

Chemistry Courses

Courses

CHEM 5195. Graduate Seminar.

Graduate Seminar This course is required of all graduate students every semester.

Department: Chemistry

1 Credit Hour

2 Total Contact Hours

0 Lab Hours

2 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5196. Graduate Research in Chemistry.

Graduate Research in Chemistry

Department: Chemistry

1 Credit Hour

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5301. Modern General Chemistry.

Modern General Chemistry An intensive course intended for school teachers, which presents a thorough grounding in the basic principles of chemistry.

May not be counted toward the M.S. degree in chemistry.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5318. Advanced Analytical Chemistry.

Advanced Analytical Chemistry Chemical equilibrium and its applications to separation and analysis.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5319. Contem Topics Analytical Chem.

Contemporary Topics in Analytical Chemistry Selected topics of current interest in modern analytical chemistry. May be repeated for credit when topics vary.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5321. Advanced Organic Chemistry I.

Advanced Organic Chemistry I: A survey of the more important types of reaction in organic chemistry; reaction mechanisms, stereochemistry of intermediates and products; current structural theory.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

Prerequisite(s): (CHEM 3322 w/D or better)

CHEM 5322. Advanced Organic Chemistry II.

Advanced Organic Chemistry II: A continuation of Chemistry 5321.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

Prerequisite(s): (CHEM 5321 w/B or better)

CHEM 5329. Contem Topics Organic Chemistr.

Contemporary Topics in Organic Chemistry Selected topics of current interest in descriptive and theoretical organic chemistry. May be repeated for credit when topics vary.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5331. Advanced Biochemistry.

Advanced Biochemistry A survey of the organic and physical aspects of biological chemistry. Prerequisite: Department approval.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5339. Contemp Topics in Biochemistry.

Contemporary Topics in Biochemistry Selected topics of current interest in organic or physical aspects of biological chemistry. May be repeated for credit when topics vary.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5341. Anal./Model of Bio Structures.

Analysis and Modeling of Biological Structures (2-3) Introduction to the principles and methods used for the three-dimensional structural determination and simulation of macromolecules of biological interest. Molecular recognition, conformational analysis, and molecular dynamics; ligand design and docking; and modern methods for protein structure determination. Course fee required.

Department: Chemistry

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5351. Advanced Physical Chemistry I.

Advanced Physical Chemistry I: Schrodinger wave mechanics; atomic and molecular quantum states; applications to the treatment of wave functions for atoms and molecules.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5352. Advanced Physical Chemistry II.

Advanced Physical Chemistry II: Classical and statistical thermodynamics; applications to physical and chemical systems.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5359. Contemp Topics Physical Chem.

Contemporary Topics in Physical Chemistry: Selected topics of current interest in experimental and theoretical fields of physical chemistry. May be repeated for credit when topics vary.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5361. Advanced Inorganic Chemistry.

Advanced Inorganic Chemistry: Ionic, metallic and covalent bonding; valence bond, molecular orbital and ligand field theories; structure and properties of coordination compounds, metal carbonyls and complexes.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5369. Contemp Topics Inorganic Chem.

Contemporary Topics in Inorganic Chemistry (3-0) Selected topics in Inorganic Chemistry. May be repeated for credit when topics vary.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5396. Graduate Research in Chemistry.

Graduate Research in Chemistry

Department: Chemistry

3 Credit Hours

9 Total Contact Hours

0 Lab Hours

0 Lecture Hours

9 Other Hours

Classification Restrictions:

Excluded Class: DR

CHEM 5398. Thesis.

Thesis

Department: Chemistry

3 Credit Hours

9 Total Contact Hours

0 Lab Hours

0 Lecture Hours

9 Other Hours

CHEM 5399. Thesis.

Thesis

Department: Chemistry

3 Credit Hours

9 Total Contact Hours

0 Lab Hours

0 Lecture Hours

9 Other Hours

Prerequisite(s): (CHEM 5398 w/B or better)

CHEM 6195. Graduate Seminar.

Graduate Seminar: This course is required of all graduate students every semester.

