



School of Arts & Science
CHEMISTRY AND GEOSCIENCE DEPARTMENT
CHEM 253-01
Environmental Chemistry
2008W

COURSE OUTLINE

The Approved Course Description is available on the web @ _____

Ω Please note: this outline will be electronically stored for five (5) years only.
It is strongly recommended students keep this outline for your records.

1. Instructor Information

(a)	Instructor:	Dr. Neil Meanwell		
(b)	Office Hours:	Dr. Meanwell, Dr. Meanwell, Dr. Meanwell, 9.30 AM - 10.30 AM, 12.30 PM - 1.30 PM		
(c)	Location:	348		
(d)	Phone:	370-3448	Alternative Phone:	
(e)	Email:	neil.meanwell@camosun.bc.ca		
(f)	Website:			

2. Intended Learning Outcomes

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

Upon completion of this course the student will be able to:

1. Describe the natural physical and chemical processes that occur in the environment, especially those pertaining to the atmosphere and the hydrosphere.
2. Use the specialized language and terminology of environmental chemistry.
3. Describe the effects of human activity upon the environment and comment on the properties of specific organic and inorganic pollutants.
4. Utilize the knowledge of the chemical and physical properties of substances to determine how various pollutants exert their effects on the environment both qualitatively and quantitatively.
5. Classify hazardous substances according to their properties and describe the approaches to their safe disposal.
6. Classify toxic substances according to type and use the terminology associated with chemical toxicology.
7. Perform numerous laboratory procedures involving the monitoring of various pollutants in the environment.

3. Required Materials

(a)	Texts	<i>Environmental Chemistry, 3rd Edition, (Freeman), Colin Baird</i>
(b)	Other	

7. Principles of Atmospheric Chemistry (Parts of Chapters 1, 2, 3, 4, and 5)

Students will be able to describe the composition of the atmosphere, the greenhouse effect, acid rain, photochemical smog, and the depletion of the ozone layer. They will also be able to explain the role of trace gases in atmospheric chemistry and the impact of human activities on the atmosphere.

8. Topics in Atmospheric Pollution (Parts of Chapters 1, 2, 3, 4, and 5)

Students will be able to describe the sources and effects of air pollution, the role of particulate matter, and the impact of acid rain on the environment.

9. Particles in the Atmosphere (Chapter 2)

Students will be able to describe the sources and effects of atmospheric particles, the role of aerosols, and the impact of human activities on the atmosphere.

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10. Hazardous Waste (Chapters 12 and 13)

Students will be able to describe the sources and effects of hazardous waste, the role of hazardous waste management, and the impact of human activities on the environment.

5. Basis of Student Assessment (Weighting)

(Should be linked directly to learning outcomes.)

Course Mark

Classroom participation	5%
Classroom participation @ 15%	30%
Classroom participation	35%
Classroom participation @ 15%	30%

Assignments

Students will be able to describe the sources and effects of hazardous waste, the role of hazardous waste management, and the impact of human activities on the environment.

Exams

Students will be able to describe the sources and effects of hazardous waste, the role of hazardous waste management, and the impact of human activities on the environment.

Midterm Exam #1 is worth 7 - 120 marks. It consists of 10 multiple choice questions and 10 short answer questions. The exam is held on Monday, October 1st from 9:00 am to 12:00 pm. The exam is held in the lecture hall.

Midterm Exam #2 is worth 12 - 120 marks. It consists of 10 multiple choice questions and 10 short answer questions. The exam is held on Monday, October 7th from 9:00 am to 12:00 pm. The exam is held in the lecture hall.

Final Exam is worth 180 marks. It consists of 10 multiple choice questions and 10 short answer questions. **all** students must take the final exam. The exam is held on Monday, December 11th from 9:00 am to 12:00 pm. The exam is held in the lecture hall.

Note: Students must take the exam as soon as possible. The exam is held in the lecture hall.

Laboratory Work

Students must complete the laboratory work as part of the course. The laboratory work is held in the lecture hall.

6. Grading System

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at camosun.ca or information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.

IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at **camosun.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at camosun.ca.

STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED