BACHELOR OF ARTS WITH A MAJOR IN CHEMISTRY

Engaging in cutting-edge research alongside expert faculty and graduate students, you’ll be studying problems of critical importance to our world as a GW Chemistry student. Our program provides a hands-on approach to modern laboratory practices and instrumentation supported by curricula in analytical, inorganic, organic, and physical chemistry. Pairing academic rigor with rich research in the nation’s capital, you will graduate with the expertise to pursue opportunities in a variety of areas. Chemistry is a powerful springboard to rich and rewarding careers, from patent law and medicine, pharmacology and pharmacy, clinical and forensic laboratories to material science or academics.

Visit program website (https://chemistry.columbian.gwu.edu/) for additional information.

ADMISSIONS

For more information on the admission process, please visit the Office of Undergraduate Admissions website. Applications may be submitted via the Common Application.

Supporting documents not submitted online should be mailed to:
Office of Undergraduate Admissions
The George Washington University
800 21st Street NW, Suite 100
Washington DC 20052

Contact for questions: gwadm@gwu.edu or 202-994-6040

REQUIREMENTS

The Department of Chemistry offers the bachelor of arts degree, which is designed to give students a broad background in the basic divisions of chemistry: analytical, biochemistry, inorganic, organic, and physical. It should meet the needs of students preparing to enter the fields of medicine, law, dentistry, and business, among others.

The following requirements must be fulfilled:

The general requirements stated under Columbian College of Arts and Sciences, Undergraduate Programs (http://bulletin.gwu.edu/arts-sciences/#degreeregulationstext) and the required curriculum, below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHEM 2122 &amp; CHEM 2123W</td>
<td>Introductory Quantitative Analysis and Introductory Quantitative Analysis Laboratory</td>
<td></td>
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<tr>
<td>MATH 1231</td>
<td>Single-Variable Calculus I *</td>
<td></td>
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<tr>
<td>MATH 1232</td>
<td>Single-Variable Calculus II</td>
<td></td>
</tr>
<tr>
<td>PHYS 1021 &amp; PHYS 1022 or PHYS 1025</td>
<td>University Physics I and University Physics II</td>
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*Or MATH 1220 (http://bulletin.gwu.edu/search/?P=MATH%201220) Calculus with Precalculus I and MATH 1221 (http://bulletin.gwu.edu/search/?P=MATH%201221) Calculus with Precalculus II

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<tbody>
<tr>
<td>CHEM 2151 &amp; CHEM 2153</td>
<td>Organic Chemistry I and Organic Chemistry Laboratory I</td>
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<tr>
<td>CHEM 2152 &amp; CHEM 2154</td>
<td>Organic Chemistry II and Organic Chemistry Laboratory II</td>
<td></td>
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<tr>
<td>CHEM 3171 &amp; CHEM 3172</td>
<td>Physical Chemistry I and Physical Chemistry II</td>
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<tr>
<td>CHEM 3173</td>
<td>Physical Chemistry Laboratory</td>
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<tr>
<td>CHEM 3165</td>
<td>Biochemistry I</td>
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<tr>
<td>CHEM 4122</td>
<td>Instrumental Analytical Chemistry</td>
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<tr>
<td>CHEM 4134</td>
<td>Inorganic Chemistry</td>
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Suggested Program of Study:

Students should follow this sequence in general and are urged to consult with the chemistry and premedical advisors concerning their academic program.

**First Year**

- CHEM 1111
- CHEM 1112
- MATH 1231
- MATH 1232

**Second Year**

- CHEM 2122
- CHEM 2151
- CHEM 2153
- CHEM 2152

- General Chemistry I
- General Chemistry II
- Single-Variable Calculus I
- Single-Variable Calculus II
- Introductory Quantitative Analysis
- Organic Chemistry I
- Organic Chemistry Laboratory I
- Organic Chemistry II
CHEM 2154  Organic Chemistry Laboratory II
PHYS 1021 or 1025  University Physics I
PHYS 1022 or 1026  University Physics II
MATH 1232 (if not taken in the first year)  Single-Variable Calculus II

Third Year
CHEM 2123  Introductory Quantitative Analysis Laboratory
CHEM 3171  Physical Chemistry I
CHEM 3172  Physical Chemistry II
CHEM 3173  Physical Chemistry Laboratory

Fourth Year
CHEM 3165 (if not taken in the junior year)  Biochemistry I
CHEM 4122  Instrumental Analytical Chemistry
CHEM 4134 (if not taken in the junior year)  Inorganic Chemistry

* Or MATH 1220 Calculus with Precalculus I and MATH 1221 Calculus with Precalculus II

GENERAL EDUCATION
In addition to the University General Education Requirement (http://bulletin.gwu.edu/university-regulations/general-education/#text), undergraduate students in Columbian College must complete a further, College-specific general education curriculum—Perspective, Analysis, Communication, or G-PAC (http://bulletin.gwu.edu/arts-sciences/gpac/). Together with the University General Education Requirement, G-PAC engages students in active intellectual inquiry across the liberal arts. Students achieve a set of learning outcomes that enhance their analytical skills, develop their communication competencies, and invite them to participate as responsible citizens who are attentive to issues of culture, diversity, and privilege.

G-PAC approved courses, Dean’s Seminars, and Sophomore Colloquia that may be available for registration are listed on the CCAS Advising website (https://advising.columbian.gwu.edu/general-education-courses/).

Coursework for the University General Education Requirement is distributed as follows:

- Writing—one approved course in university writing and two approved writing in the disciplines (WID) courses.
- Humanities—one approved course in the humanities that involves critical or creative thinking skills.
- Mathematics or Statistics—one approved course in either mathematics or statistics.
- Natural or Physical Science—one approved laboratory course that employs the process of scientific inquiry.
- Social Sciences—two approved courses in the social sciences.

Coursework for the Columbian College general education curriculum is distributed as follows:

- Arts—one approved course in the arts that involves the study or creation of artwork based on an understanding or interpretation of artistic traditions or knowledge of art in a contemporary context.
- Global or Cross-Cultural Perspective—one approved course that analyzes the ways in which institutions, practices, and problems transcend national and regional boundaries.
- Humanities—one approved course in the humanities that involves critical thinking skills (in addition to the one course in this category required by the University General Education Requirement).
- Local or Civic Engagement—one approved course that develops the values, ethics, disciplines, and commitment to pursue responsible public action.
- Natural or Physical Science—one approved laboratory course that employs the process of scientific inquiry (in addition to the one course in this category required by the University General Education Requirement).
- Oral Communication—one course in oral communication.

Certain courses are approved to fulfill the requirement in more than one of these categories.

Courses taken in fulfillment of G-PAC also may be counted toward majors or minors. Transfer courses taken prior to, but not after, admission to George Washington University may count toward the University General Education Requirement and G-PAC, if those transfer courses are equivalent to GW courses that have been approved by the University and the College.

SPECIAL HONORS
In addition to meeting the general requirements stated under University Regulations, a candidate for graduation with Special Honors in chemistry must maintain a cumulative 3.0 grade-point average in chemistry courses and take CHEM 4195 Undergraduate Research or CHEM 4195W Undergraduate Research for at least 3 credits over two semesters. In addition to the final report for CHEM 4195 or CHEM 4195W, a poster or oral presentation is required.

Bachelor of Arts with a Major in Chemistry