

University of Toronto at Scarborough
“INTRODUCTION TO ENVIRONMENTAL SCIENCE”

(EES A01H3F, Fall 2016)

Professor: Dr. C.P.J. Mitchell **Phone:** 416 208 2744 **Office:** EV-450
Email: carl.mitchell@utoronto.ca

Office Hours: Mondays 1:30 to 2:30 pm, Wednesdays 3:30 to 4:30 pm, and by appointment.

Teaching Assistants: Your teaching assistants are responsible for your tutorials and assignments. TA contact information, tutorial responsibilities, and office hours will be provided on Blackboard early in the semester.

Course Web Site: Everything on Blackboard (<https://portal.utoronto.ca>)

Lecture Time: Mondays, 10am-noon; AC-223

Labs: **This course has hands-on, indoor and outdoor laboratories to enhance your learning experience. LABS START THE WEEK BEGINNING SEPTEMBER 6 (see detailed schedule on page 3 of this syllabus). Please go only to the laboratory room assigned to you when you registered for the course because labs are relatively small (~22 students each) and all sections are generally at full capacity at the beginning of the semester. Please note that no one unfortunately, not even Prof. Mitchell, can remove someone from a lab section to fit you into another if the other is at capacity. Your best bet to get into a lab section that works best for your schedule is to check ROSI daily for room in case a student drops the course, thus providing an open spot. Be aware that open slots are quickly snatched up. If you go to the wrong lab (purposefully or accidentally), you will be responsible for not receiving the proper participation marks (part of your laboratory assignment mark), and in fact will not be permitted to finish your lab.**

Grading:	Laboratory assignments (4 @ 10% each):	40%
	Mid-term Examination (multiple choice):	20%
	Final Examination (multiple choice):	40%

Texts: "Environment: The Science Behind the Stories, 3rd Canadian Edition"
[Authors: Jay Withgott, Scott Brennan, and Barbara Murck; Publisher: Pearson Canada]

This book is required reading and is a new edition for this year. We will not use the online "Mastering" package that comes with it very much. I will not be providing details about readings from older versions of the textbook.

"EESA01 Laboratory Manual" – This will be made available as a free pdf file.

INTENT OF THE COURSE

This course will introduce students to the science behind processes occurring on the earth and within its atmosphere. The course will look at relationships between environmental degradation and human activity in terms of the physical, chemical and biological processes operating at or near the earth's surface. The environmental costs and consequences of human activity are examined in an attempt to define balances between human living conditions and environmental integrity. **The course is science-based and intended for students interested in pursuing environmental issues from a scientific (physical, chemical, biological, and mathematical) perspective.** The course's primary intent is to provide a broad background for students pursuing an education in Environmental Science.

ACCESSIBILITY STATEMENT

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services Office as soon as possible. I will work with you and AccessAbility Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC AccessAbility Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. (416) 287-7560 or ability@utsc.utoronto.ca.

LECTURE OUTLINE / SCHEDULE / TEXT READING

DATE	LECTURE CONTENT
Sept. 1	Introduction to Environmental Science (read ch. 1 & 2)
Sept. 12	The Science of the Environment – Matter, Energy, & the Physical Environment (brush up on ch. 2)
Sept. 19	Earth Systems and Ecosystems (read ch. 3)
Sept. 26	Global Energy Flows and the Global Water Cycle (read ch. 3, pp. 78-79; ch. 13, p. 386-392; ch. 14, p. 422-429)
Oct. 3	Water Resource Issues (read ch. 11)
Oct. 10	THANKSGIVING AND FALL READING WEEK – NO CLASSES OR TUTORIALS
Oct. 17	Soils (read ch. 7)
Oct. 24	Agriculture and Impacts (read ch. 8)
Oct. 31	Biodiversity and Conservation (read ch. 9)
Nov. 7	Atmospheric Science and Global Climate Change (read ch. 13 and 14)
Nov. 14	Energy Extraction and Impacts (read ch. 15)
Nov. 21	Energy Alternatives (read ch. 16)
Nov. 28	Global Population Dynamics and the Environment (read ch. 6)

I will follow this schedule as closely as possible, but things being what they are, some of these topics may "overflow" over into other time slots and slight alterations to the schedule may occur.

