

CAPILANO UNIVERSITY COURSE OUTLINE	
Term: Fall 2014	Course No. CHEM 130
Course: CHEMISTRY IN OUR WORLD	Credits: 4.0
Instructor: TBA Office: TBA Tel: 604-986-1911 (Ext. TBA) email: tba@capilanou.ca web:	

COURSE FORMAT: Three hours of class time, two lab hours plus an additional hour of supplemental activity delivered through on-line or other activities for a 15 week semester, which includes two weeks for final exams.

PRE-REQUISITES: n/a

COURSE OBJECTIVES:

General:

The student will:

- gain a depth of understanding of basic chemistry, such that they will be prepared for any subsequent chemistry course.
- learn to develop an awareness of the influence of science in our society and realise that science is not just a collection of isolated facts, but a series of interconnecting and overlapping ideas.

**Student Learning
Outcomes:**

Upon successfully completing the course, the student should be able to:

- demonstrate understanding of simple atomic structure and chemical bonding as related to the topics covered;
- describe common elements and compounds (acids, bases, salts, etc.);
- apply the scientific method, and critically evaluate media reports on topics involving chemistry;
- demonstrate understanding of simple chemical reactions, balancing chemical equations and predicting chemical products;
- demonstrate an understanding of risk assessment, from a chemical perspective, with respect to food additives, cosmetics and medications; and
- demonstrate an understanding of how energy may be derived from chemical processes.

REQUIRED COURSE MATERIALS:

Textbook: Joesten, M. and Hogg, J. CHEM In Your World. 1st ed. New York: Brooks/Cole, 2011.

Capilano University Chemistry 130 Laboratory Manual and Student Laboratory Guide.

COURSE CONTENT:

Topic	Weeks (approx)
General introduction - scientific method, atoms, elements, molecules, ionic and covalent bonding, interpreting organic structures, the periodic table	1-4
Understanding the environmental issues from a chemical perspective: air and water pollution, acid rain, the greenhouse effect and ozone layer depletion	5-6
Chemical reactivity: balancing chemical equations, acid-base reactions and reduction oxidation reactions	7-8
Energy use in our environment (i.e., a chemical perspective): coal, natural gas and nuclear power	9
Chemistry of life: important biomolecules such as carbohydrates, proteins and lipids; nutrition and digestion	10-11
Chemistry and medicine: prescription drugs and diseases, mood-altering drugs, homeopathic medicine	12-13
Final Exam Period	14,15

EVALUATION PROFILE:

Final grades for the course will be computed based on the following schedule:

Term Tests (2)	40%
Labs	15%
Final Examination	35%
Performance Evaluation	10%
TOTAL	100%

A pass grade of 50% or above is required on each of the laboratory and lecture portions of the course for the student to pass the course.

Please note that lab exemptions are granted at the discretion of the instructor.

PERFORMANCE EVALUATION:

In the absence of exceptional circumstances, which are at the instructor's discretion, the performance evaluation component

of the final grade will be prorated to the rest of the grade. For example, a 10% performance evaluation component would be determined by dividing the remaining mark out of 90 by 9. The most common circumstance justifying an increased performance evaluation mark is a student's improved performance in the final examination relative to the midterm exam(s), which the instructor feels justifies an elevated letter grade.

SUPPLEMENTAL 4TH HOUR ACTIVITY:

Supplemental activity might be a scheduled tutorial, an on-line activity, a group meeting, or some other activity as indicated by the instructor.

GRADING PROFILE:

Letter grades will be assigned according to the following guidelines:

A+ 90 - 100%	B+ 77 - 79%	C+ 67 - 69%	D 50 - 59%
A 85 - 89%	B 73 - 76%	C 63 - 66%	F 0 - 49%
A- 80 - 84%	B- 70 - 72%	C- 60 - 62%	

Students should refer to the University Calendar for the effect of the above grades on grade point average.

OPERATIONAL DETAILS:

University Policies:

Capilano University has policies on Academic Appeals (including appeal of final grade), Student Conduct, Cheating and Plagiarism, Academic Probation and other education issues. These and other policies are available on the University website.

Attendance:

The student is responsible for all information given in the lectures and laboratories, including times of examinations and assignment deadlines.

Missed Exams and Labs:

Normally, a score of zero will be given for a missed exam, test, quiz, lab, etc. In some exceptional situations, the student will be permitted to write a make-up test, defer the lab to a later date or to replace the score by other marks.

The situations in which a score of zero may be avoided are those for which the student meets **all** of the following conditions:

1. Circumstances are beyond the control of the student which resulted in the exam, test, quiz, lab, etc. to be missed. Such circumstances include serious illness or injury, or death of close family member. They do **NOT** include forgetting about the test, lack of preparation for the test, work-related or social obligations.

2. The student has notified the instructor (or the Pure and Applied Science office staff, if the instructor is not available) about the missed exam, test, quiz, lab, etc. Such notification **MUST** occur in advance, if possible, or at the latest, on the day of the exam, test, quiz, lab, etc.
3. Proof of the circumstances must be provided. Proof of illness or injury requires a note from a doctor, who may also be consulted.
4. The student has been fully participating in the course up until the circumstances that prevented the writing of the exam, test, quiz, lab, etc. **Fully participating means attending almost all classes and turning in almost all assignments in the course.**

The options offered to the student who meets the four conditions are decided by the instructor. They will not necessarily meet the convenience of the student.

Final Exam Period: Students should note that the final exam period is from **(date)** and that they can expect to write exams at any time during this period. Individual exam times will not normally be rescheduled because of holidays, work, or other commitments. While efforts are made to spread exams throughout the exam period, an individual's particular course combination may result in exams being scheduled close together, or spread widely through the entire exam period.

Cheating/Plagiarism: Students caught cheating on a test will normally receive a grade of "F" on the course and may be expelled from the University. Plagiarism (including the copying of any part of assignments, laboratory reports, and essays) is a serious offence and is a form of cheating.

Incomplete Grades: Incomplete grades ("I") are given only when special arrangements have been agreed upon with the instructor prior to the end of the semester. Since "I" grades are granted only in exceptional circumstances (usually health problems), their occurrence is rare. A student receiving an "I" grade should see the instructor.

English Usage: Students are expected to use correct standard English in their written and oral assignments, exams, presentations and discussions. Failure to do so may result in reduced grades in any part of the Evaluation Profile. Please refer to the guidelines provided in the Capilano Guide to Writing Assignments (available from the University bookstore).

Emergency Procedures: Please read the emergency procedures posted on the wall of the classroom.