2022-23
ACADEMIC CATALOG



Midway University Course Catalog - Chemistry

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Chemistry

Chemistry Minor - Chemistry Minor

Type: Minor

The minor in chemistry requires a minimum of 19 semester hours.

Requirements

Elective Hours - 0

Total Hours to Complete - 19

Minor Requirements

Chemistry Minor - General Chemistry I - 3 hours

Chemistry Minor - General Chemistry Laboratory I - 1 hour

Chemistry Minor - General Chemistry II - 3 hours

Chemistry Minor - General Chemistry Laboratory II - 1 hour

Chemistry Minor - Organic Chemistry I - 3 hours

Chemistry Minor - Organic Chemistry Laboratory I - 1 hour

Chemistry Minor - Organic Chemistry II - 3 hours

Chemistry Minor - Organic Chemistry Laboratory II - 1 hour

Chemistry Minor - Biochemistry - 3 hours

Chemistry

Courses

BIO 420 - Biochemistry

This course is a study of biochemical compounds and their role in intermediary metabolism. Special topics include biochemical energies and coenzyme mechanics. Prerequisite: CHM 330, and Pre or Corequisite BIO 325 and BIO 421. Also listed as CHM 420.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

Prerequisites:

- BIO 325 - Genetics and Molecular Biology
- BIO 421 - Biochemistry Laboratory
- CHM 330 - Organic Chemistry I

CHM 150 - Principles of Chemistry

This course provides a working knowledge of the principles, measurements and calculations basic to chemistry. Topics include the scientific method, energy, atoms, periodic table, bonding, names and formulas, equations, stoichiometry, states of matter, solutions, acids and bases, oxidation and biochemistry. Prerequisite: Grade of C or better in MTH 135 or equivalent skills. A student will not receive credit toward graduation requirements for both CHM 150 and CHM 170. This course is designed for the non-science major.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

Prerequisites:

- MTH 135 - Intermediate Algebra

CHM 170 - General Chemistry I

This course is the systematic study of the principles of chemistry. Topics include chemical measurement, elements, compounds, reactions, stoichiometry, thermochemistry, gas, liquids, solids, atomic structure, bonding, and descriptive chemistry of important elements and compounds. Prerequisite or Corequisite: MTH 140 or MTH 145 or equivalent. A student will not receive credit toward graduation for both CHM 150 and CHM 170.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

Prerequisites:

- MTH 140 - College Algebra
- MTH 145 - Finite Mathematics

CHM 171 - General Chemistry Laboratory I

Laboratory experiments to accompany General Chemistry I (CHM 170). Two hours per week are required. Concurrent enrollment in or previous completion of CHM 170 required. A student will not receive credit toward graduation for both CHM 151 and CHM 171. Coreq: CHM 170

Grade Basis: L
Credit hours: 1.0
Lab hours: 1.0

CHM 175 - General Chemistry II

A continuation of CHM 170; topics include equilibrium, kinetics, acids, bases, solutions, oxidation, reduction, thermodynamics, coordination chemistry, qualitative analysis, nuclear chemistry and an introduction to organic chemistry. Prerequisites: CHM 170 and MTH 140 or MTH 145 or equivalent.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

Prerequisites:

- CHM 170 - General Chemistry I
- MTH 140 - College Algebra
- MTH 145 - Finite Mathematics

CHM 176 - General Chemistry Laboratory II

Course includes laboratory experiments to accompany General Chemistry II (CHM 175). Two hours per week are required. Concurrent enrollment in or previous completion of CHM 175 required. Prerequisite: CHM 171 or permission of instructor. Coreq: CHM 175.

Grade Basis: L
Credit hours: 1.0
Lab hours: 1.0

Prerequisites:

- CHM 171 - General Chemistry Laboratory I
- CHM 175 - General Chemistry II

CHM 330 - Organic Chemistry I

This course explores the fundamentals of organic chemistry, including the nomenclature, reactions, stereochemistry, and spectroscopy of hydrocarbons, alkenes, alkynes, and alkyl halides. Prerequisites: CHM 175 and CHM 176 or equivalent.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

Prerequisites:

- CHM 175 - General Chemistry II
- CHM 176 - General Chemistry Laboratory II

CHM 331 - Organic Chemistry Laboratory I

Laboratory experiments to accompany Organic Chemistry I (CHM 330). Two hours per week are required. Prereq or Coreq: CHM 330.

Grade Basis: L
Credit hours: 1.0
Lab hours: 1.0

Prerequisites:

- CHM 330 - Organic Chemistry I

CHM 335 - Organic Chemistry II

A continuation of the fundamentals of organic chemistry through ethers, carboxylic acids, aldehydes, ketones, alcohols, amines, aromatic compounds and other selected topics. Prerequisite: CHM 330.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

Prerequisites:

- CHM 330 - Organic Chemistry I

CHM 336 - Organic Chemistry Laboratory II

Laboratory experiments to accompany Organic Chemistry II (CHM 335). Two hours per week are required. Prereq or Coreq: CHM 335. Prerequisite: CHM 331 or consent of instructor.

Grade Basis: L
Credit hours: 1.0
Lab hours: 1.0

Prerequisites:

- CHM 331 - Organic Chemistry Laboratory I
- CHM 335 - Organic Chemistry II

CHM 421 - Biochemistry Laboratory

Biochemistry Lab is a hands-on study of biochemical and molecular techniques used in various fields of biology. Two laboratory hours per week. CHM 330, and Pre or corequisite BIO 325 and BIO 420. Also listed as BIO 421.

Grade Basis: L
Credit hours: 1.0
Lab hours: 1.0

Prerequisites:

- BIO 325 - Genetics and Molecular Biology
- BIO 420 - Biochemistry
- CHM 330 - Organic Chemistry I

Last updated: 08/09/2022

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