

SYLLABUS: ES370 2008-09
ENVIRONMENTAL TOXICOLOGY

Course Instructors:

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Course Support:

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A) LECTURES:

Two hours per week: Tuesday (9:00-11:00 AM); GC 110

There is no course text. However, the basic lecture materials and overheads utilized in the course will be available to students through WebCT.

	<u>TOPIC</u>	<u>Lecturer</u>
<u>FIRST TERM:</u>		
Sept. 9, Week 1	Introduction to environmental toxicology	CM
Sept. 16, Week 2	Fate of chemicals in the environment I	CM
Sept. 23, Week 3	Fate of chemicals in the environment II	CM
Sept. 30, Week 4	Atmospheric transport of contaminants	CM
Oct. 7, Week 5	Biological interactions with chemicals I	CM
Oct. 14, Week 6	Biological interactions with chemicals II	CM
<i>Reading Break</i>		
Oct. 28, Week 7	Endocrine disruption	CM
Nov. 4, Week 8	Contaminants of chemical manufacturing	CM
Nov. 11, Week 9	Pharmaceuticals & personal care products	CM
Nov. 18, Week 10	Pesticides I	Guest
Nov. 25, Week 11	Pesticides II	CM
Dec. 2, Week 12	Pesticides III; Review of Term I	CM
<u>SECOND TERM:</u>		
Jan. 6, Week 1	Halogenated hydrocarbons I	GP
Jan. 13, Week 2	Halogenated hydrocarbons II	GP
Jan. 20, Week 3	Halogenated hydrocarbons III	GP
Jan. 27, Week 4	Biproductions of fossil fuels I	GP
Feb. 3, Week 5	Biproductions of fossil fuels II	GP
Feb. 10, Week 6	Organometal compounds	GP
<i>Reading Break</i>		
Feb. 24, Week 7	Toxic Cations I	GP
Mar. 3, Week 8	Toxic Cations II	GP
Mar. 10, Week 9	Toxic Anions I	GP
Mar. 17, Week 10	Toxic Anions II	GP
Mar. 24, Week 11	Radionuclides	GP
Mar. 31, Week 12	Review of Term II	GP

B) IN-CLASS QUIZZES

Each week during one of the lectures, there will be a short in-class quiz that will examine students on information provided in the lectures that week. There will be 22 of these quizzes, starting in the second week of the lectures.

C) ASSIGNMENTS

There will be a written assignment in Term 1 and oral presentations (30 min each) in Term 2. Information relevant to these assignments will be provided during class time.

DUE DATES FOR ASSIGNMENTS

Written assignment: December 12, 2007
Oral presentations: During March, 2008

D) TUTORIALS

Two hours fortnightly: Monday (11 AM – 1 AM); OC 208 or BL

Students will be responsible for preparing reports related to the tutorials.

TERM 1:

During the first part of the term, there will be two computer-based tutorials focused on concepts related to the use of **Contaminant Models**, including exercises with a soil transport model and a beluga contaminant dynamics model. Students will be responsible for preparing a report for each of the tutorials, *to be handed in before the next tutorial*. During the remainder of the term, there will be 3 tutorials to introduce the concepts of **Ecological Risk Assessment**. Students will be responsible for preparing a report related to the risk assessment exercise at the end of this section (*Deadline: December 5, 2008*)

TERM 2:

During the first part of the term, there will be 3 tutorials that will focus on concepts and calculations related to **Human Risk Analysis**. Students will be responsible for preparing a report related to a risk analysis exercise at the end of this section (*Deadline: March 6, 2009*)

The tutorial sessions during the last part of the term (i.e. March) will be devoted to individual student presentations.

		DATE	LOCATION
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<u>Term 1</u>			
Tutorial 1	Soil transport model	Sept. 22	BL 210
Tutorial 2	Contaminant dynamics model	Oct. 6	BL 201
	<i>Reading Break</i>		
Tutorial 3	Ecol. risk assessment I	Nov. 3	OC 208
Tutorial 4	Ecol. risk assessment II	Nov. 10	OC 208
Tutorial 5	Ecol. risk assessment III	Nov. 24	OC 208
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Term 2

Tutorial 6	Human risk analysis I	Jan. 12	OC 208
Tutorial 7	Human risk analysis II	Jan. 26	OC 208
Tutorial 8	Human risk analysis III	Feb. 9	OC 208
	<i>Reading Break</i>		
Tutorial 9	Student presentations	March 9	OC 208
Tutorial 10	Student presentations	March 23	OC 208

E) COURSE EVALUATION

- 1) Christmas Exam and Final Exam (12% each x 2 = 24%)
N.B. Exams will be 2 hours each; written during exam weeks.
 - 2) In-class quizzes (1% each x 22 = 22%)
 - 3) Tutorial reports:
 - Models (5% each x 2 = 10%)
 - Ecological risk assessment (12%)
 - Human risk analysis (12%).
 - 4) Written assignment in Term 1 (10%)
 - 5) Oral presentation in Term 2 (10%)
- TOTAL = 100%**
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F) POLICY ON LATE ASSIGNMENTS

Unless written documentation from a health professional or a college tutor is provided as an explanation for a late assignment, penalties will be assessed at a rate of 5% per day. Assignments may be submitted without penalty to the course instructor by email at times up to 12:00 midnight on the calendar day of the deadline, but a hardcopy version must also be received by the course instructor within 3 days of the date that the emailed version was sent. Hardcopies of assignments may be submitted directly to the course instructors, or to the secretary of the ERS program.

G) POLICY ON PLAGIARISM:

Plagiarism is an extremely serious academic offence and carries penalties varying from failure in an assignment to debarment from the University. See the 2008-09 academic calendar for a description of the policy on academic dishonesty at Trent University.