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 - Statistical Inferential Reason - 3

**TOTAL HOURS: 16**

Total Freshman Hours: 32

**SPRING SEMESTER**

- CHE 107 - GENERAL COLLEGE CHEMISTRY II - 3
- CHE 113 - LABORATORY TO ACCOMPANY GENERAL CHEMISTRY II - 2
- UK Core - Comp. & Comm. II - 3
- Pre-Major Math Selection - 5
- UK Core - Arts and Creativity - 3

**TOTAL HOURS: 16**

Sophomore Year

**FALL SEMESTER**

- CHE 230 - ORGANIC CHEMISTRY I - 3
- CHE 231 - ORGANIC CHEMISTRY LABORATORY I - 1
- MA 213 - CALCULUS III - 4
- PHY 231 - GENERAL UNIVERSITY PHYSICS - 4
- PHY 241 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- UK Core - Social Sciences - 3

**TOTAL HOURS: 16**

Total Sophomore Hours: 34

**SPRING SEMESTER**

- CHE 226 - ANALYTICAL CHEMISTRY - 3
- CHE 232 - ORGANIC CHEMISTRY II - 3
- PHY 232 - GENERAL UNIVERSITY PHYSICS - 4
- PHY 242 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- Foreign Language 101 - 4
- UK Core - Humanities - 3

**TOTAL HOURS: 18**

Junior Year

**FALL SEMESTER**

- MSE 201 - MATERIALS SCIENCE - 3
- CHE 547 - PRINCIPLES OF PHYSICAL CHEMISTRY I - 3
- CHE 532 - SPECTROMETRIC IDENTIFICATION OF ORGANIC MOLECULES - 2
- CHE 576 - POLYMER CHEMISTRY - 3

**SPRING SEMESTER**

- CHE 410G - INORGANIC CHEMISTRY - 2
- CHE 533 - QUALITATIVE ORGANIC ANALYSIS LABORATORY - 2
- CHE 441 - PHYSICAL CHEMISTRY LABORATORY - 2
- CHE 516 - INORGANIC MATERIALS CHEMISTRY - 3
## Senior Year

### FALL SEMESTER
- CHE 412: INORGANIC CHEMISTRY LABORATORY - 2
- CHE 372: COMMUNICATION IN CHEMISTRY 1 - 1
- CHE 536: ORGANIC MATERIALS: ELECTRONIC AND PHOTONIC PROPERTIES - 3
- Major Field Option Selection - 3
- A&S Social Sciences (100+ level) - 3
- UK Core: Community, Culture and Citizen - 3

**TOTAL HOURS: 15**

### SPRING SEMESTER
- CHE 566: ORGANIC MATERIALS: CHARACTERIZATION AND DEVICES - 3
- CHE 567: ORGANIC MATERIALS: FABRICATION LABORATORY - 2
- CHE 472: COMMUNICATION IN CHEMISTRY 2 - 1
- Major Field Option Selection - 3
- UK Core: Global Dynamics - 3
- A&S Approved Elective (100+ level) - 3

**TOTAL HOURS: 15**

**Total Senior Hours: 30**

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

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