

CHE 318 Environmental Chemistry (3 cr)

Basic chemistry of soils, atmosphere and natural waters. Changes resulting from pollution discharges. Chemical perspectives on environmental problems. Prerequisite: CHE 120 and 122.

CHE 319 Quantitative Analysis Lab (1 cr)

A laboratory course involving the principles of quantitative analysis and an introduction to instrumental methods. Prerequisites: CHE 120 and 122. Corequisite: CHE 315.

CHE 321, 322 Physical Chemistry Lecture (4 crs ea)

Modern concepts of molecular structure, chemical thermodynamics, equilibrium and kinetics. Prerequisites: CHE 120/222, MAT 112, PHY 120

CHE 331, 332 Physical-Instrumental Measurements Lab (1 cr ea)

Experiments in physical-chemical measurements with an emphasis on instrumental methods. Prerequisites: CHE 122, CHE 232, PHY 122.

CHE 344, 345 Biochemical Lab Projects I & II (1 cr ea)

Directed experiments to illustrate basic testing procedures performed in hospitals and research biochemistry laboratories. Experimental test results related to actual patient case histories will provide for meaningful discussions about medical biochemistry in health and disease. Pre/Corequisite for I is CHE/BIO 314; Prerequisite for II is CHE 344.

CHE 401 Inorganic Chemistry (3 crs)

Modern concepts of bonding and structure in inorganic compounds, reactivity and reaction mechanisms, acid-base and solid state chemistry. Prerequisite: CHE 222.

CHE 405 Advanced Inorganic Chemistry (3 crs)

An advanced topics lecture course in inorganic chemistry. Prerequisites: CHE 401.

CHE 410 Advanced Biochemistry (3 crs)

An advanced topics lecture course in physical biochemistry. Prerequisite: CHE 314.

CHE 411 Inorganic Chemistry Laboratory (1 cr)

A laboratory course providing experience in the synthesis of significant inorganic compounds and the techniques of various experimental and spectroscopic methods. Corequisite: CHE 401.

CHE 415 Advanced Organic Chemistry (3 crs)

An advanced topics lecture course in physical-organic chemistry. Prerequisites: CHE 222.

CHE 420 Advanced Physical Chemistry (3 crs)

An advanced topics lecture course in physical chemistry. Prerequisite: CHE 322.

CHE 431, 432 Advanced Lab Techniques I & II (1 or 2 crs ea)

Directed experimental projects in the synthesis of organic and inorganic compounds. Emphasis on instrumental characterization. Prerequisite: CHE 317.

CHE 477, 478 Senior Research Project I and II (2 crs ea)

Directed research projects. A seminar and the satisfactory completion of an original paper are integral parts of each course. Prerequisite: Senior standing as a major.

CHE 450 Thesis

Completion of senior research project resulting in an undergraduate research thesis. Prerequisites: Senior standing, permission.

CHE 480 Seminar (1 cr)

Seminar presentations by faculty and chemists from industry and other academic institutions; student presentations on their undergraduate research and literature topics. Prerequisite: Senior standing as major or permission.

NOTE: Without passing grades in prerequisites, 400-level chemistry courses may be taken only on a credit/no-credit basis.

Clinical Science

Course Descriptions

CLS 121 Introduction to Hospital Science (2 crs)

The duties and responsibilities of various health care professions; introduction to medical terminology; seminars, speakers and field trips. For 3 hours credit, an introduction to the use of computers in the hospital, college and personal settings is added.

CLS 130 (PHY 130) Physics for Allied Health (3 crs)

General physical principles with special emphasis on gas laws, flow principles, fluidics, the use of formulae and how they apply to nuclear medicine technology and respiratory therapy.

CLS 215 Concepts of Epidemiology and Microbiology (2 crs)

The recognition of normal flora occurring on/within the human body, invasion processes, control mechanisms for the prevention of the spread of microorganisms and the effects of the infection by certain specific microbes will be covered. Principles of immunology are covered as well.

CLS 234 (BIO 234) Pathophysiology (3 crs)

A survey of disease processes which affect tissues, organs, or the body as a whole. Prerequisites: BIO 128 and BIO 129, or equivalent. A system-wide approach with interactions.

CLS 311 Introduction to Pharmacology (1 cr)

Principles of drug actions and reactions.

CLS 312 Emergency Life Support Techniques (3 crs)

Emergency procedures for first responders. Includes cardiopulmonary resuscitation.

CLS 320 Management Techniques for the Health Sciences (2 crs)

An introduction to the principles, practices and problems of management encountered in the allied health professions.

CLS 330 Principles of Instruction (2 crs)

An introduction of educational methods, techniques and their application to a clinical setting, academic classroom or professional arena. This class offers a systematic approach to instruction, presentation, teaching and methods of practice as it relates to educational instruction or professional seminars. This course also includes a service learning project.