

**CHEM\*1050 General Chemistry II F,W (3-3) [0.50]**

This course provides an introductory study of the fundamental principles governing chemical transformations: thermodynamics (energy, enthalpy, and entropy); kinetics (the study of rates of reactions); and redox/electrochemistry.

*Prerequisite(s): CHEM\*1040*

- Lecturer for this course is [Professor Monteiro](mailto:monteiro@uoguelph.ca) (monteiro@uoguelph.ca).
- The book that will be used for discussions and chapter-based homework is the 10<sup>th</sup> edition of Ebbing and Gammon, Houghton Mifflin Co. Copies of this textbook and corresponding solutions manual are available in the library.
- In this course, the learning objectives will comprise of the concepts described in:
  - Chapter 6 *THERMOCHEMISTRY*
  - Chapter 18 *THERMODYNAMICS*
  - Chapter 9 *ENERGETICS OF IONIC COMPOUNDS*
  - Chapter 19 *ELECTROCHEMISTRY*
  - Chapter 13 *REACTION RATES*
  - Chapter 20 *RADIOACTIVE DECAY*

### ●HOMEWORK

Homework will consist of exercises given by Prof. Monteiro during class discussions, and all odd numbered questions in *PRACTICE PROBLEMS* and *GENERAL PROBLEMS* sections of chapter 6 (pages 260-265), chapter 18 (pages 770-775), and chapter 19 (pages 820-825).

### ●Your final grade will be calculated as follows:

Three (3) Mid-term in-class Exams	30% (10% each)
Wet labs	15%
Online dry labs	10%
Final Exam	45% (Final exam is cumulative)

### ●Dates of in-class mid-term exams:

Mid-term exam 1: Friday, October 6  
 Mid-term exam 2: Wednesday, November 1  
 Mid-term exam 3: Wednesday, November 22

### ●Date of final exam:

Thursday, Dec. 14th, 19:00 - 21:00. Check WebAdvisor for location.

●**No make-up mid-term exams will be given.** If you miss any mid-term exam, a grade of zero will be assigned. However, within one week of the missed mid-term, you may provide justification/documentation to Prof. Monteiro for your absence – which if justified – the percent value of the mid-term exam will be added to that of the final examination.

●In the case of a missed final exam, contact your Program Counsellor ([www.uoguelph.ca/uaic/programcounsellors](http://www.uoguelph.ca/uaic/programcounsellors)) as soon as possible. Official documentation is required within **five working days** of the missed examination.

● **Exams will be closed book.** No written notes, printed materials or electronic storage devices are permitted.

● Electronic calculators may be used during examinations when allowed (electronic calculator with ln, exp or  $e^x$ ,  $\log_{10}$  and  $10^x$  functions). Calculators or notebook computers capable of storing text information are not allowed in the examinations. *Please practice calculations with your calculator before using it in the exam(s).*

● **Wet Lab Exemptions:** Laboratory Exemptions for students who are repeating CHEM\*1050. Students who obtained a “wet” lab grade of at least 60%, but who failed the course as a whole, may apply for a lab exemption. The lab work must have been completed during one of the three preceding semesters in which the course was offered. Apply online at [www.chemistry.uoguelph.ca/labexemption](http://www.chemistry.uoguelph.ca/labexemption). NOTE: Students repeating CHEM\*1050 who are granted a “wet” lab exemption must still complete the online “dry” computer labs.

Deadline for lab exemption applications: Tuesday, September 12

● **Laboratory Manual** for CHEM\* 1050 and **safety goggles** (not safety glasses) can be purchased in the Department of Chemistry, SCIE 2106. A **lab coat** is also required. Sales run Sept. 7, 8, 11, 12 and 13, 9:30 AM – 3:30 PM.

● **Mandatory Online Lab Safety Course:** Complete the CourseLink course entitled “Student Science Safety” with a grade of 90% or better, before you can undertake any labs. It takes 2-3 hours to complete. You have unlimited attempts to obtain the passing grade. Upon successful completion, you receive an electronic badge that you need to show your T.A. (print or electronic form), as proof of completion, prior to being allowed to participate in the lab.

● **Office Hours:** Monday (10AM to 11AM), Wednesday (10:30 AM to 11:30 AM) and Friday (11:15 AM to 12:15 PM) in the McLaughlin Library Library (open section of the first floor - turn left as you enter the library through the main entrance).

● **First laboratory:** You must attend your first lab in order to receive mandatory safety training and all the required information from your TA. If you do not attend the lab, you may lose your place. As proof that you are registered in the lab, you must bring a computer print-out (dated Sept. 1 or later) of “My Class Schedule” from WebAdvisor to your first lab.

## UNIVERSITY POLICIES

### E-mail Communication

As per university regulations, all students are required to check their University e-mail account regularly: e-mail is the official route of communication between the University and its students.

### When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the undergraduate calendar for information on regulations and procedures for Academic Consideration:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

**Drop Date**

Friday November 3. Fortieth class day - last day to drop one semester courses. For regulations and procedures for dropping this course, see the Undergraduate Calendar.

**Copies of out-of-class assignments**

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to show your work at any time.

