

**ENVIRONMENTAL AND RESOURCE STUDIES PROGRAM  
TRENT UNIVERSITY**

**ERSC 1000Y: Introduction to Environmental Science/Studies  
2009-10 FW Peterborough**

**About Us**

Welcome! Our job is to help you do as well as you can in this course. You should feel welcome to talk with us after class or at our offices. You should also say hi if you see us wandering the halls or grabbing a coffee (fair trade, of course) in the cafeteria.

<b>Instructor</b>	<b>Office Location</b>	<b>Telephone</b>	<b>Email</b>
<b>Dr. Stephen Hill</b> (co-ordinator) Office hours: Thursdays 3-5pm	ESC C106	748-1011 x7368	stephenhill at trentu.ca
<b>Dr. Magda Havas</b> Office hours: Thursdays 1-2pm or as arranged	ESC B309	748-1011 x7368	mhavas at trentu.ca
<b>Dr. Dolly Kothawala</b> Office hours: Fridays 11am-1pm	CSB F112	748-1011 x7648	dollykothawala at trentu.ca
<b>Helen Baulch</b> Office hours: Thursdays 11am-1pm	TBA	TBA	helenmbaulch at trentu.ca
<b>Robert Loney</b> (course technician)	ESC A204.1	748-1011 x7870	rloney at trentu.ca
<b>Deb Mills</b> (secretary)	ESC B202	748-1011 x7199	dmills at trentu.ca

**Teaching Assistants:**

Rathika Balthasar	rathikabaltha at trentu.ca	Pamela Quart	TBA
Kyle Borrowman	kyleborrowman at trentu.ca	Paul McCarney	paulmccarney at trentu.ca
Agata Durkalec	(January-April)	Andrew McDonough	(January-April)
Andrew Ecclestone	andrewecclestone at trentu.ca	Matthew Meadows	matthewmeadows at trentu.ca
Beth Evans	(January-April)	Tyler Phillips	tylerphillips at trentu.ca
Deborah Garreau	deborahgarreau at trentu.ca	Donna Strang	donnastrang at trentu.ca

**Course Description**

Environmental & Resource Science/Studies is an interdisciplinary program offering a Bachelors in Environmental Science/Studies (B.E.S.S.), a B.A. in Environmental & Resource Studies and a B.Sc. in Environmental & Resource Science.

As the program's introductory course, Environmental Science and Studies 1000Y is designed to introduce students to a range of contemporary environmental issues, concepts and knowledge required for upper year ERS courses, and to improve environmental literacy. The course is taught by a team of ERS professors to provide students with access to a range of expertise and fields of study.

ERSC 1000Y is an interdisciplinary exploration of how humans use, affect, and protect our world, emphasizing the scientific, political, ethical and economic dimensions of environmental issues. These dimensions are examined through a series of case studies including: energy systems, climate change,

contaminants, air quality, the Trent University environment, urban environments, biodiversity and endangered species, drinking water quality, and the environmental implications of globalization.

**Course objectives:**

1. To enhance the environmental literacy and citizenship of Trent students.
2. To generate student interest in environmental issues.
3. To introduce key concepts and skills required for further study in environmental science and studies.

**What we expect you will learn:**

**Key values:**

- A concern for the environment and future generations.
- A desire to make a difference.

**Key knowledge:**

- Knowledge of the causes and impacts of major environmental problems.
- Knowledge about potential solutions to environmental problems.

**Key skills:**

- Ability to read and think critically and analyze environmental problems.
- Ability to identify, define and develop solutions to environmental problems.
- Ability to work effectively in a team.
- Ability to write professionally, succinctly and coherently.
- Ability to manage, interpret, and communicate data and results.
- Ability to present your ideas orally.

