The following coursework is a sample of the types of classes offered. During your first 2 years you will confer with faculty to choose the best course options according to the discipline and research with which you are involved. For a description of the courses please refer to the University of Arizona course catalog at https://catalog.arizona.edu/

**Analytical Chemistry:**

- CHEM 526B – Analytical Spectroscopy
- CHEM 527 – Analytical Separations
- CHEM 528 – Advanced Analytical Chemistry Laboratory
- CHEM 522 – Electroanalytical Chemistry
- CHEM 525 – Mass Spectrometry
- CHEM 521A – Advanced Analytical Chemistry
- CHEM 523A – Bioanalytical Chemistry
- CHEM 529 – Methods of Surface and Materials Analysis

**Inorganic Emphasis:**

- CHEM 545 – Laboratory Methods for Organic Chemistry
- CHEM 510 – Advanced Inorganic Chemistry
- CHEM 514 – Organometallic Compounds
- CHEM 515 – Physical methods in Inorganic Chemistry
- CHEM 512 – Inorganic Preparations
- CHEM 518 – Computational Chemistry

**Organic Emphasis:**

- CHEM 545 – Laboratory Methods for Organic Chemistry
- CHEM 550 – Synthetic and Mechanistic Organic Chemistry
- CHEM 541 – Mechanisms of Organic Reactions
- CHEM 542B – Polymer Chemistry
- CHEM 640 – Advanced Organic Synthesis
- CHEM 546 – Advanced Organic Chemistry
- CHEM 549A – Topics in Chemical Biology
- CHEM 548 – Advanced Synthetic Organic Chemistry
**Physical Emphasis:**

CHEM 580 – Introduction to Quantum Chemistry
CHEM 582 – Statistical Thermodynamics
CHEM 680 – Quantum Chemistry
CHEM 587 – Introduction to Molecular Spectroscopy
CHEM 581 – Mathematical Methods for Chemistry
CHEM 686 – Chemical Physics in the Condensed Phase

**Biochemistry:**

BIOC 565 – Proteins and Enzymes
BIOC 568 – Nucleic Acids, Metabolism, and Signaling
BIOC 585A – Biological Structures 1
BIOC 585B – Biological Structures 2

**Chemical Education:**

Complete major course requirements in any of these subject areas: analytical, biological, inorganic, organic, or physical chemistry.