Chemistry, A.A.

Degree Offered

- Associate of Arts

Nature of the Program

The chemistry program at Potomac State College includes the first two years of courses toward a bachelors degree in chemistry. Courses provide a strong foundation in general and organic chemistry. Laboratory work includes classical wet chemistry, volumetric and instrumental analysis as well as the applications of computers to analysis of data collected in laboratory experiments. The goal of the program is to prepare students to transfer to the Morgantown campus to complete either a B.A. or B.S. degree in chemistry. Students planning to transfer to another institution should discuss their plans with their advisor to determine the requirements of that program.

If the student is 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, a foreign language is not required.

Career Opportunities

Upon completion of the B.S. in chemistry, a student can secure employment as a chemist in various chemical industries such as iron and steel, petrochemical or paper industries. Another option is to pursue an advanced degree in chemistry such as a Masters or Doctorate.

The B.A. program allows students to pursue an advanced degree in chemistry or to apply for admission to professional schools such as medicine, pharmacy or dentistry. Admission requirements for these professional schools are easily accomplished by adjustments to specific courses taken within the B.A. program.

FACULTY

CHAIR

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

PROFESSOR

- Jay Badenhoop - Ph.D. Chemistry
  Year @ PSC (1997)

ASSISTANT PROFESSORS

- Ganesh Ghimire - Ph.D. Organic Chemistry
  Year @ PSC (2018)
- Roshan Lamicichane - Ph.D. Curriculum and Instruction; M.S. Chemistry
  Year @ PSC (2020)

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

<table>
<thead>
<tr>
<th>F1 - Composition &amp; Rhetoric</th>
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<tbody>
<tr>
<td>ENGL 101</td>
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<td>&amp; ENGL 102</td>
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<td>or ENGL 103</td>
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<tr>
<td>Introduction to Composition and Rhetoric</td>
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<td>and Composition, Rhetoric, and Research</td>
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<tr>
<td>Accelerated Academic Writing</td>
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| 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 |
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**

**ENGL 101 & ENGL 102**
Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)

**CHEM 115 & 115L**
Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2 - minimum grade of C-)

**CHEM 116 & 116L**
Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (GEF 8 - minimum grade of C-)

**CHEM 233 & CHEM 235**
Organic Chemistry and Organic Chemistry Laboratory (minimum grade of C-)

**CHEM 234 & CHEM 236**
Organic Chemistry and Organic Chemistry Laboratory (minimum grade of C-)

**MATH 155**
Calculus 1 (GEF 3)

**MATH 156**
Calculus 2 (GEF 8)

**WVUE 191**
First Year Seminar

Tracks (Select one of the following):

**BA Track**

GEF Elective Requirements - 4, 5, or 6 (3 credit hours required)

Foreign Language (12 credit hours required)

Elective

Select one of the following:

**PHYS 101 & PHYS 102**
Introductory Physics and Introductory Physics (GEF 8)

**PHYS 111 & PHYS 112**
General Physics and General Physics

**BS Track**

GEF Elective Requirements - 4, 5, 6, and 7 (12 credit hours required)

Elective

**MATH 251**
Multivariable Calculus

**PHYS 111**
General Physics (GEF 8)

**PHYS 112**
General Physics

Elective

Total Hours
60

**Suggested Plan of Study (BA Track)**

**First Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<td>ENGL 102 (GEF 1)</td>
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<tr>
<td>CHEM 115</td>
<td>4</td>
<td>CHEM 116</td>
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<td>MATH 155 (GEF 3)</td>
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<td>MATH 156 (GEF 8)</td>
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<tr>
<td>WVUE 191</td>
<td>1</td>
<td>Foreign Language</td>
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Total Hours
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**Second Year**

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Total Hours
16
Suggested Plan of Study (BS Track)

First Year

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<td>WVUE 191</td>
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Second Year

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Total credit hours: 60

Major Learning Outcomes

CHEMISTRY

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

1. Explain fundamental chemical principles related to general and organic chemistry.
2. Perform accurate and precise quantitative analyses, to utilize modern instrumental methods of analysis, to analyze and report the results of chemical experimentation, to work safely with chemicals, and to work effectively both as an individual and in a small group.
3. Retrieve information from chemical literature and organize and communicate chemical information effectively in written reports and laboratory notebooks.
4. Transfer to a four year institution for completion of a B.S. or B.A. degree.