University of Manitoba
Faculty of Environment
Department of Environment and Geography

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COURSE DETAILS

Course Title & Number:	Environmental Chemistry 2550
Number of Credit Hours:	3
Class Times & Days of Week:	Tuesday/Thursday 11:30-12:45 Lab Thursdays 2:30-5:30
Location for Classes: Labs:	Thursdays 2:30 – 5:30 247 Wallace Building 537A Wallace Building
Pre-Requisites:	Introductory Physical Chemistry 1310

Instructor Contact Information

Instructor(s) Name:	Debbie Armstrong
Preferred Form of Address:	Debbie
Office Location:	554 Wallace Building
Office Hours or Availability:	Please make an appointment by email
Office Phone No.	204-272-1528
Email:	Debbie.Armstrong@umanitoba.ca I will return emails within 24 hrs
Office:	5th floor Wallace Building, Room 554

Course Description

(Lab Required) (Formerly 128.255) An introduction to the chemistry of the environment. Emphasis will be on the composition of the natural environment and the processes of natural and human-introduced chemical species that take place within it. The course will provide students with the chemical basis for understanding the environment and environmental problems. Not to be held with CHEM 2550 (002.255). Prerequisite: CHEM 1310 or CHEM 1311 (002.131 with a minimum grade of a C).

General Course Information

ENVR2550 is very similar to Analytical Chemistry with respect to lab techniques, however this course is focused on environmental perspectives, collection of environmental samples and analysis. This is a good course for people entering into instrumental analysis and oceanography.

Course Goals

This course is designed to expand students' perception of environmental chemistry and the variety of fields of research reflected in the subject matter.

Intended Learning Outcomes

If you choose to do so, identify what the students will have learned as a result of the content. Use Bloom's Taxonomy or the ICE model to rank the objectives into an order of increasing depth of learning. See the University of Manitoba Teaching Handbook section 3.4 for details.

Using Copyrighted Material

Please respect copyright. We will use copyrighted content in this course. I have ensured that the content I use is appropriately acknowledged and is copied in accordance with copyright laws and University guidelines. Copyrighted works, including those created by me, are made available for private study and research and must not be distributed in any format without permission. Do not upload copyrighted works to a learning management system (such as UM Learn), or any website, unless an exception to the *Copyright Act* applies or written permission has been confirmed. For more information, see the University's Copyright Office website at http://umanitoba.ca/copyright/ or contact um_copyright@umanitoba.ca.

Textbook, Readings, Materials

Environmental Chemistry, A Global Perspective by Gary W. vanLoon and Stephen J. Duffy 3rd edition
ISBN 978-0-19-922886-7
Available in the Bookstore, the Edition has not been updated in several years.

Supplementary readings – posted on UM Learn
Required Lab Equipment – lab coat and safety glasses (purchased main floor of Parker from Chemistry Club Students or Bookstore) materials

Course Technology

It is the general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical and legal manner. The student can use all technology in classroom setting only for educational purposes approved by instructor and/or the University of Manitoba Disability Services. Student should not participate in personal direct electronic messaging / posting activities (e-mail, texting, video or voice chat, wikis, blogs, social networking (e.g. Facebook) online and offline "gaming" during scheduled class time. If student is on call (emergency) the student should inform me of the situation and then switch his/her cell phone on vibrate mode and leave the classroom before using it. (©S Kondrashov. Used with permission)

Class Communication

The University requires all students to activate an official University email account. For full details of the Electronic Communication with Students please visit: http://umanitoba.ca/admin/governance/media/Electronic_Communication_with_Students_Policy_-_2014_06_05.pdf

Please note that all communication between myself and you as a student must comply with the electronic communication with student policy (http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html). You are required to obtain and use your U of M email account for all communication between yourself and the university.

Expectations: I Expect You To

I will treat you with respect and would appreciate the same courtesy in return. See Respectful Work and Learning Environment Policy. I expect students will participate in class discussions in a respectful manner with all participants.

Lab attendance is mandatory. For significant reasons of absence (death in the family, sporting event with UofM team, illness with doctors' note) then the lab will be rescheduled, usually during reading week or the last week of classes. Other reasons such as missed bus, had to work, etc. will result in a lab grade of zero on that report.

Academic Integrity:

In addition to the general information about academic integrity and student discipline that you provide (Schedule "A" Policies and Resources), references to specific course requirements for individual work and group work, such as:

(i) Group projects (Lab Reports) are subject to the rules of academic dishonesty;

(ii) Group members must ensure that a group project adheres to the principles of academic integrity.
(iii) Students should also be made aware of any specific instructions concerning study groups and individual assignments;
(iv) The limits of collaboration on assignments should be defined as explicitly as possible; and
(v) All work is to be completed independently unless otherwise specified
(vi) DO NOT COPY content from any source without citation.