**Accessibility**

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, academic accommodations are a shared responsibility between the University and the student. When accommodations are needed, students are required to register with Student Accessibility Services (SAS). Documentation to affirm a disability is required, however, interim accommodations may be possible while that process is underway. Accommodations are available for both permanent and temporary disabilities. Common illnesses, such as a cold or the flu, do not constitute a disability. Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance, and not later than the 40th Class Day (Nov. 3). More information: [www.uoguelph.ca/sas](http://www.uoguelph.ca/sas)

**Academic Misconduct**

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. Note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor. The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

**Recording of Materials**

Presentations which are made in relation to course work—including lectures—cannot be recorded or filmed without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Class discussion materials cannot be mass-distributed or supplied to any for-profit organization.

**Resources**

The Academic Calendars are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs:

<http://www.uoguelph.ca/registrar/calendars/index.cfm?index>

## FALL 2017 CHEM\*1050 LABORATORY SCHEDULE

DATE	WEEK A Schedule (Sections ending with ODD number)	Activity	WEEK B Schedule (Sections ending with EVEN number)	Activity
Week 1 Sept. 11 – 15	No Lab. Independent Study.	Online Lab Safety course	No Lab. Independent Study.	Online Lab Safety course
Week 2 Sept. 18 – 22	Do not go to lab room this week. Online Computer Lab: Dry Lab A: Bomb Calorimeter	Dry Lab A Marking Module	Do not go to lab room this week. Online Computer Lab: Dry Lab A: Bomb Calorimeter	Dry Lab A Marking Module
Week 3 Sept. 25 – 29	Arrive for regular starting time. Sign-in & safety training. Safety training is mandatory and a legal requirement.	Bring Class Schedule & Lab Manual	Arrive 90 min AFTER regular starting time (i.e., 10 AM, 4 PM or 8:30 PM). Sign-in & safety training. Safety training is mandatory and a legal requirement.	Bring Class Schedule & Lab Manual
<b>Dry Lab A Marking Module DEADLINE: Sunday, October 1, 11:55 PM</b>				
Week 4 Oct. 2 – 6	Arrive for regular starting time. <u>Experiment 1</u> : Equilibrium Constant	Pre-lab Quiz on WHMIS & Exp't 1	Do not go to lab room this week. Online Computer Lab: Dry Lab B: $\Delta G^\circ$ , $\Delta H^\circ$ and $\Delta S^\circ$	Dry Lab B Marking Module
Week 5 Oct. 11 – 13 (No classes Oct. 9 & 10)	No Lab. Independent Study.	No pre-lab quiz	No Lab. Independent Study.	No pre-lab quiz
Week 6 Oct. 16 – 20	Do not go to lab room this week. Online Computer Lab: Dry Lab B: $\Delta G^\circ$ , $\Delta H^\circ$ and $\Delta S^\circ$	Dry Lab B Marking Module	Arrive at regular starting time. <u>Experiment 1</u> : Equilibrium Constant	Pre-lab Quiz on WHMIS & Exp't 1
<b>Dry Lab B Marking Module DEADLINE: Sunday, October 22, 11:55 PM</b>				
Week 7 Oct. 23 – 27	Arrive at regular starting time. <u>Experiment 2</u> : Enthalpy of Formation	Pre-lab Quiz on Exp't 2	Do not go to lab room this week. Online Computer Lab: Dry Lab C: Electrolysis	Dry Lab C Marking Module
Week 8 Oct. 30 – Nov. 3	Do not go to lab room this week. Online Computer Lab: Dry Lab C: Electrolysis	Dry Lab C Marking Module	Arrive at regular starting time. <u>Experiment 2</u> : Enthalpy of Formation	Pre-lab Quiz on Exp't 2
<b>Dry Lab C Marking Module DEADLINE: Sunday, November 5, 11:55 PM</b>				
Week 9 Nov. 6 – 10	Arrive at regular starting time. <u>Experiment 3</u> : Voltaic Cells Quiz on Experiment 3	Pre-lab Quiz on Exp't 3	Arrive 90 min after regular starting time. <u>Experiment 3</u> : Voltaic Cells Quiz on Experiment 3	Pre-lab Quiz on Exp't 3
Week 10 Nov. 13 – 17	Do not go to lab room this week. Online Dry Lab D: Catalytic Hydrolysis of Salicin	Dry Lab D Marking Module	Arrive at regular starting time. <u>Experiment 4</u> : Chemical Kinetics Report due in three days.	Pre-lab Quiz on Exp't 4
Week 11 Nov. 20 – 24	Arrive at regular starting time. <u>Experiment 4</u> : Chemical Kinetics Report due in three days.	Pre-lab Quiz on Exp't 4	Do not go to lab room this week. Online Dry Lab D: Catalytic Hydrolysis of Salicin	Dry Lab D Marking Module
<b>Dry Lab D: Catalytic Hydrolysis of Salicin DEADLINE: Sunday, November 26, 11:55 PM</b>				
Week 12 Nov. 27 – 29 (No labs Nov. 30/ Dec. 1)	Arrive at regular starting time. Clean-up and check out.		Arrive 90 min after regular starting time. Clean-up and check out.	

Note: laboratory schedule may be subject to change.