

**Western University - Faculty of Engineering  
Department of Civil and Environmental Engineering**

**ES 4498G – Engineering Ethics, Sustainable Development and the Law  
Course Outline –2014**

**Calendar Copy:** This course will cover professionalism, ethical theory, the code of ethics and enforcement; the environment; and contracts and risk.

**Prerequisites:** Completion of third year of the Engineering program.

**Contact Hours:** Three lecture hours per week for 14 weeks.

**Instructors:**

Dr. Solomon Asantey P.Eng.  
(Course Coordinator)  
Room 3117, SEB  
[sasantey@uwo.ca](mailto:sasantey@uwo.ca)  
Section 002

Mr. Kevin McGuire P.Eng.  
Room 3117, SEB  
[kmcgui5@uwo.ca](mailto:kmcgui5@uwo.ca)  
Section 001

**Required Texts:**

- Andrews, Gordon and Kemper. **Canadian Professional Engineering and Geoscience: Practice and Ethics.** 5<sup>th</sup> Edition, Toronto: Nelson, 2014.
- Marston, D. L. **Law for Professional Engineers.** 4th edition, Toronto: McGraw-Hill, Ryerson, 2008.
- **ES 4498G Winter 2014 Course Readings.**

**General Learning Objectives:**

Problem Analysis	Team Work		Ethics and Equity	E
Investigation	Communication	E	Economics and Project Management	
Design	Professionalism	E	Life-Long Learning	E
Engineering Tools	Impact on Society	T		

**Evaluation:**

Position Paper	20%
Term Test (in class)	20%
Case Study	20%
Class Participation	10%
Final Examination	30%

- Note:**
- (a) **Students must pass the final examination to pass this course.** Students who fail the final examination will be assigned the aggregate mark, as determined above, or 48%, whichever is less.
  - (b) **Students who have failed this course previously must repeat all components of the course.** No special permissions will be granted enabling a student to retain laboratory, assignment or test marks from previous years. Previously completed assignments and laboratories cannot be resubmitted.
  - (c) Should any test or exam conflict with a religious holiday that a student wishes to observe, the student must inform the Department of the conflict no later than two weeks before the scheduled test.  
(For further information on Accommodations for Religious Holidays see [http://www.uwo.ca/univsec/handbook/appeals/accommodation\\_religious.pdf](http://www.uwo.ca/univsec/handbook/appeals/accommodation_religious.pdf))

### 1. Tests and Examinations:

Term Test: An in-class Closed Book Term Test will be held at 7:00 pm on March 6, 2014.

Final Examination: A 3-hour Closed Book final examination will be held during examination week (Week 15).

### 2. Written Assignments

All written assignments are due by 7:00 p.m. on the date noted on the assignment sheet. The assignments must be submitted in class or to the assigned locker announced in class by 7:00 p.m. of the due date. Late written assignments will be subject to a penalty of 5 marks per day to a maximum of 4 days based on the locker submission. Assignments that are more than 4 days late will receive a mark of zero. Assignments must also be submitted online to the New OWL and turnitin.com by the due date.

### 3. Use of English

In accordance with Senate and Faculty Policy, students may be penalised up to 10% of the marks on all assignments, tests, and examinations for the improper use of English. Additionally, poorly written work with the exception of the final examination may be returned without grading. If resubmission of the work is permitted, it may be graded with marks deducted for poor English and/or late submission.

### **Plagiarism Checking:**

The University of Western Ontario uses software for plagiarism checking. Students are required to submit their Laboratory Reports in electronic form to Turnitin.com for plagiarism checking.

### **Cheating:**

University policy states that cheating is a scholastic offence. The commission of a scholastic offence is attended by academic penalties that might include expulsion from the program. If you are caught cheating, there will be no second warning.

For more information on scholastic offenses, please see:

[http://www.uwo.ca/univsec/handbook/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_undergrad.pdf)

### **Attendance:**

Any student who, in the opinion of the instructor, is absent too frequently from class, laboratory, or tutorial periods will be reported to the Dean (after due warning has been given). On the recommendation of the Department concerned, and with the permission of the Dean, the student will be debarred from taking the regular final examination in the course.

### **Accessibility:**

Please contact the course instructor if you require material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 for any specific question regarding an accommodation.