**Course Format**

Type	Day	Start Time	Location
Lecture	Tuesday	2 p.m. (2 hrs)	Wenjack Theatre
Lecture	Thursday	5 p.m. (1 hr)	Wenjack Theatre
Seminar 1	Tuesday	5 p.m.	SC W2
Seminar 2	Tuesday	6 p.m.	SC W2
Seminar 3	Tuesday	7 p.m.	CC C3
Seminar 4	Tuesday	8 p.m.	CC C3
Seminar 5	Tuesday	9 p.m.	CC C3
Seminar 6	Wednesday	11 a.m.	EPC 102
Seminar 7	Wednesday	12 p.m.	EPC 102
Seminar 8	Wednesday	4 p.m.	BL 314
Seminar 9	Wednesday	5 p.m.	BL 314
Seminar 10	Thursday	9 a.m.	EPC 102
Seminar 11	Thursday	10 a.m.	EPC 102
Seminar 12	Friday	10 a.m.	ESC B305
Seminar 13	Friday	11 a.m.	ESC B305
Seminar 14	Friday	1 p.m.	SC W1
Seminar 15	Friday	2 p.m.	SC W1
Seminar 16	Friday	3 p.m.	SC W1

You are expected to attend all lectures. Having a thorough understanding of all the lecture material is essential to doing well on the exams. The readings and lecture notes supplement the lectures – they don't replace them. So attending the lectures, taking good notes, and reviewing this material in conjunction with the textbook readings is essential to doing well in the course.

There are two lectures most, but not all, weeks. There will be some weeks when we don't require a Thursday lecture and we will announce this at the end of Tuesday's lecture.

Each of you should have been assigned to a seminar group by the Registrar. If you have not been assigned to a seminar or you need to change your seminar time, please see Rob Loney (ESC A204.1, 748-1011x7870).

You are expected to attend all of your seminars. Seminars provide a chance to work in smaller groups on assignments, course material, and other projects. You have a 50-minute seminar each week. Trent graduate students help facilitate the seminars but your participation and ideas are what make them successful. In your seminar, you will be organized into Pods of 3-4 students – learning groups. Pods will work as groups on some assignments, work on group activities in seminar, and sit/work together in lecture so that we can have some small group discussions during the class.

Five percent of your final grade will be determined by the quality and consistency of your participation in seminar and lecture. You should come to lecture and seminar prepared with questions and ideas for discussion.

### Required Text

G.T. Miller & D. Hackett. 2007. *Living in the Environment: First Canadian Edition*. Toronto: Nelson/Thompson Canada Ltd.  
Available in the Trent Bookstore, from last year's students, and through online bookstores.

### MyLearning

MyLearningSystem is an online source for course information. We sometimes distribute lecture notes, announcements, and assignments in this way (Note: lecture notes may not be distributed for every lecture). It also lets you ask questions and chat with your TA or other students in the course. You should regularly check MyLearningSystem.

### Course Evaluation:

**Assignments:** 4 assignments worth 10% each = 40% total

**Consistency and quality of Lecture and Seminar participation:** 5%

**In-class tests:** There will be six unannounced short in-class tests. Only your top five test marks will count toward your final grade. These tests will be worth 2% each = 10% total

**Mid-term & final exams:** 20% on lower mark; 25% on higher mark = 45% total

Type of Assignment	Weighting	Due Date
Assignment 1: Environmental communication	10 %	November 3, 2009
Assignment 2: Environment & the urban form	10 %	December 8, 2009
Assignment 3: Pollution lab	10 %	February 23, 2010
Assignment 4: Environmental Petition	10 %	March 30, 2010

Bata Library runs the Library Skills Program (part of your mark for Assignment #1). The Library Skills program, offered as a separate MyLearningSystem course, will take 3-4 hours to complete, and will help you learn how to find information via sources at the library and on the Internet. You can complete the Library Skills Program at any time before noon on October 13, 2009 but are encouraged to do it earlier in the term before things get too busy. Note also that this program, while somewhat similar in structure, is unique from other courses or from ISW and you must complete the ERSC 1000Y version.

**In-Class Tests:**

You *must* be present in lecture to write an in-class test. While this might seem like tough medicine, it is designed to encourage you to stay on top of your readings and lecture material and, thus, do well on the exam and in the course. It goes without saying that you need to be in class and paying attention to do well on the in-class tests. Ultimately, to do well on the exams, you will need to continually review lecture notes and integrate this material with the readings and assignments.

