

## **EARTH 122 Lab: Course Outline**

### **Course Description and Objectives**

**Catalogue number:** Earth 122L, Winter 2017

**Class Location:** EIT 1013

**Class Schedule:** 6:30-9:20 pm (Sess. 1 and 2); 9:30 am–12:20 pm (Sess. 3); & 2:30-5:20 pm (Sess. 4)

**Units:** 0.25

**Prerequisite:** EARTH 121 or 122

Environmental Science is an interdisciplinary science involving geology, biology, chemistry, hydrology, atmospheric science, and other related fields. It is also considered to be a highly practical subject that majority of the environmental scientists spend their time putting principles learned in courses to practice. As a complimentary course to the lecture session of EARTH 122, this course emphasizes on real-life problems and hands-on exercises. Case studies of past environmental events such as subsidence, earthquakes, and contaminations are particularly useful to enhance students' awareness of environmental issues. Lab sessions are consisted of applied methods and principles that are useful in identifying and solving environmental science problems. Attendance is required.

### **Contact Information**

#### **Session 1 – Monday (6:30 pm-9:20 pm)**

Teaching Assistant: Eric McQuay

Office Address: 1012 first desk as you walk in

Office Hours: TBD during first week of labs

Email: emmcquay@uwaterloo.ca

#### **Session 2 – Tuesday (6:30 pm-9:20 pm)**

Teaching Assistant: Daniel Birch

Email: dwbirch@uwaterloo.ca

#### **Session 3 – Wednesday (9:30 am-12:20 pm)**

Teaching Assistant: Riley Mills

Email: riley11.mills@gmail.com

#### **Session 4 – Thursday (2:30 pm-5:20 pm)**

Teaching Assistant: Allison McCarthy

Email: asmccart@uwaterloo.ca

### **Resources**

**Lab Manual:** Environmental Geology Laboratory, Freeman 2011, 2<sup>nd</sup> edition, John Wiley & Sons, Inc.

**Materials required:** lab manual, pencil, eraser, calculator, ruler, and protractor

### **Student Assessment**

Grading will depend on in-lab assignments as well as the final examination.

Lab assignment – 70% (Lowest lab score will be dropped; each lab is worth 7%!)  
Final examination – 30% (details: TBD)

## Topics

<b>LAB 01</b> (week of Jan. 9):	Maps: history, applications, and technology
<b>LAB 02</b> (week of Jan. 16):	Weathering: soils and human geography
<b>LAB 03</b> (week of Jan. 23):	Plate Tectonics: origins of Earth's major features
<b>LAB 04</b> (week of Jan. 30):	Earthquakes: the why, where, and severity
<b>LAB 05</b> (week of Feb 6):	Streams and rivers: and floods and storm waters
<b>LAB 06</b> (week of Feb. 13):	Groundwater: the dynamics of water tables
<b>LAB 07</b> (week of Feb. 27):	Coastal processes and problems: loving our coasts to death?
<b>LAB 08</b> (week of Mar. 6):	Atmosphere and oceans: an inextricable linkage
<b>LAB 09</b> (week of Mar. 13):	Waste and water: going hand-in-hand
<b>LAB 10</b> (week of Mar. 20):	Hazardous waste: the forever of radioactivity
<b>LAB 11</b> (week of Mar. 27):	Climate Change

## Laboratory Assignments

The marks of the laboratory will be based on weekly lab assignments. Assignments must be finished during the lab period and submitted to the session TA. Assignments not submitted in person will not be accepted. If assignments are not received by their home session TA on the day of the lab, 10% deduction will be applied for each ensuing day. No assignments will be accepted after Friday. Students are also required to provide their solutions on the answer sheets provided in the manual.

## Missed Labs

Students may only attend their home lab session each week. Alternative arrangements for missed labs will be granted only in cases where the student provides a Verification of Illness Form.

## Expectation of Academic Integrity

**Academic Integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility.

**Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy #70, Student Petitions and Grievances, Section 4. <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>

**Discipline:** A student is expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. For information on categories of offenses and

types of penalties, students should refer to Policy #71, Student Discipline,  
<http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>

**Appeals:** Concerning a decision made under Policy #70 (Student Petitions and Grievances) (other than petitions) or Policy #71 (Student Discipline) a student may appeal the finding, the penalty, or both. A student who believes he/she has a ground for an appeal should refer to Policy #72 (Student Appeals)  
<http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>

The Faculty of Arts has an excellent website on “Avoiding Academic Offences” –  
[http://arts.uwaterloo.ca/arts/ugrad/academic\\_responsibility.html](http://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html)

The following URL is a useful one to refer students to concerning citation styles:  
<http://tinyurl.com/29s5tj>