

**Chemistry - Bachelor of Science (SCH5)**  
**Chemistry/Environmental: ACS Certified**

**Total Credits Required: 128**

**Required Courses**

**Department Core Requirements - 49-50 Credits**

| Course                                    | Credits |
|---|---------|
| CH 1110 University Chemistry I            | 4       |
| AND                                       |         |
| CH 1111 University Chemistry Lab I        | 1       |
| OR  |         |
| CH 1112 University Chemistry-Studio LabI  | 5       |
| CH 1120 University Chemistry II           | 4       |
| OR  |         |
| CH 1122 University Chemistry-Studio LabII | 5       |
| CH 1130 Orientation                       | 1       |
| CH 2410 Organic Chemistry I               | 3       |
| CH 2411 Organic Chemistry Lab I           | 1       |
| CH 2420 Organic Chemistry II              | 3       |
| CH 2421 Organic Chemistry Lab II          | 2       |
| CH 2212 Quantitative Analysis             | 5       |
| CH 3510 Physical Chemistry I              | 3       |
| CH 3511 Physical Chemistry Lab I          | 2       |
| CH 3520 Physical Chemistry II             | 3       |
| CH 3521 Physical Chemistry Lab II         | 2       |
| CH 4212 Instrumental Analysis             | 5       |
| CH 4710 Biomolecular Chemistry I          | 3       |
| CH 4310 Inorganic Chemistry I             | 3       |
| CH 4311 Inorganic Chemistry Lab I         | 2       |
| CH 4900 Senior Seminar in Chemistry I     | 1       |
| CH 4910 Senior Seminar in Chemistry II    | 1       |

**Math/Science Requirements - 24 Credits**

|  |   |
|--|---|
| MA 1160 Calculus I                         | 4 |
| MA 2160 Calculus II                        | 4 |
| MA 2321 & MA 3521 Elm Lin Alg & Dif Eq OR  |   |
| MA 2320 & MA 3520 Intro Lin Alg & Dif Eq   | 4 |
| MA 3160 Multivariable Calculus             | 4 |
| PH 1100 Physics by Inquiry I               | 1 |
| PH 2100 Univ Physics I-Mechanics           | 3 |
| PH 1200 Physics by Inquiry II              | 1 |
| PH 2200 Univ Physics II-Electricity and Ma | 3 |

**Concentration Requirement - 17 Credits**

| Course                             | Credits |
|------------------------------------|---------|
| BL 1040 Principles of Biology      | 4       |
| BL 3310 Environmental Microbiology | 3       |
| CH 4515 Atmospheric Chemistry      | 3       |
| FW 3330 Soil Science               | 4       |
| GE 3200 Geochemistry               | 3       |

**General Education Requirements - 28 Credits**

|                                 |    |
|---------------------------------|----|
| UN 1001 Perspectives on Inquiry | 3  |
| UN 1002 World Cultures*         | 4  |
| UN 2001 Revisions               | 3  |
| UN 2002 Institutions            | 3  |
| Distribution Courses**          | 15 |

**Free Electives - 9-10 Credits**

**Co-Curricular Activities - 3 Units\*\*\***

\* Two semesters of a single modern language (6 credits) plus UN1003 (1 credit) may be substituted for UN1002

\*\* From HASS Distribution Course Lists: 6 of the 15 credits must be 3XXX or 4XXX level course:

\*\*\* P. E. courses are taught as 0.5 unit classes. Thus 6 of these are needed for 3 units.