### **Conduct:**

Students are expected to arrive at lectures on time, and to conduct themselves during class in a professional and respectful manner that is not disruptive to others. Late comers may be asked to wait outside the classroom until being invited in by the Instructor. Please turn off your cell phone before coming to a class, tutorial, quiz or exam.

On the premises of the University or at a University-sponsored program, students must abide by the Student Code of Conduct: <http://www.uwo.ca/univsec/board/code.pdf>

**Sickness and Other Problems:**

Students should immediately consult with the Instructor or Department Chair if they have any problems that could affect their performance in the course. Where appropriate, the problems should be documented (see attached). The student should seek advice from the Instructor or Department Chair regarding how best to deal with the problem. Failure to notify the Instructor or Department Chair immediately (or as soon as possible thereafter) will have a negative effect on any appeal.

For more information concerning medical accommodations, please see:

[http://www.uwo.ca/univsec/handbook/appeals/accommodation\\_medical.pdf](http://www.uwo.ca/univsec/handbook/appeals/accommodation_medical.pdf)

**Notice:**

Students are responsible for regularly checking their email, course website (<https://owl.uwo.ca>) and notices posted outside the Civil and Environmental Engineering Department Office

**Consultation:**

Students are encouraged to discuss problems with their teaching assistant and/or instructor in tutorial sessions. Office hours will be arranged for the students to see the instructor and teaching assistants. Other individual consultation can be arranged by appointment with the appropriate instructor.

**Course Breakdown:**

Complementary Studies = 100%

**Tentative Course Schedule:**

**Module 1: Professionalism, Ethical Theory, The Code, and Enforcement**

Week 1 (Jan 9)	Course Introduction The nature of Professionalism, Professional Ethics and Basic Ethical Theory
Week 2 (Jan16)	<b>Library Resources Presentation</b> Historical Antecedents and the development of the Code of Ethics Introduction to Ontario Regulation 941, “The Engineer’s Act” Negligence, Misconduct, and Incompetence: Regulation and Licensing Discipline and Enforcement: Case Studies
Week 3 (Jan23)	<b>Presentation by Engineer in Industry</b> Professional and Ethical Issues for Engineers in Industry
Week 4 (Jan30)	Professional and Ethical Issues for Engineers in Management
Week 5 (Feb 6)	Professional and Ethical Issues for Engineers in Private Practice and Consulting

**Module2: The Law**

Week 6 (Feb13)	<b>Position Paper Due 7:00 pm, February 13, 2014</b> Introduction to legal theory The Canadian legal system Tort Law
Week7 (Feb20)	<b>Reading Week/ Winter Break - No class</b>
Week 8 (Feb27)	Tort Law cases
Week 9 (Mar6)	<b>Term Test (in class) 7:00 pm, March 6, 2014</b> Introduction to Contract Law Contract Law cases

**Module 3: The Environment and Sustainable Development**

Week10 (Mar13)	Ethical Aspects of Risk Assessment and Risk Management
Week 11 (Mar20)	Environmental Ethics
Week 12 (Mar27)	<b>Case Study/Sustainability Paper Due 7:00 p.m. March 27, 2014</b> Sustainable Development

**Module 4: Equity**

Week 13 (Apr 3)	Equity, Social Justice, Discrimination in the workplace
Week 14 (Apr 10)	Equity, Social Justice, Discrimination in the workplace , Course Review
Week 15	<b>Final Examination (TBA)</b>

\*The course schedule is approximate and does not list all of the topics that will be covered in class. Due dates are definite; New OWL may show different dates, but the course outline lists the correct dates.

***INSTRUCTIONS FOR STUDENTS UNABLE TO WRITE TESTS  
OR EXAMINATIONS OR SUBMIT ASSIGNMENTS AS SCHEDULED***

IF, ON MEDICAL OR COMPASSIONATE GROUNDS, YOU ARE UNABLE TO WRITE TERM TESTS OR FINAL EXAMINATIONS OR COMPLETE COURSE WORK BY THE DUE DATE, YOU SHOULD FOLLOW THE INSTRUCTIONS LISTED BELOW. YOU SHOULD UNDERSTAND THAT ACADEMIC ACCOMMODATION WILL NOT BE GRANTED AUTOMATICALLY ON REQUEST. YOU MUST DEMONSTRATE TO YOUR DEPARTMENT (OR THE UNDERGRADUATE SERVICES OFFICE IF YOU ARE IN FIRST YEAR) THAT THERE ARE COMPELLING MEDICAL OR COMPASSIONATE GROUNDS THAT CAN BE DOCUMENTED BEFORE ACADEMIC ACCOMMODATION WILL BE CONSIDERED. DIFFERENT REGULATIONS APPLY TO TERM TESTS, FINAL EXAMINATIONS AND LATE ASSIGNMENTS. READ THE INSTRUCTIONS CAREFULLY. (SEE THE 2013 UWO ACADEMIC CALENDAR).

