CHEMISTRY (CHMY)

CHMY 155G, CHEMISTRY AND SOCIETY 3 (3)
Course designed for non-science and non-Allied Health and Nursing students. An introduction to chemistry presented in the context of current world problems (i.e. ozone depletion, acid rain, and global warming) and commercial products (foods, drugs, plastics). Natural Science Core Course.
General Education: C3, IN1
Course Entry Requirement(s): Course placement policy: Satisfactory placement assessment in mathematics or previous or concurrent enrollment in MTHM 058 or MTHM 051
Typically Offered: Summer, Fall and Spring Semesters

CHMY 161, GENERAL, ORGANIC AND BIOCHEMISTRY I 4 (6)
Designed to give the Allied Health student an understanding of and appreciation for general chemistry. Includes atomic and molecular structure, intermolecular and intramolecular forces, properties of matter, states of matter, solutions, principles of reactions (including acid-base, redox), and nuclear chemistry. Laboratory required. (A special fee will be assessed.) Natural Science Core Course.
General Education: C3, IN1
Course Entry Requirement(s): Course placement policy: Satisfactory placement assessment into college level mathematics or grade of C or higher in MTHM 058 or MTHM 061
Typically Offered: Summer, Fall and Spring Semesters

CHMY 162, GENERAL, ORGANIC AND BIOCHEMISTRY II 4 (6)
Continuation of CHMY 161. Emphasis is on organic and biochemistry. Topics include nomenclature; structure classification and typical reactions of organic compounds; and properties, synthesis, and metabolism of carbohydrates, lipids, nucleic acids, and proteins. Role of enzymes, hormones, vitamins, and drugs is also discussed. Laboratory required. (A special fee will be assessed.) Natural Science Core Course. Prerequisite: CHMY 161 or divisional approval.
General Education: C3, IN1
Course Entry Requirement(s): Prerequisite: CHMY 161 or divisional approval
Typically Offered: Summer, Fall and Spring Semesters

CHMY 171, GENERAL CHEMISTRY I 5 (7)
Course recommended for Science majors as an introduction to the principles of chemistry. Emphasis is on atomic, molecular, and electronic structures, gas laws, stoichiometry, chemical bonding, solutions, and equilibrium. Laboratory required. (A special fee will be assessed.) Natural Science Core Course. Prerequisite: Demonstrated proficiency at the Algebra II level on the placement assessment or MTHM 023 or divisional approval.
General Education: C3, IN1
Course Entry Requirement(s): Course placement policy: Grade of C or higher in MTHM 081 or satisfactory placement assessment score in mathematics
Typically Offered: Summer, Fall and Spring Semesters

CHMY 172, GENERAL CHEMISTRY II 5 (7)
Continuation of CHMY 171. Emphasis is on acids and bases, thermodynamics, electrochemistry, coordination compounds, nuclear chemistry, descriptive chemistry, and reaction kinetic. Laboratory required. (A special fee will be assessed.) Natural Science Core Course.
General Education: C3, IN1
Course Entry Requirement(s): Prerequisite: CHMY 171
Typically Offered: Summer, Fall and Spring Semesters

CHMY 265, QUANTITATIVE ANALYSIS 5 (9)
Theory and applications of gravimetric, volumetric, and spectroscopic methods of analysis along with common separation techniques. Laboratory required. (A special fee will be assessed.) Natural Science Core Course.
General Education: C3, IN1
Course Entry Requirement(s): Prerequisite: CHMY 172
Typically Offered: Fall Semester

CHMY 271, ORGANIC CHEMISTRY I 5 (7)
Course designed for science majors that focuses on the fundamentals of hydrocarbon and functional group chemistry with emphasis on structure, properties, preparation, stereochemistry, reactions (mechanism and synthesis), and spectroscopy. The course includes theoretical discussion of lab techniques. Laboratory required. (A special fee will be assessed.) Natural Science Core Course.
General Education: C3, IN1
Course Entry Requirement(s): Prerequisite: CHMY 172
Typically Offered: Fall Semester

