of 2.0 in Biology coursework is required for graduation.

GEF Requirements (4, 5, or 6)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 101</td>
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</tr>
<tr>
<td>&amp; ENGL 102</td>
<td>6</td>
</tr>
<tr>
<td>BIOL 115 &amp; 115L</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 117L</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 219 &amp; 219L</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 221</td>
<td>3</td>
</tr>
<tr>
<td>&amp; 116 &amp; 116L</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 233 &amp; 233L</td>
<td>4</td>
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<tr>
<td>&amp; 234 &amp; 234L</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 115 &amp; 115L</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 116 &amp; 116L</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 233 &amp; 233L</td>
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<tr>
<td>WVUE 191</td>
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Tracks (Select one of the following):

<table>
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<tr>
<th>Track</th>
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<tbody>
<tr>
<td>BA Track</td>
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<tr>
<td>MATH 150</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language (12 credit hours required)</td>
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<tr>
<td>BS Track</td>
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<tr>
<td>MATH 155</td>
<td>3</td>
</tr>
<tr>
<td>STAT 211</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 101 &amp; 101L</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 102 &amp; 102L</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>1</td>
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</tbody>
</table>

Total Hours 60

Suggested Plan of Study (BA Track)

First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 115 &amp; 115L</td>
<td>4</td>
<td>ENGL 101 (GEF 1)</td>
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</tbody>
</table>
CHEM 115 & 115L (GEF 8) 4 BIOL 117 & 117L (GEF 8) 4
MATH 150 (GEF 3) 3 CHEM 116 & 116L (GEF 8) 4
WVUE 191 1 Foreign Language 3
Foreign Language 3 HLSC 270 (or Elective) 1

Second Year

Fall | Hours | Spring | Hours
---|---|---|---
ENGL 102 (GEF 1) | 3 BIOL 221 | 3
BIOL 219 & 219L | 4 CHEM 234 & 234L | 4
CHEM 233 & 233L | 4 GEF Elective (4, 5, or 6) | 3
Foreign Language or Elective | 3 GEF Elective (4, 5, or 6) | 3
Foreign Language or Elective | 3

Total credit hours: 60

Suggested Plan of Study (BS Track)

First Year

Fall | Hours | Spring | Hours
---|---|---|---
ENGL 101 (GEF 1) | 3 ENGL 102 (GEF 1) | 3
BIOL 115 & 115L (GEF 2) | 4 BIOL 117 & 117L (GEF 8) | 4
CHEM 115 & 115L (GEF 8) | 4 CHEM 116 & 116L (GEF 8) | 4
MATH 155 (GEF 3) | 4 STAT 211 | 3
WVUE 191 | 1 HLSC 270 (or Elective) | 1

Second Year

Fall | Hours | Spring | Hours
---|---|---|---
BIOL 219 & 219L | 4 BIOL 221 | 3
CHEM 233 & 233L | 4 CHEM 234 & 234L | 4
PHYS 101 & 101L | 4 PHYS 102 & 102L | 4
GEF Elective (4, 5, 6) | 3 GEF Elective (4, 5, 6) | 3

Total credit hours: 60

Major Learning Outcomes

BIOLOGY

Upon completion of the associates in biology program, students will be able to:

1. Explain how information is stored, processed and used within cells and organisms.
2. Analyze how organisms obtain and process energy and matter.
3. Explain the primary forces of evolution, including how these forces lead to genetic differentiation and speciation.
4. Describe how biological structures dictate their function.
5. Explain how organisms, populations, communities and ecosystems are structured and function.
6. Transfer into a bachelor degree program in biology.