**Exams:**

There will be a mid-term exam in the December exam period and a final exam during the April exam period. The mid-term exam will cover material for the fall term and the final exam will cover the entire year, although most of the emphasis will be on the second term. The two exams will be worth 45% of your final mark; the exam on which you perform better will be worth 25% while the exam on which you don't do as well will be worth 20%. No matter how well you do on the mid-term, this marking scheme should give you an incentive to do better on the final!

**University Policies****Academic Integrity:**

Academic dishonesty, which includes plagiarism and cheating, is an extremely serious academic offence and carries penalties varying from a 0 grade on an assignment to expulsion from the University. Definitions, penalties, and procedures for dealing with plagiarism and cheating are set out in Trent University's *Academic Integrity Policy*. You have a responsibility to educate yourself – unfamiliarity with the policy is not an excuse. You are strongly encouraged to visit Trent's Academic Integrity website to learn more: [www.trentu.ca/academicintegrity](http://www.trentu.ca/academicintegrity).

**Access to Instruction:**

It is Trent University's intent to create an inclusive learning environment. If a student has a disability and/or health consideration and feels that he/she may need accommodations to succeed in this course, the student should contact the Disability Services Office (BL Suite 109, 748-1281, [disabilityservices@trentu.ca](mailto:disabilityservices@trentu.ca)) as soon as possible. Complete text can be found under Access to Instruction in the Academic Calendar.

**Please see the Trent University academic calendar for University Diary dates, Academic Information and Regulations, and University and departmental degree requirements.**

**Last date to withdraw from Fall/Winter full courses without academic penalty in 2009-10 is February 9, 2010.**

## Course Policies

### Assignments:

- Assignments are to be submitted during lecture or to the assignment drop box outside of Rob Loney's office (ESC A204) before 4:30 p.m. on the day they are due. Do not submit assignments under our office doors, by email, or directly to your TA. Late assignments will not be accepted and will receive zero. Extensions will only be granted under exceptional circumstances (e.g., documented medical condition, family emergency) as determined by the course coordinator (Stephen Hill).
  - 2009-10 Exception - H1N1 Flu & Late passes: There are predictions that more people than normal will be affected by the flu this fall. If you catch the flu, we want you to stay home, rest and get better. So, if you have the flu, you can have a one-time only late pass for your assignment. The late pass permits you to submit any assignment up to one week (seven calendar days) late without penalty. You do not need to contact us before hand or to provide a medical note. Simply hand your assignment in with a note on your first page indicating you had the flu. A word of caution: you should not use this late pass unless you truly have the flu. It's a one-time only offer.
- Your graded assignments will be returned by your TA during your seminar, normally two weeks following the assignment's due date. Assignments that are not claimed in seminar will be left for pick up outside of Rob Loney's office, in ESC A204.
- If you feel that any assignment has been incorrectly or unfairly graded, please put your argument in writing (Note: no written argument, no re-grade), attach it to the original assignment, and deliver it to your TA at your earliest opportunity. In the event that you cannot resolve a grading issue with your TA, you can appeal your grade to the course coordinator. In your appeal, outline in writing the steps you took to resolve the grading dispute (i.e., discussing the assignment with your TA) and submit a new, unmarked copy of your assignment. The course coordinator or another TA will then remark the *entire* assignment. The new mark, which could be either higher or lower than the original mark, will be your grade.
- Assignments do sometimes get lost. It is your responsibility to keep an original, *unopened* digital back-up copy of your work and your rough notes. This will ensure that you can resubmit and still get full marks for your work.

### Exams:

- The Registrar schedules both mid-term and final exams and we normally learn the date of each exam after reading week. You are expected to be available to write the exams at any time during the exam period and should not book travel or holidays until you know the exam date and time. Trent University regulations for exam workload will apply.
- If you will miss the midterm exam for a legitimate reason, your mid-term mark will be based on your performance on the final exam. There will be no alternative mid-term exam.
- If exceptional circumstances prevent you from writing the final exam, you must make a written request to the ERS program outlining the basis for your absence. An alternative arrangement, most likely in the form of a different exam, may be made where each request is considered on its merit.