**A. GENERAL REGULATIONS & PROCEDURES**

1. CHECK THE COURSE OUTLINE TO SEE IF THE INSTRUCTOR HAS A POLICY FOR MISSED TESTS, EXAMINATIONS, LATE ASSIGNMENTS OR ATTENDANCE.
2. BRING YOUR REQUEST FOR ACADEMIC ACCOMMODATION TO THE ATTENTION OF THE CHAIR OF YOUR DEPARTMENT (OR THE UNDERGRADUATE SERVICES OFFICE IF YOU ARE IN FIRST YEAR) PRIOR TO THE SCHEDULED TIME OF THE TEST OR FINAL EXAMINATION OR DUE DATE OF THE ASSIGNMENT. IF YOU ARE UNABLE TO CONTACT THE RELEVANT PERSON, LEAVE A MESSAGE WITH THE APPROPRIATE DEPARTMENT (OR WITH THE UNDERGRADUATE SERVICES OFFICE, IF YOU ARE IN FIRST YEAR). THE ADDRESSES, TELEPHONE AND FAX NUMBERS ARE GIVEN AT THE END OF THESE INSTRUCTIONS. DOCUMENTATION MUST BE PROVIDED AS SOON AS POSSIBLE.
3. IF YOU DECIDE TO WRITE A TEST OR AN EXAMINATION YOU SHOULD BE PREPARED TO ACCEPT THE MARK YOU EARN. REWRITING TESTS OR EXAMINATIONS OR HAVING THE VALUE OF A TEST OR EXAMINATION REWEIGHTED ON A RETROACTIVE BASIS IS NOT PERMITTED.

**B. TERM TESTS**

1. If you are unable to write a term test, inform your instructor and the Chair of your Department (or the Undergraduate Services Office if you are in first year) prior to the scheduled date of the test. If the instructor is not available, leave a message for him/her at the department office and inform the Chair of the Department (or the Undergraduate Services Office if you are in first year).
2. Be prepared to provide supporting documentation to the Chair and the Undergraduate Services Office (see next page for information on documentation).
3. Discuss with the instructor if and when the test can be rescheduled. **N.B.** The approval of the Chair (or the Undergraduate Services Office if you are in first year) is required when rescheduling term tests.

**C. FINAL EXAMINATIONS**

1. If you are unable to write a final examination, contact the Undergraduate Services Office **PRIOR TO THE SCHEDULED EXAMINATION TIME** to request permission to write a Special Final Examination. If no one is available in the Undergraduate Services Office, leave a message clearly stating your name & student number (please spell your full name).
2. Be prepared to provide the Undergraduate Services Office with supporting documentation (see next page for information on documentation) the next day, or as soon as possible (in cases where students are hospitalized). The following circumstances are not considered grounds for missing a final examination or requesting special examinations: common cold, sleeping in, misreading timetable and travel arrangements.
3. In order to receive permission to write a special examination, you must obtain the approval of the Chair of the Department **and** the Associate Dean and in order to apply you must sign a "Recommendation for a Special Examination Form" available in the Undergraduate Services Office. The Undergraduate Services Office will then notify the course instructor(s) and reschedule the examination on your behalf.

**N.B. It is the student's responsibility to check the date, time and location of the special examination.**

**D. LATE ASSIGNMENTS**

1. Advise the instructor if you are having problems completing the assignment on time (**prior** to the due date of the assignment).
2. Be prepared to provide documentation if requested by the instructor (see reverse side for information on documentation).
3. If you are granted an extension, establish a due date. The approval of the Chair of your Department (or the Associate Dean if you are in first year) is not required if assignments will be completed prior to the last day of classes.
4. i) Extensions beyond the end of classes must have the consent of the instructor, the department Chair and the Associate Dean. Documentation is mandatory.