CHMY 272, ORGANIC CHEMISTRY II 5 (7)
Continuation of Organic Chemistry I. Course designed for science majors that focuses on structure, properties, and reactions of aromatic and polyfunctional compounds. Laboratory required. (A special fee will be assessed.) Natural Science Core Course.
General Education: C3, IN1
Course Entry Requirement(s): Prerequisite: CHMY 271
Typically Offered: Spring Semester

CHMY 273, ANALYTICAL AND QUANTITATIVE CHEMISTRY 5 (6)
The course covers theory and application of volumetric, gravimetric, and spectroscopic methods of analysis along with chromatographic separation.
General Education: C3, IN4
Course Entry Requirement(s): Prerequisite: MTHM 168 AND CHMY 172
Typically Offered: Fall Semester

CHMY 274, ENVIRONMENTAL CHEMISTRY 3 (3)
The course covers chemical theory on the carbon cycle (organic chemistry of fossil fuels), the atmosphere (oxygen chemistry,, ozone, and air pollution), the hydrosphere (water quality and health hazards), and the biosphere(nitrogen cycle and environmental toxicity including pesticides and insecticides).
General Education: C3, IN1, IN2, IN3, IN5
Course Entry Requirement(s): Prerequisite: CHMY 273
Typically Offered: Spring Semester

CHMY 275, BIOCHEMISTRY I 3 (3)
This course is the first semester of a two-semester sequence; course focuses on the principles of structure and function of important biomolecules: proteins, nucleic acids, lipids and carbohydrates, and general metabolic pathways. This course is designed for science majors. Prerequisite: MTHM 171 and CHMY 272. Natural Science Core Course
General Education: C3, IN1, IN2, IN4
Course Entry Requirement(s): Prerequisite: MTHM 171 and CHMY 272

CHMY 276, BIOCHEMISTRY II 3 (3)
This course is the second of a two-semester sequence; course continues the study of metabolism begun in CHMY 275; including lipids, carbohydrates, nucleic acids and nucleotides metabolisms. Additionally, it examines the transmission and expression of the genetic material in bacterial and eukaryotic cells. This course is designed for science majors. Prerequisite: CHMY 275. Natural Science Core Course
General Education: C3, IN1, IN2, IN4
Course Entry Requirement(s): Prerequisite: CHMY 275

CHMY 286, INTERNSHIP IN ENVIRONMENTAL CHEMISTRY 3 (15)
The overall goal of this class is to further develop and refine the students' laboratory and analytical skills within the restrictions of a real-world environmental laboratory setting. This course will provide students with unique opportunities to gain hands-on experience with employers. Throughout the class students will work in specific duties assigned and in positions developed around the needs of the laboratory. Students will gain valuable experience in sample collection, sample analysis, data analysis and reporting.
Course Entry Requirement(s): Prerequisite: CHMY 274 and second year standing and/or divisional approval.
Typically Offered: Offer as required

CHMY 287, WORK-BASED LEARNING I - CHMY 1-3 (1)
This course provides supervised work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating classroom learning with work experience. Students will be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. Activities are coordinated and evaluated by college personnel. Course will be graded on the S/U basis. Prerequisite: A student must be pursuing an approved program at LCCC; have completed 15 semester hours with a minimum of six semester hours in the discipline of placement; have a minimum GPA of 2.5 in the discipline and a 2.0 overall GPA; and have divisional approval.
Course Entry Requirement(s): A student must be pursuing an approved program at LCCC; have completed 15 semester hours with a minimum of six semester hours in the discipline of placement; have a minimum GPA of 2.5 in the discipline and a 2.0 overall GPA; have divisional approval
Typically Offered: Offer as required

CHMY 299, INDIVIDUALIZED STUDIES IN CHEMISTRY 1-2 (1)
An in-depth study of areas in Chemistry presented by discussion and/or individual research and reading. Topics will vary. Repeatable up to a total of four (4) credit hours. Prerequisite: Second-year standing and divisional approval.
Course Entry Requirement(s): Prerequisite: Second-year standing and divisional approval
Typically Offered: Offer as required