

Prerequisite(s): CHEM 111, 112; CHEM 103, 112; or 103, 104 with instructor's consent. BIOL 113, 114; 223 recommended. (3-1-3 or 3-1-3)

#### **CHEM 386 Biosynthesis (3 sem. hrs.)**

Two aspects of biochemistry are developed:

- 1) The modern understanding of the biochemical transfer of genetic information: DNA structure and synthesis, transcription and translation. These are related to developments in recombinant DNA technology;
- 2) An introduction to physiological biochemistry including vision, muscle contraction, and neuro-transmission.

*NB:* Not offered every year. See Department chair.

*NB:* CHEM 386 may only be applied to the Life Sciences Emphasis and Honours Programs in Chemistry.

Cross-listed: BIOL 386.

Co-requisites: CHEM 221, 222.

Prerequisite(s): CHEM 111, 112; CHEM 103, 112; or 103, 104 with instructor's consent. Recommended: BIOL 113, 114; 223. (3-0 or 3-0)

#### **CHEM 400 Directed Studies in Chemistry**

(2 or 3 sem. hrs.)

Students are required to produce an outline of the topic to be studied in consultation with the instructor. A course of reading and/or experimentation is pursued according to the approved outline. Assessment may be via examination and/or a final written report.

*NB:* This course with the appropriate choice of topics can be used as a preparation for the senior thesis (CHEM 410).

Prerequisite(s): Advanced standing in Chemistry or instructor's consent.

#### **CHEM 409 Thesis Preparation (1 sem. hr.)**

Students are required to choose a topic for their senior thesis (CHEM 410) in consultation with an instructor. Selected readings and references pertinent to the topic are assigned. Regular meetings take place with all students and instructors in the class. A final written report is presented consisting of a detailed thesis proposal and a literature review.

Prerequisite(s): Advanced standing in Chemistry or instructor's consent.

#### **CHEM 410 Senior Thesis (2 sem. hrs.)**

Research in a chosen area of Chemistry with a final written report.

Prerequisite(s): CHEM 409, a related directed study in preparation, or instructor's consent.

#### **CHEM 411 Senior Thesis (3 sem. hrs.)**

Research in a chosen area of Chemistry with a final written report.

*NB:* This course can only be taken by prior arrangement with the Department chair and the Office of the Registrar.

Prerequisite(s): CHEM 409, a related directed study in preparation, or instructor's consent.

#### **CHEM 431, 432 Advanced Inorganic Chemistry (3, 3 sem. hrs.)**

Chemistry of the transition metals. Emphasis during the first semester is on classical co-ordination chemistry, including stereochemistry, symmetry, theories of bonding and electronic structure in complexes. The second semester includes a variety of special topics in inorganic chemistry, such as organometallic chemistry, catalysis, and bioinorganic chemistry.

*NB:* CHEM 431 should precede 432. Not offered every year. See Department chair.

Prerequisite(s): CHEM 230. (3-4; 3-0)

#### **CHEM 469 Polymer Chemistry (3 sem. hrs.)**

Organic and structural aspects of several polymer families, physical properties including molecular weight and distribution, solution properties of macromolecules, kinetics of polymerization in free radical, ionic and condensation systems. Stereochemistry of polymers. Application to the properties of selected synthetic rubbers and plastics.

*NB:* Not offered every year. See Department chair.

Prerequisite(s): CHEM 221, 222. (3-0 or 3-0)

For further course listings, see Au Sable Institute of Environmental Studies listings (under Environmental Studies).

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## CHINESE

#### **CHIN 101, 102 Chinese Language and Culture (3, 3 sem. hrs.)**

A basic introduction to Mandarin Chinese for students with no previous knowledge of either Mandarin or Cantonese.

The courses focus on speaking and listening comprehension, but also introduce reading and writing. With Chinese culture as a major component, students gain insight into the significance of China today and over the centuries.

Prerequisite(s): None; CHIN 101 is a prerequisite for CHIN 102. (3-1; 3-1)

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## COMMUNICATIONS

#### **Comm 110: Research and Writing in Communications (3 sem. hrs.)**

This writing-intensive course orients students to the demands of academic research and writing within the Communications major. By course completion the diligent student should be able to write lucid, academic, and researched prose in the genres of cultural critique, scientific reporting, and term papers. Central to the course are the twin emphases of critical thinking strategies and research methods in the information age.

*NB:* Required of all Communication majors

Prerequisites: None (0-0; 3-0)

#### **COMM 111 Introduction to Communication (3 sem. hrs.)**

Designed to provide a framework of foundational knowledge about the nature of human interaction. The course surveys theories and research of communication in various contexts to foster understanding and analysis of communication behaviour and events.

*NB:* Fulfils departmental human communication competency requirement.

Prerequisite(s): None. (3-0; 0-0)

#### **COMM 112 Introduction to Mass Communication (3 sem. hrs.)**

An introduction to communication media and technology as they affect and are affected by the underlying cultural values of western society. Technological, political, social, and economic factors are surveyed as components affecting development of communication media.

*NB:* Fulfils departmental media studies competency requirement.

Prerequisite(s): None. (0-0; 3-0)

#### **COMM 120 Introduction to Interpersonal Communication RP (3 sem. hrs.)**

Introduces basic self-awareness and interpersonal communications skills. Students learn about the nature of the communications process. The emphasis is on developing and practicing the ability to communicate effectively with others. As part of the course requirements, students are expected to share personal (but not necessarily private) experiences with others.

*NB:* Course taught at Redeemer Pacific College, an approved TWU learning centre. Fulfils departmental human communication competency requirement.

Prerequisite(s): None. (3-0 or 3-0)

#### **COMM 211 Public Speaking (3 sem. hrs.)**

Principles and skills of effective public speaking. This course, designed to provide an appreciation of the nature and uses of speech, includes a survey of the communication process, ethical obligations, audience analysis, language and delivery, and persuasive principles. Participants develop and deliver several short speeches.