Creation date: October 27, 2020
Revision date: June 20, 2025

SAMPLE COURSE OUTLINE

Course Code, Number, and Title:

CHEM 1118: Intermediate Chemistry

Course Format:
[Course format may vary by instructor. The typical course format would be:]

Lecture 4.0 h + Seminar 0.0 h + Lab. 3.0 h

Credits: 4.0 **Transfer Credit:** For information, visit bctransferguide.ca

Course Description, Prerequisites, Corequisites:

A continuation of the CHEM 1114 course with an increased emphasis on laboratory work. CHEM 1118 topics include solutions, descriptive kinetics, chemical equilibrium, acid-base chemistry, buffers, and electrochemistry.

Prerequisite(s): One of the following: a minimum "C+" grade in CHEM 1114 or Chemistry 11, or a minimum "C" grade in Chemistry 12; and one of the following: an "S" grade in MATH 1150, a minimum "C+" grade in Precalculus 11, a minimum "C" grade in Precalculus 12, MATH 1152, 1170, 1171, 1173, 1174, or 1175, a score of 65 on the Langara Math Diagnostic Test; or permission of the department.

Prerequisites are only valid for three years.

Learning Outcomes:
Upon successful completion of this course, students will be able to:

- Understand and use laboratory skills and equipment to perform a variety of quantitative and qualitative experiments safely, efficiently and with precision.
- Demonstrate an understanding of the position chemistry plays in the pure and applied sciences, as well as the history of scientific discovery.
- Possess a thorough understanding of basic quantitative chemical concepts (including, but not limited to dimensional analysis, balancing of equations and stoichiometry) and use them to develop efficient problem-solving skills.
- Describe solutions in terms of concentrations and electrolytic properties and perform solution calculations (including stoichiometry).
- Demonstrate awareness that reactions occur at different rates and that reaction rates need to be determined experimentally.
- Demonstrate knowledge of collision theory and use it to explain how reaction rates can be changed.
- Represent graphically the energy changes associated with catalyzed and uncatalyzed reactions.
- Manipulate the Ideal Gas law and Partial pressures

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- Understand the concept and requirements of equilibria, including the reaction quotient and law of mass action.
- Use equilibria expressions to solve a variety of quantitative problems.

Instructor(s): TBA
Office: TBA **Phone: (604) 323-XXXX** **Email: TBA**
Office Hours: TBA

Textbook and Course Materials:
[Textbook selection may vary by instructor. An example of texts and course materials for this course might be:]

For textbook information, visit https://mycampusstore.langara.bc.ca/buy_courselisting.asp?selTerm=3|8

Note: *This course may use an electronic (online) instructional resource that is located outside of Canada for mandatory graded class work. You may be required to enter personal information, such as your name and email address, to log in to this resource. This means that your personal information could be stored on servers located outside of Canada and may be accessed by U.S. authorities, subject to federal laws. Where possible, you may log in with an email pseudonym as long as you provide the pseudonym to me so I can identify you when reviewing your class work.*

Assessments and Weighting:
Final Exam 35%
Other Assessments
(An example of other assessments might be:)

Midterm 1: 20%
Midterm 2: 20%
Labs: 15%
Quiz x 3: 10%

Grading System:
Specific grading schemes will be detailed in each course section outline.

Information unavailable, please consult Department for details.

Topics Covered:
[Topics covered may vary by instructor. An example of topics covered might be:]
- Review of Chem 1114 (or Chem 11)
- Gases
- Chemical Equilibrium
- Acid-Base Equilibria
- Titrations and Solubility

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- Electrochemistry
- Chemical Kinetics

As a student at Langara, you are responsible for familiarizing yourself and complying with the following policies:

College Policies:

E1003 - Student Code of Conduct
F1004 - Code of Academic Conduct
E2008 - Academic Standing - Academic Probation and Academic Suspension
E2006 - Appeal of Final Grade
F1002 - Concerns about Instruction
E2011 - Withdrawal from Courses

Departmental/Course Policies:

Information unavailable, please consult Department for details.

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