Bachelor of Arts in Chemistry

The Bachelor of Arts degree program in chemistry is designed for the student who plans a career in chemistry or the related sciences upon graduation, to continue to graduate school in the chemical sciences, or professional health sciences such as medicine or pharmacy, but is interested in studying other subjects to augment a basic chemistry curriculum, perhaps with a minor or a double major in another field, for example. The program provides foundational course work in the sub-disciplinary areas of organic, inorganic, physical, analytical, and biochemistry with cognate course work in biology, mathematics and physics. A concentration in biochemistry or chemistry is required. The B.A. program is not certified by the American Chemical Society.

The B.A. in Chemistry provides additional chemistry electives and fewer requirements than the B.S. degree program. The Chemistry concentration may be an appropriate degree for those that would like to become high school chemistry teachers, for example. A total of 14 free elective units are available. The biochemistry option requires biology and biochemistry course and laboratory work, and may be more appropriate for students interested in the biotech industry, medical or pharmacy school, or clinical laboratory science. Ten free elective units are available.

Requirements (68-73 units)

Total units required for graduation: 120

Requirements for a B.A. in Chemistry

Lower-division requirements (28)
- CHEM 2100 General Chemistry I 4
- CHEM 2100L General Chemistry I Laboratory 1
- CHEM 2200 General Chemistry II 4
- CHEM 2200L General Chemistry II Laboratory 1
- MATH 2210 Calculus I 4
- MATH 2220 Calculus II 4
- PHYS 2000 Introduction to Physics I 4
- PHYS 2000L Introduction to Physics I Lab 1
- PHYS 2010 Introduction to Physics II 4
- PHYS 2010L Introduction to Physics II Lab 1

Note: Physics requirement may be alternatively met by taking PHYS 2500, 2500L, 2510, and 2510L.

Upper-division requirements (40-45)
- CHEM 3200 Quantitative Analysis 4
- CHEM 3400 Principles of Organic Chemistry I 5
- CHEM 3500 Principles of Organic Chemistry II 5

Note: The organic chemistry requirement may be alternatively met with the following five courses (13 units):
- CHEM 2400 Organic Chemistry I Lecture
- CHEM 2400L Organic Chemistry I Laboratory
- CHEM 2500 Organic Chemistry II
- CHEM 2500L Organic Chemistry II Laboratory
- CHEM 3600 Intermediate Organic Chemistry
- CHEM 5800 Chemistry Seminar 1

Total Units 68-73

Select one of the following two concentrations to complete the major (25-30 units)

Concentrations (25-30 Units)

Chemistry Concentration (25 Units)
(Program Code: CHEM)
- BIOL 1000 Introduction to Biology 3
- BIOL 1000L Introduction to Biology Lab 1
- MATH 2310 Applied Linear Algebra 4
- CHEM 4300 Inorganic Chemistry 4
- CHEM 4400 Physical Chemistry I 3
- CHEM 4500 Physical Chemistry II 3
- CHEM 4550 Physical Chemistry Laboratory 1

Choose 6 units of upper-division chemistry electives from the following list:
- CHEM 4100 Biochemistry I (3 units)
- CHEM 4100L Biochemistry I Laboratory (1 unit)
- CHEM 4200 Biochemistry II (3 units)
- CHEM 5001 Topics in Chemistry (1 unit)
- CHEM 5001L Topics in Chemistry Laboratory (1 unit)
- CHEM 5002 Topics in Chemistry (2 units)
- CHEM 5100 Polymer Science (2 units)
- CHEM 5150 Materials Chemistry (2 units)
- CHEM 5200 Instrumental Analysis (5 units)
- CHEM 5300 Environmental Chemistry (3 units)
- CHEM 5320 Atmospheric Chemistry (3 units)
- CHEM 5400 Chemistry of the Elements (3 units)
- CHEM 5420 Pyrotechnics (1 unit)
- CHEM 5500 Medicinal Chemistry (2 units)
- CHEM 5550 Computational Chemistry (2 units)
- CHEM 5751 Internship in Chemistry (1 unit)
- CHEM 5752 Internship in Chemistry (2 units)
- CHEM 5753 Internship in Chemistry (3 units)
- CHEM 5901 Directed Laboratory Research (1 unit)
- CHEM 5902 Directed Laboratory Research (2 units)
- CHEM 5903 Directed Laboratory Research (3 units)
- CHEM 5951 Independent Study (1 unit)
- CHEM 5952 Independent Study (2 units)
- CHEM 5953 Independent Study (3 units)

Total Units 25

Biochemistry Concentration (30 Units)
(Program Code: CBIO)
- BIOL 2010 Principles of Biology I 5
- BIOL 2020 Principles of Biology II 5
- CHEM 4100 Biochemistry I 3
- CHEM 4100L Biochemistry I Laboratory 1
- CHEM 4200 Biochemistry II 3
- CHEM 4200L Biochemistry II Laboratory 1
- CHEM 4350 Bioinorganic Chemistry 3
- CHEM 4600 Physical Chemistry for Biochemists I 3
Bachelor of Arts in Chemistry

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<thead>
<tr>
<th>Course Code</th>
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<th>Units</th>
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<tbody>
<tr>
<td>CHEM 4700</td>
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<tr>
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Choose at least 2 units of upper-division elective from the following list:

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<td>CHEM 5001</td>
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<td>CHEM 5001L</td>
<td>Topics in Chemistry Laboratory (1 unit)</td>
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Total Units: 30