## Chemistry, A.A.

## 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.

| Code | Title | Hours |
| :---: | :---: | :---: |
| General Education Foundations |  |  |
| F1-Composition \& Rhetoric |  | 3-6 |
| ENGL 101 <br> \& ENGL 102 <br> or ENGL 103 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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 |
| 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

| Code | Title | Hours |
| :---: | :---: | :---: |
| ENGL 101 <br> \& ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1) | 6 |
| $\begin{aligned} & \text { CHEM } 115 \\ & \text { \& } 115 \text { L } \end{aligned}$ | Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory (GEF 2 - minimum grade of C-) | 4 |
| $\begin{aligned} & \text { CHEM } 116 \\ & \text { \& } 116 \text { L } \end{aligned}$ | Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory (GEF 8 - minimum grade of C-) | 4 |
| $\begin{aligned} & \text { CHEM } 233 \\ & \& 233 L \end{aligned}$ | Organic Chemistry 1 and Organic Chemistry 1 Laboratory (minimum grade of C-) | 4 |
| $\begin{aligned} & \text { CHEM } 234 \\ & \& 234 \mathrm{~L} \end{aligned}$ | 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 |
| Select one of the following groups: |  | 8 |
| PHYS 101 <br> \& 101L <br> \& PHYS 102 <br> \& PHYS 102L | Introductory Physics 1 <br> and Introductory Physics 1 Laboratory <br> and Introductory Physics 2 <br> and Introductory Physics 2 Laboratory (GEF 8) |  |
| PHYS 111 <br> \& 111L <br> \& PHYS 112 <br> \& PHYS 112 L | General Physics 1 and General Physics 1 Laboratory and General Physics 2 and General Physics 2 Laboratory |  |
| WVUE 191 | First Year Seminar | 1 |
| GEF Elective Requirements - 4, 5, or 6 |  | 3 |
| Foreign Language |  | 12 |
| Elective |  | 6 |
| Total Hours |  | 60 |

## Suggested Plan of Study

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 102 | 3 |
| Foreign Language 101 |  | 3 Elective | 1 |
|  |  | 15 | 15 |
| Second Year |  |  |  |
| Fall | Hours | Spring | Hours |
| CHEM 233 |  | 4 CHEM 234 | 4 |
| \& 233L |  | \& 234L |  |
| PHYS 101 |  | 4 PHYS 102 | 4 |
| \& 101L (GEF 8) |  | \& 102L |  |
| GEF Elective (4, 5, or 6) |  | 3 Foreign Language 204 | 3 |
| Foreign Language 203 |  | 3 Elective | 4 |
| Elective |  | 1 |  |
|  |  | 15 | 15 |

Total credit hours: 60

## Major Learning Outcomes

## CHEMISTRY

Upon completion of the associates in chemistry 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 bachelor degree.