### Course Policy on Information Technology:

We want to make our lecture halls and seminar rooms as conducive to learning as possible. We know that many information technologies, while useful tools in some circumstances, can be distracting and unhelpful in the wrong setting. As instructors, we have had a number of discussions about these issues and have examined the practices of other courses and universities. In particular, we found the following sources to be helpful:

1. [http://www.doit.wisc.edu/network/wireless/advice\\_stu.asp](http://www.doit.wisc.edu/network/wireless/advice_stu.asp)
2. <http://fp.arizona.edu/geog695c/PDFs/wireless.classroom.pdf>
3. <http://edc.carleton.ca/blog/index.php/2008/03/28/research-notes-classroom-management-for-the-wireless-classroom/>

As well, we reviewed some of the emerging evidence in this area:

*“Recently, a debate has begun over whether in-class laptops aid or hinder learning. While some research demonstrates that laptops can be an important learning tool, anecdotal evidence suggests more and more faculty are banning laptops from their classrooms because of perceptions that they distract students and detract from learning. The current research examines the nature of in-class laptop use in a large lecture course and how that use is related to student learning. Students completed weekly surveys of attendance, laptop use, and aspects of the classroom environment. Results showed that students who used laptops in class spent considerable time multitasking and that the laptop use posed a significant distraction to both users and fellow students. Most importantly, the level of laptop use was negatively related to several measures of student learning, including self-reported understanding of course material and overall course performance.” (C.B. Fried, 2008. Computers & Education. 50(3) p.906-14).*

Based on these resources, we have developed a set of course expectations for laptops and cellphones:

- Cellphones should be turned completely off during lectures and seminar. Texting is not permitted during lectures.
- Laptop use during lecture is discouraged. If, however, you choose to use a laptop to take notes during lecture, we expect that you will (1) turn off your Wi-Fi access to minimize distractions to your learning; and (2) sit on the left side of the lecture hall to minimize distractions to others.

We expect that you will follow and help enforce this policy. We also welcome discussion about these issues.

### **Help with studying, taking notes, time management, reading, writing, etc:**

We encourage ALL students to access the many resources of the Academic Skills Centre, located at Champlain College (CC S206, 748-1720). There is a wonderful array of materials and people who can assist you in improving your academic performance.

### **Referencing your work**

*You are expected to properly reference all of your assignments, unless otherwise indicated. References serve three purposes: (1) to credit others for their ideas; (2) to demonstrate your understanding of the literature; and (3) to allow the reader to refer to the original reference for further detail or interpretation. Detailed references should be consistent throughout an assignment and follow a common formatting convention (e.g., APA, Nature, MLA, Environmental Science & Technology). More information about proper referencing can be found at the Trent Library webpage: [www.trentu.ca/library/help/citations.html](http://www.trentu.ca/library/help/citations.html) and in the Academic Skills Centre booklet: Notes on the Preparation of Essays in the Arts and Sciences (available at the ASC or bookstore). We strongly encourage you to become familiar with Trent Library’s online reference management software, RefWorks, and use this for your citations and bibliographies.*

### **Personal Safety and Walkhome**

There are safety phones all over campus, Use them! That's why they're there.

We have an early evening lecture this year and some evening seminars. Please consider using Trent Walkhome: 742-FOOT. They are open 7 days a week - September to April. Mon-Fri: 7pm-1am. Sat & Sun: 9pm-1am.

### **Workload**

Are you wondering how much work you should be doing for ERSC 1000Y? The answer all depends how much you want to learn and how well you want to do! Nonetheless, here's some *general* guidance to help you manage your time.

Full time students take 5 courses. If you work seriously on school 40-50 hours per week, then you have about 8-10 hours of time per week for each course. For ERSC 1000Y, there are 3 lecture hours and 1 seminar hour each week. That's your first four hours. In addition, you should spend at least *2-3 hours each week* doing the assigned reading (which range from about 10-40 pages per week) and *reviewing lecture notes*. To round out your week, you should spend another 2-3 hours working on your assignments. To earn the 60% or higher required to continue in ERS, you shouldn't expect to cut many corners, nor leave all your readings and assignments to the end. Students who do well in ERSC 1000Y normally complete all of the assignments and spend a good deal of time reviewing their lecture notes during the term.

