CHEM BS Upper Division Elective Options (8 units required):

**Core Electives I (5-6 units required, depending on research/preceptor/seminar/colloquium):**

- ASTR 488A, Astrochemistry
- BIOC 462B, Biochemistry
- BIOC 466, Biochemistry of Nucleic Acids
- CE 439, Developing Next Generation Li-ion Batteries
- CHEE/CHEM/MSE 437, Surface Science
- CHEM 404B, Inorganic Chemistry II
- CHEM 446, Organic Preparations (lab)
- CHEM 447, Organic Structural Analysis Laboratory
- CHEM 450, Synthetic and Mechanistic Organic Chemistry
- GEOS 400, Introduction to Geochemistry
- MSE 460, Materials Science of Polymers
- PHYS 426, Thermal Physics
- PHYS 484, Nuclear Magnetic Resonance Spectroscopy
- PLS 448A, Plant Biochemistry and Metabolic Engineering
- PTYS 407, Chemistry of the Solar System

Course descriptions/pre-requisites found [HERE](#).

500 level CHEM courses also approved. Form for permission to enroll in 500 level courses found [HERE](#).

Core Electives II (2-3 units):

All above Core Elective I courses AND

- CHEM 396D, Chemistry Discovery
- CHEM 392/492, Directed Research *
- CHEM 399/499, Independent Study*
- CHEM 399H/499H, Honors Independent Study*
- CHEM 405, Chemical Safety
- CHEM 491, Preceptorship*
- CHEM 491H, Honors Preceptorship*
- CHEM 493, Internship*
- CHEM 498, Senior Capstone*
- CHEM 498H, Honors Thesis*

* Requires completion of appropriate forms in order to add units. Forms can be found [HERE](#).