Department: Chemistry

1 Credit Hour

2 Total Contact Hours

0 Lab Hours

2 Lecture Hours

0 Other Hours

CHEM 6196. Graduate Research in Chemistry.

Graduate Research in Chemistry

Department: Chemistry

1 Credit Hour

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

CHEM 6281. Teaching Practicum - Chemistry.

Teaching Practicum: A course in which the student is in charge of the equivalent of two laboratory sections including teaching and experimental components with commonly accepted responsibilities.

Department: Chemistry

2 Credit Hours

6 Total Contact Hours

0 Lab Hours

0 Lecture Hours

6 Other Hours

CHEM 6301. Modern General Chemistry.

Modern General Chemistry An intensive course intended for school teachers, which presents a thorough grounding in the basic principles of chemistry. May not be counted toward the M.S. degree in chemistry.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6318. Advanced Analytical Chemistry.

Advanced Analytical Chemistry: Chemical equilibrium and its applications to separation and analysis.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6319. Contemp Topics in Analyt Chem.

Contemporary Topics in Analytical Chemistry: Selected topics of current interest in modern analytical chemistry. May be repeated for credit when topics vary.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6321. Advanced Organic Chemistry I.

Advanced Organic Chemistry I: A survey of the more important types of reactions in organic chemistry; reaction mechanisms, stereochemistry of intermediates and products; current structural theory.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6322. Advanced Organic Chemistry II.

Advanced Organic Chemistry II: Theoretical physical organic chemistry, bioorganic chemistry.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Prerequisite(s): (CHEM 6321 w/B or better)

CHEM 6329. Contemp Topics in Organic Chem.

Contemporary Topics in Organic Chemistry: Selected topic of current interest in descriptive and theoretical organic chemistry. May be repeated for credit when topics vary.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6331. Advanced Biochemistry.

Advanced Biochemistry: A survey of the organic and physical aspects of biological chemistry.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6339. Contemp Topics in Biochemistry.

Contemporary Topics in Biochemistry: Selected topics of current interest in organic or physical aspects of biological chemistry. May be repeated for credit when topic varies.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6341. Anal./Model of Bio Structures.

Analysis and Modeling of Biological Structures: Introduction to the principles and methods used for the three-dimensional structural determination and simulation of macromolecules of biological interest. Molecular recognition, conformational analysis, and molecular dynamics; ligand design and docking; and modern methods for protein structure determination.

Department: Chemistry

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

CHEM 6351. Adv Physical Chemistry I.

Advanced Physical Chemistry I: Schroedinger wave mechanics: atomic and molecular quantum states; applications to the treatment of wave functions for atoms and molecules.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6352. Advanced Physical Chemistry II.

Advanced Physical Chemistry II: Classical and statistical thermodynamics; applications to physical and chemical systems.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Prerequisite(s): (CHEM 6351 w/B or better)

CHEM 6359. Contemp Topics in Phys Chem.

Contemporary Topics in Physical Chemistry: Selected topics of current interest in experimental and theoretical fields of physical chemistry. May be repeated for credit when topics vary.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6361. Advanced Inorganic Chemistry.

Advanced Inorganic Chemistry (3-0) Ionic, metallic, and covalent bonding; valence bond, molecular orbital, and ligand field theories; structure and properties of coordination compounds, metal carbonyls, and complexes. Prerequisite: Department approval.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6369. Contemp Topics Inorganic Chem.

Contemporary Topics in Inorganic Chemistry: Selected topics in Inorganic Chemistry. May be repeated for credit when topics vary.

Department: Chemistry

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

CHEM 6396. Graduate Research in Chemistry.

Graduate Research in Chemistry

Department: Chemistry

3 Credit Hours

9 Total Contact Hours

0 Lab Hours

0 Lecture Hours

9 Other Hours

CHEM 6398. Dissertation.

Dissertation

Department: Chemistry

3 Credit Hours

9 Total Contact Hours

0 Lab Hours

0 Lecture Hours

9 Other Hours

CHEM 6399. Dissertation.

Dissertation

Department: Chemistry

3 Credit Hours

9 Total Contact Hours

0 Lab Hours

0 Lecture Hours

9 Other Hours

Prerequisite(s): (CHEM 6398 w/B or better)