Finally, we empathize with those of you who hold part-time jobs to support your education. It's not an easy thing to do and we commend your effort. We also recognize that many students volunteer their time to Trent groups, teams and to the community. This is also commendable. That said, we want to be fair to everyone and so we won't normally consider workload as a reason for accommodating students who miss lectures, seminars and assignments.

**Course Schedule & Readings (subject to revision during year)**

Wk	Dates	Topic & Instructor	Readings	Notes
1	Sept 15, 18	Tues: Introduction to environmental science & studies (SH) Thurs: Introduction to Assignment #1 (service learning)	Chapter 1 Orr. What is education for? <a href="http://www.context.org/ICLIB/IC27/Orr.htm">http://www.context.org/ICLIB/IC27/Orr.htm</a>	Complete ecological footprint (online)
2	Sept 22, 25	Framing & defining environmental problems (SH)	Chapter 2 & 28 Turner 2007 (online)	Seminars begin
3	Sept 29, Oct 2	Tues: Introduction to Assignment #1 Environmental communication (SH) Thurs: Environmental impact assessment (SH)		
4	Oct 6, 9	Environmental Policy in Canada (SH)	Chapter 27	
5	Oct 13, 16	Climate science, risks and impacts (SH)	Chapter 21, pp. 475-498 Garnaut Review. Chapter 2 (online)	Library Skills due. Annotated bibliography due
6	Oct 20, 23	Finding solutions: Climate policy (SH)	Hill & Leiss (online). Montgomery (online)	
<i>Oct 26-30: Fall Reading week (no classes)</i>				
7	Nov 3, 6	Ecological concepts (Guest: Dr. Mike Fox)	Chapter 4, pp 57-77, Chapter 8	Assignment #1 due
8	Nov 10, 13	Ecology and biodiversity (HB)	Chapters 9 & 12	
9	Nov 17, 20	Biogeochemical cycling (HB)	Chapter 4, pp. 78-88	
10	Nov 24, 27	Urban environments (DK)	Chapter 25, pp 578-599	
11	Dec 1, 4	Soils, food and the environment (DK)	Chapter 14, pp. 284-316	
12	Dec 8, 11	Water issues (DK)	Chapter 15, pp. 317-341	Assignment #2 due
Mid-term exam (in period Dec. 12-22; scheduled by Office of the Registrar)				
13	Jan 12, 15	Tues: Clear Lake: a case study (MH) Thurs: DDT and decision making	Chapters 19, 23, and pp. 536-7	
14	Jan 19, 22	Ecological agriculture (TH) Guest- Dr. Tom Hutchinson	Chapter 14	
15	Jan 26, 29	Tues: Atmospheric pollution (smog & acid rain) (MH) Thurs: The London Smog: First hand observations	Chapter 20	
16	Feb 2, 5	CFCs and Ozone depletion (MH)	Chapter 21 pp. 499-506	
17	Feb 9, 12	Tues: Biological effects of electromagnetic fields (MH) Thurs: Windmills & CFLS: Decision making & Environmental Petitions	Four Havas readings (online)	
<i>Feb. 15-19: Winter Reading week (no classes)</i>				
18	Feb 23, 26	Environmental Economics (SH)	Chapter 26	Assignment #3 Due
19	Mar 2, 5	Organizations & the environment (SH)		
20	Mar 9, 12	Indigenous perspectives on the environment guest- Dan Longboat, Indigenous Studies Program, Trent University	MacGregor. 2005 (online) Paci et al. 2002 (online)	
21	Mar 16, 19	Energy & the environment (SH)	Chapter 17	
22	Mar 23, 26	Tues: Renewable energy (SH) Thurs: Guest – JP Pawliw	Chapter 18	
23	Mar 30 (Apr 2 holiday)	Aggregates in Ontario	TBA	Assignment #4 due
24	Apr 6, 9	Review (SH, BH, SW, SB)	No reading	
Final exam (in period April 12-27; scheduled by Registrar)				