

# CHEMISTRY (CH)

## CH 104: Intro to Chemistry I (4)

Introductory Chemistry Sequence. Serves as preparation for CH 221-223 for those lacking high-school chemistry or preparation beyond MTH 095. Sequence required for some bachelor's degrees granted at other institutions (i.e. Dental Hygiene at O.I.T.) Some AAS degree programs require only CH 104 — see specific programs for details. Students must be proficient in elementary algebra. This course focuses on measurement and dimensional analysis, properties of matter, elements and compounds, nomenclature, periodic table and trends, chemical equations, stoichiometry, atomic structure.

**Registration-Enforced Prerequisite:** MTH 065 or higher.

**Terms Typically Offered:** Fall, Summer

## CH 105: Intro to Chemistry II (4)

Introductory Chemistry Sequence. Serves as preparation for CH 221-223 for those lacking high-school chemistry or preparation beyond MTH 095. Sequence required for some bachelors degrees granted at other institutions (i.e. Dental Hygiene at O.I.T.) Some A.A.S. degree programs require only CH 104-see specific programs for details. Students must be proficient in elementary algebra. CH 105: This course focuses on bonding, gas laws, liquids, solutions, acid, bases, ionization, neutralization, chemical equilibrium, oxidation-reduction.

**Registration-Enforced Prerequisite:** CH 104.

**Terms Typically Offered:** Winter

## CH 106: Intro to Chemistry III (4)

Introductory Chemistry Sequence. Serves as preparation for CH 221-223 for those lacking high-school chemistry or preparation beyond MTH 095. Sequence required for some bachelor's degrees granted at other institutions (i.e. Dental Hygiene at O.I.T.) Some A.A.S. degree programs require only CH 104-see specific programs for details. Students must be proficient in elementary algebra. CH 106: This course focuses on organic and biochemistry.

**Registration-Enforced Prerequisite:** CH 105.

**Terms Typically Offered:** Spring

## CH 112: Fundamentals of Chemistry (5)

This is a one-term entry-level chemistry course designed for individuals not previously exposed to chemistry. Basic knowledge and skills are developed in Inorganic, Organic, and Biochemistry for general application in a wide range of professions.

**Registration-Enforced Prerequisite:** MTH 065 or higher or math placement test score.

**Terms Typically Offered:** Fall, Winter, Spring, Summer

## CH 221: General Chemistry I (5)

Topics include atomic structure, stoichiometry, thermodynamics, periodic trends, bonding, molecular structure. Instructor approval will be granted for students that have taken high school chemistry if copy of high school transcripts or other documentation of successful course completion is provided to UCC Science Department. F

**Registration-Enforced Corequisite:** MTH 111Z or higher.

**Registration-Enforced Prerequisite:** CH 104, CH 112, GS 105, or instructor approval.

## CH 222: General Chemistry II (5)

Sequence designed for science and pre-medical majors and engineering majors. States of matter, solution chemistry, kinetics, and equilibrium

**Registration-Enforced Prerequisite:** CH 221.

**Terms Typically Offered:** Winter

## CH 223: General Chemistry III (5)

Sequence designed for science and pre-medical majors and engineering majors. Electrochemistry, nuclear chemistry, coordination chemistry, descriptive inorganic, introduction to organic chemistry. Courses must be taken in sequence, or with consent of instructor.

**Registration-Enforced Prerequisite:** CH 222.

**Terms Typically Offered:** Spring

## CH 241: Organic Chemistry I (4)

Sequence designed for science and pre-professional medical majors.

CH 241: molecular structure and bonding, functional groups, acids-bases, alkanes, stereochemistry, addition reactions, free-radicals, alkenes and alkynes. Courses must be taken in sequence, or with consent of instructor.

**Registration-Enforced Prerequisite:** CH 223.

**Terms Typically Offered:** Fall

## CH 242: Organic Chemistry II (4)

Sequence designed for science and pre-professional medical majors.

CH 242. addition reactions, free-radicals, alcohols and ethers, conjugated systems, spectroscopy, aromatics. Courses must be taken in sequence, or with consent of instructor.

**Registration-Enforced Prerequisite:** CH 241.

**Terms Typically Offered:** Winter

## CH 243: Organic Chemistry III (4)

This course focuses on aldehydes and ketones, carboxylic acids and derivatives, amines, phenols, macromolecules. Course must be taken in sequence, or with consent of instructor.

**Registration-Enforced Prerequisite:** CH 242.

**Terms Typically Offered:** Spring