

**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.