Chemistry examines the composition, structure, properties, and changes to stuff at the nanometer scale; this is the molecular and atomic scale. Chemists understand the world in terms of how these molecular and atomic units interact: Are the molecules bound to one another? Does one molecule effect how fast a chemical reaction happens? How does molecular component X interact with light in the fingernail polish formulation Y-126 after the brushed film dries on the cuticle? And a zillion other questions around which we can modify outcomes by modifying molecules. Often working to answer these questions can be very lucrative. Chemists have advanced understanding in everything from life to matter in outer space to probable extraterrestrial life in terms of atomic and molecular components. In very basic terms chemistry is the central argument in many other sciences and professions; an education in Chemistry opens many doors.

### Freshman Year

**FALL SEMESTER**
- CHE 105 - GENERAL COLLEGE CHEMISTRY I - 4
- CHE 111 - LABORATORY TO ACCOMPANY GENERAL CHEMISTRY I - 1
- UK Core - Comp. & Comm. I - 3
- Pre-Major Math Selection - 5
- UK Core - Arts and Creativity - 3

**TOTAL HOURS: 15**

**SPRING SEMESTER**
- CHE 107 - GENERAL COLLEGE CHEMISTRY II - 3
- CHE 113 - LABORATORY TO ACCOMPANY GENERAL CHEMISTRY II - 2
- BIO 148 - INTRODUCTORY BIOLOGY I - 3
- BIO 155 - LABORATORY FOR INTRODUCTORY BIOLOGY I - 1
- UK Core - Comp. & Comm. II - 3
- Pre-Major Math Selection - 5

**TOTAL HOURS: 16**

**Total Freshman Hours: 31**

### Sophomore Year

**FALL SEMESTER**
- MA 213 - CALCULUS III - 4
- CHE 230 - ORGANIC CHEMISTRY I - 3
- PHY 231 - GENERAL UNIVERSITY PHYSICS - 4
- PHY 241 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- BIO 152 - PRINCIPLES OF BIOLOGY II - 3
- UK Core - Statistical Inferential Reason - 3

**TOTAL HOURS: 18**

**SPRING SEMESTER**
- CHE 226 - ANALYTICAL CHEMISTRY - 3
- CHE 231 - ORGANIC CHEMISTRY LABORATORY I - 1
- CHE 232 - ORGANIC CHEMISTRY II - 3
- PHY 232 - GENERAL UNIVERSITY PHYSICS - 4
- PHY 242 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- UK Core - Humanities - 3

**TOTAL HOURS: 15**

**Total Sophomore Hours: 33**

### Junior Year

**FALL SEMESTER**
- CHE 440G - INTRODUCTORY PHYSICAL CHEMISTRY - 3
- CHE 550 - BIOLOGICAL CHEMISTRY I - 3
- Chemistry Major Core Selection - 2

**SPRING SEMESTER**
- CHE 410G - INORGANIC CHEMISTRY - 2
- CHE 533 - QUALITATIVE ORGANIC ANALYSIS LABORATORY - 2
UK Core - Social Sciences - 3
A&S Humanities (100+ level) - 3
**TOTAL HOURS: 16**

CHE 552 - BIOLOGICAL CHEMISTRY II - 3
CHE 454 - BIOLOGICAL CHEMISTRY LABORATORY - 2
Chemistry Major Core Selection - 4
Foreign Language 101 - 4
**TOTAL HOURS: 15**

Total Junior Hours: 31

**Senior Year**

**FALL SEMESTER**
CHE 412 - INORGANIC CHEMISTRY LABORATORY - 2
WRD 310 - WRITING IN THE NATURAL SCIENCES - 3
Foreign Language 102 - 4
Major Field Option Selection - 3
A&S Social Sciences (100+ level) - 3
UK Core - Community, Culture and Citizen - 3
**TOTAL HOURS: 17**

Total Senior Hours: 33

**SPRING SEMESTER**
CHE 441 - PHYSICAL CHEMISTRY LABORATORY - 2
Foreign Language 201 - 3
Major Field Option Selection - 3
UK Core - Global Dynamics - 3
A&S Approved Elective (100+ level) - 3
**TOTAL HOURS: 16**

**Total Minimum hours Required for Degree: 128 hours**

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