Students Accessibility Services

Student Accessibility Services
If you are a student with a disability, please contact SAS for academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation.
Student Accessibility Services http://umanitoba.ca/student/saa/accessibility/
520 University Centre
204 474 7423
Student_accessibility@umanitoba.ca

Expectations: You Can Expect Me To

I will do my best to return assignments and exams in a timely manner. If you have questions outside of class time or can email me or make an appointment with me to meet. I do not have assigned office hours but I am on campus daily.

A large part of my teaching practice includes the use of questions in class. I expect students to engage in discussions and I hope if you have questions you will ask. There will also be a few guest lecturers, please see this as an opportunity to engage with leading researchers in their associated fields.

Class Schedule

This schedule is subject to change at the discretion of the instructor and/or based on the learning needs of the students but such changes are subject to Section 2.8 of the – ROASS-Procedure.

I intend to follow the same order material is presented in the text book. There will be some guest lecturers whose area of expertise is outlined in the course and the scheduling of these seminars may deviate from textbook. Material for these lectures is required knowledge.

I will do my best to have all assignments back to you promptly and you will have one assignment and the midterm returned before the voluntary withdrawal date. Lab reports will be returned as quickly as possible, ideally before the next report, however, there may be delays.

Laboratory Expectations

Please show up prepared (lab coat and protective glasses) with lab printed and read. There will be a pre-lap quiz on some of the labs and if you do not pass you will need to take the time to read the lab again before you begin.

Lab reports are due seven days later by 11 PM, submitted in PDF format on UMLearn. Late reports will be docked 10% per day of lateness. Please read through comments on the reports and see your TA about any comments you are not clear with. Lab reports are limited to 4 written pages (this does NOT include the title page, graphs and tables or references). Be concise with your writing. Please use the lab 'introduction' and the 'writing lab reports' documents posted on UMLearn as guidelines.

Lab Schedule

The lab schedule is posted on UMLearn and is subject to change at a moment's notice. We run all the labs in research labs so due to unforeseen circumstances with research programs, we may need to change the schedule. You are responsible to check UMLearn regularly for updates to the lab schedule. Lab reports are due the following Thursday by 11 PM online to UMLearn in the designated folder as PDF files (unless otherwise specified). The exception is reading week you will be given until March 1st to submit.

Course Evaluation Methods

All assignments are to be uploaded to UMLearn by 11 PM on the due date. For each day late, 10% will be subtracted (this is for the assignments and lab reports).

Due Date:	Assessment Tool	Value of Final Grade
February 16th 2018, 11 PM	Assignment 1	10%
March 1st 2018	Mid-term exam (during class)	20%

March 22nd 2018, 11 PM	Assignment 2	10%
TBD final exam period	Final Exam	30%

Grading

Indicate your grading scale. A sample is given below that you can adjust to your course expectations.

Letter Grade	Percentage out of 100	Grade Point Range	Final Grade Point
A+	95-100	4.25-4.5	4.5
A	86-94	3.75-4.24	4.0
B+	80-85	3.25-3.74	3.5
B	72-79	2.75-3.24	3.0
C+	65-71	2.25-2.74	2.5
C	60-64	2.0-2.24	2.0
D	50-59	Less than 2.0	1.0
F	Less than 50		0

Referencing Style

Below are typical examples for how to list a journal article, a textbook, and a website.

1. Leopold, D. G.; Edgar, B. *J. Chem. Educ.*, **2008**, *85*, 724-731.

2. Shoemaker, D. P.; Garland, C. W.; Steinfeld, J. I.; Nibler, J. W. *Experiments in Physical Chemistry*, 4th Ed., McGraw-Hill, New York, 1981, pp. 12-24.

3. University of Manitoba, Student Affairs. *http://umanitoba.ca/student/resource/student_advocacy/academic_honesty_quiz.html* (accessed April 2010).

Assignment Extension and Late Submission Policy

Assignments and Labs are to be submitted via UMLearn by 11 PM on the due date, they are then time stamped. If they are late, 10% of your grade will be subtracted for each late day. PDFs only please. You have ample time to complete both the assignments and laboratory reports, please plan your time accordingly. You can submit to UMLearn at any point and if you decide to make a change, resubmission will overwrite the previous file, so only your final submission will be graded. Please be careful to submit to the correct folder.