- ii) A Recommendation of Incomplete Form must be filled out indicating the work to be completed and the date by which it is due. This form must be signed by the student, the instructor, the department Chair and the Associate Dean.

### **SHORT ABSENCES**

If you miss a class due to a minor illness or other problems, check your course outlines for information regarding attendance requirements and make sure you are not missing a test or assignment. Cover any readings and arrange to borrow notes from a classmate.

### **EXTENDED ABSENCES**

If you are absent more than one week or if you get too far behind to catch up, you should consider reducing your workload by dropping one or more courses. (Note drop deadlines listed below). You may want to seek advice from the academic counsellor in your Department or the counsellors in the Undergraduate Services Office if you are in first year.

### **DOCUMENTATION**

If you consulted an off-campus doctor or Student Health Services regarding your illness or personal problem, you must provide the doctor with a Student Medical Certificate to complete at the time of your visit and then bring it to the Department (or the Undergraduate Services Office if you are in first year). **This note must contain the following information: severity of illness, effect on academic studies and duration of absence.**

**In Case of Serious Illness of a Family Member:** Provide a Student Medical Certificate to your family member's physician to complete and bring it to the Department (or the Undergraduate Services Office if you are in first year).

**In Case of a Death:** Obtain a copy of the death certificate or the notice provided by the funeral director's office. You must include your relationship to the deceased and bring it to the Department (or the Undergraduate Services Office if you are in first year).

**For Other Extenuating Circumstances:** If you are not sure what documentation to provide, ask the Departmental Office (or the Undergraduate Services Office if you are in first year) for direction.

**Note:** Forged notes and certificates will be dealt with severely. To submit a forged document is a scholastic offence (see below).

### **ACADEMIC CONCERNS**

You need to know if your instructors have a policy on late penalties, missed tests, etc. This information may be included on the course outlines. If not, ask your instructor(s).

**You should also be aware of attendance requirements in some courses. You can be debarred from writing the final examination if your attendance is not satisfactory.**

If you are in academic difficulty, check out the minimum requirements for progression in the calendar. If in doubt, see your academic counsellor.

**Calendar References:** Check these regulations in your 2013 Western Academic Calendar available at [www.westerncalendar.uwo.ca](http://www.westerncalendar.uwo.ca).

Absences Due to Illness: <http://www.westerncalendar.uwo.ca/2013/pg117.html>

Academic Accommodations for Students with Disabilities: <http://www.westerncalendar.uwo.ca/2013/pg118.html>

Academic Accommodations for Religious or Holy Days: <http://www.westerncalendar.uwo.ca/2013/pg119.html>

Course Withdrawals: <http://www.westerncalendar.uwo.ca/2013/pg157.html>

Examinations: <http://www.westerncalendar.uwo.ca/2013/pg129.html>

Scheduling of Term Assignments: <http://www.westerncalendar.uwo.ca/2013/pg97.html>

Scholastic Offences: <http://www.westerncalendar.uwo.ca/2013/pg113.html>

**Engineering Academic Regulations:** <http://www.westerncalendar.uwo.ca/2013/pg1442.html>

**Note:** These instructions apply to all students registered in the Faculty of Engineering regardless of whether the courses are offered by the Faculty of Engineering or other faculties in the University.

### **Drop Deadlines:**

First term half course (i.e. "A" or "F"):	November 5, 2013
Full courses and full-year half courses (i.e. "E", "Y" or no suffix):	November 30, 2013
Second term half or second term full course (i.e. "B" or "G"):	March 7, 2014

Undergraduate Services Office:	SEB 2097	telephone: (519) 661-2130	fax: (519) 661-3757
Dept. of Chemical and Biochemical Engineering & Green Process Engineering	TEB 477	telephone: (519) 661-2131	fax: (519) 661-3498
Dept. of Civil and Environmental Engineering:	SEB 3005	telephone: (519) 661-2139	fax: (519) 661-3779
Dept. of Electrical and Computer Engineering, Software Engineering, Mechatronics Engineering	TEB 279	telephone: (519) 661-3758	fax: (519) 850-2436
Dept. of Mechanical and Materials Engineering:	SEB 3002	telephone: (519) 661-4412	fax: (519) 661-3020