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 Lamichhane - 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

F1 - Composition & Rhetoric 3-6

| ENGL 101 | Introduction to Composition and Rhetoric |
| ENGL 102 | and Composition, Rhetoric, and Research |
| or ENGL 103 | Accelerated Academic Writing |

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
Curriculum Requirements

ENGL 101 & ENGL 102
Introduction to Composition and Rhetoric
and Composition, Rhetoric, and Research (GEF 1) 6

CHEM 115 & 115L
Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory (GEF 2 - minimum grade of C-) 4

CHEM 116 & 116L
Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory (GEF 8 - minimum grade of C-) 4

CHEM 233 & 233L
Organic Chemistry 1 and Organic Chemistry 1 Laboratory (minimum grade of C-) 4

CHEM 234 & 234L
Organic Chemistry 2 and Organic Chemistry 2 Laboratory (minimum grade of C-) 4

MATH 155
Calculus 1 (GEF 3) 4

MATH 156
Calculus 2 (GEF 8) 4

WVUE 191
First Year Seminar 1

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 groups:

PHYS 101 & 101L
Introductory Physics 1
and Introductory Physics 1 Laboratory

PHYS 102 & 102L
and Introductory Physics 2
and Introductory Physics 2 Laboratory (GEF 8)

PHYS 111 & 111L
General Physics 1
and General Physics 1 Laboratory

PHYS 112 & 112L
and General Physics 2
and General Physics 2 Laboratory

BS Track

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

MATH 251
Multivariable Calculus

PHYS 111 & 111L
General Physics 1
and General Physics 1 Laboratory (GEF 8)

PHYS 112 & 112L
General Physics 2
and General Physics 2 Laboratory

Elective 4

Total Hours 60

Suggested Plan of Study (BA Track)

First Year

Fall Hours Spring Hours
ENGL 101 (GEF 1) 3 ENGL 102 (GEF 1) 3
CHEM 115 4 CHEM 116 4
& 115L (GEF 2) & 116L (GEF 8)
MATH 155 (GEF 3) 4 MATH 156 (GEF 8) 4
WVUE 191 1 Foreign Language 3
Chemistry, A.A.

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Total credit hours: 60

Suggested Plan of Study (BS Track)

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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 note books.
4. Transfer to a four year institution for completion of a B.S. or B. A. degree.