



## COURSE OUTLINE FOR REMOTE LEARNING

### 1. **Course:** CHEM 321, Environmental Chemistry - Spring 2020

Lecture 01: TR 13:00 - 15:45 - Online

Instructor	Email	Phone	Office	Hours
Maryam Izadifard	maryam.izadifard@ucalgary.ca		SA 258	TBA

#### Remote Learning Supplemental Information:

This course is being offered online in real-time via scheduled meeting times, you are required to be online at the same time. Please refer to the details below for more complete information.

#### Remote Learning Details:

Please note that the first 60-90 min of the course will be live and online. For the remaining time in each class, there will be recorded videos and problem solving questions to work through.

#### Table of contents

##### 12-May

Lecture 2 Organic Chemistry

##### 19-May

Lecture 3 Toxicology

Guest Speaker

##### 26-May

Lecture 5 Water and wastewater treatment

##### 02-Jun

Global Biogeochemical Element Cycles

Assignment 2/practice problems will be posted

##### 09-Jun

Atmospheric Chemistry

##### 16-Jun

Soil Chemistry/Colloids

##### 07-May

Lecture 1 Review

Assignment 1/practice problems will be posted

##### 14-May

Lecture 2 organic chemistry

Lecture 3 Toxicology

##### 21-May

Lecture 4 Water Chemistry

##### 28-May

Mid-term Exam

Online Exam (3 hours)

##### 04-Jun

Survey of toxic compounds

##### 11-Jun

Atmospheric chemistry/Soil Chemistry

Guest Speaker

Office hours/Online communication

Tuesday and Thursdays:

4:00-5:00 pm- Zoom Meeting

#### Course Site:

D2L: CHEM 321 L01-(Spring 2020)-Environmental Chemistry

**Note:** Students must use their U of C account for all course correspondence.

### 2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

#### Prerequisite(s):

One of Chemistry 203, 209 or 213.

### 3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Component(s)	Weighting %	Date
Assignment 1	15	May 7 (available in D2L) -May 27 (due)
Assignment 2	10	June 2 (available in D2L) -June 14 (due)
Mid-term exam online (3 hrs) *	25	May 28 (available at 1:00 pm MT in D2L)*
2 short projects	15	due 2 days before final exam
Final exam (3 hrs) *	35	Registrar scheduled**

\* The Midterm and Final exam are designed to be completed in less than 3 hrs, but students will receive an extra hour if needed to complete to account for unforeseen circumstances like internet interruptions.

Additional time will be granted to SAS students, and other accommodation will be done on a case-by-case basis in case of conflict or student location in different time zones.

\*\*For example, if the registrar schedules an exam from 1-4pm on June 20, 2020, the exam should be submitted no later than 5pm on June 20, 2020 to be graded.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
<b>Minimum % Required</b>	92.0 %	85.0 %	80.0 %	76.0%	72.0%	68.0 %	64.0 %	61.0%	56.0%	52.0 %	45.0 %

This course has a registrar scheduled final exam.

#### 4. Missed Components Of Term Work:

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, then the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course.

There is no deferred Midterm examination in this course.

#### 5. Scheduled Out-of-Class Activities:

There are no scheduled out of class activities for this course.

#### 6. Course Materials:

List of Recommended References available from U of C Library (Ref. 2-4 are accessible online):

- 1) "Environmental Chemistry".4th or 5th Edition, by Colin Baird and Michael Cann, W. H. Freeman, NY.
- 2) "Elements of Environmental Chemistry".2nd Edition, by Ronald Hites and Jonathan Raff. Wiley.
- 3) "Fundamentals of Environmental and Toxicological Chemistry: Sustainable Science". 4th Edition, by Stanley Manahan. CRC Press (2013)
- 4) "Environmental Organic Chemistry".2nd Edition, Rene P. Schwarzenbach, Philip M. Gschwend and Dieter M. Imboden. A John Wiley & Sons Publication.
- 5) "Environmental Chemistry: A global perspective". 3rd Edition, by G. W. vanLoon and S. J. Duffy. Oxford University Press.

## 7. Examination Policy:

All course components (Assignments, projects, Midterm and Final Exams) must be completed **individually**.

Assignments, Midterm and Final exams are Open-book; students are **only allowed to use their lecture notes, course materials, and the recommended references**.

The Midterm and Final exams should take a student less than 3-hours to complete, but due to unforeseen circumstances like possible internet interruption, students are given an extra hour (total of 4 hrs) to complete their exams.

Students should also read the Calendar, [Section G](#), on Examinations.

## 8. Approved Mandatory And Optional Course Supplemental Fees:

There are no mandatory or optional course supplemental fees for this course.

## 9. Writing Across The Curriculum Statement:

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also [Section E.2](#) of the University Calendar.

## 10. Human Studies Statement:

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

## 11. Reappraisal Of Grades:

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

## 12. Other Important Information For Students:

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Center:** For more information, see [www.ucalgary.ca/wellnesscentre](http://www.ucalgary.ca/wellnesscentre) or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email ([svsa@ucalgary.ca](mailto:svsa@ucalgary.ca)) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed at (<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>)
- d. **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties. Examples of academic misconduct may include: submitting or presenting work as if it were the student's own work when it is not; submitting or presenting work in one course which has also

been submitted in another course without the instructor's permission; collaborating in whole or in part without prior agreement of the instructor; borrowing experimental values from others without the instructor's approval; falsification/ fabrication of experimental values in a report. **These are only examples.**

- e. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](#).

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head of the Department of Chemistry, Dr. Farideh Jalilehvand by email [ahugchem@ucalgary.ca](mailto:ahugchem@ucalgary.ca) or phone 403-220-5353. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See [Section E.4](#) of the University Calendar.

- f. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- g. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](tel:403-220-3911) Email: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca). SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: [sciencerep@su.ucalgary.ca](mailto:sciencerep@su.ucalgary.ca). [Student Ombudsman](#), Email: [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca).
- h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.
- i. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

#### Course Outcomes:

- Describe principles of fundamental environmental processes in air, water, and soil.
- Recognize different types of toxic substances & responses and analyze toxicological information.
- Apply basic chemical concepts to analyze chemical processes involved in different environmental problems (air, water & soil).
- Describe water purification and wastewater treatment processes and the practical chemistry involved.
- Identify the many impacts of anthropogenic pollutants in the environment.
- Explain energy generation and aspects of sustainability, including anthropogenic climate change
- Recognize local and global environmental issues such as emerging contaminants of concern in water, acid rain, climate change, ozone depletion, soil erosion and acidification, and eutrophication
- Recognize the fundamental interconnectedness of chemical processes that unfold in different environmental compartments by giving examples

Electronically Approved - May 06 2020 19:13

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**Department Approval**

Electronically Approved - May 08 2020 17:24

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**Associate Dean's Approval for arrangements for remote learning**