LABORATORY/PRACTICAL INFORMATION

For the first time ever in this course, students will be doing hands-on laboratory- and field-based work in order to complete related assignments. A freely-available laboratory manual has been put together that details laboratory safety, schedules, and assignments. The manual will be available via Blackboard before the first week of labs, starting September 8. **Please read the following and the laboratory manual carefully.**

There are too many laboratory sections to fit labs every week, thus you will go to lab every other week. Your attendance at all labs is **mandatory** (and will be recorded) and if you miss a lab, you will lose marks on the related assignment. As well, since you need to actually do things for the assignment, missing a lab means you will not be able to complete the assignment. Professor Mitchell will only make accommodations for missed labs with an acceptable medical excuse (see lab manual) and only if there is room to fit you in. Do not assume that you will be able to make up for missing a lab for any reason.

Below is the schedule for when there are actual labs (see your timetable for time and place). Weeks without labs, you simply do not have to attend. Lab 1 will be entirely indoors/laboratory-based. Be prepared (rain or shine) for outdoor fieldwork for labs 2, 3, and 4. Always meet at the laboratory, even for fieldwork-based labs.

LAB/PRA Section	Lab 1	Lab 2	Lab 3	Lab 4 (2-week lab)
PRA001 (Thurs)	Sep 8	Sep 22	Oct 6	Oct 27 and Nov 10
PRA002 (Thurs)	Sep 15	Sep 29	Oct 20	Nov 3 and Nov 17
PRA005 (Thurs)	Sep 8	Sep 22	Oct 6	Oct 27 and Nov 10
PRA006 (Thurs)	Sep 15	Sep 29	Oct 20	Nov 3 and Nov 17
PRA007 (Thurs)	Sep 8	Sep 22	Oct 6	Oct 27 and Nov 10
PRA008 (Thurs)	Sep 15	Sep 29	Oct 20	Nov 3 and Nov 17
PRA009 (Thurs)	Sep 8	Sep 22	Oct 6	Oct 27 and Nov 10
PRA0010 (Thurs)	Sep 15	Sep 29	Oct 20	Nov 3 and Nov 17
PRA0011 (Thurs)	Sep 8	Sep 22	Oct 6	Oct 27 and Nov 10
PRA0012 (Thurs)	Sep 15	Sep 29	Oct 20	Nov 3 and Nov 17
PRA0018 (Wed)	Sep 14	Sep 28	Oct 19	Nov 2 and Nov 16
PRA0019 (Wed)	Sep 7	Sep 21	Oct 5	Oct 26 and Nov 9
PRA0020 (Wed)	Sep 14	Sep 28	Oct 19	Nov 2 and Nov 16
PRA0021 (Wed)	Sep 7	Sep 21	Oct 5	Oct 26 and Nov 9
PRA0022 (Wed)	Sep 14	Sep 28	Oct 19	Nov 2 and Nov 16
PRA0023 (Fri)	Sep 9	Sep 23	Oct 7	Oct 26 and Nov 11

Due Dates: All assignments must be deposited by 4 pm, in the appropriate drop boxes on the 2nd floor of the EV building (adjacent to room EV 262). To avoid confusion, below are the specific due dates:

LAB/PRA Section	Assignment 1	Assignment 2	Assignment 3	Assignment 4
PRA001 (Thurs)	Sep 19	Oct 3	Oct 17	Nov 21
PRA002 (Thurs)	Sep 26	Oct 7	Oct 31	Nov 28
PRA005 (Thurs)	Sep 19	Oct 3	Oct 17	Nov 21
PRA006 (Thurs)	Sep 26	Oct 7	Oct 31	Nov 28
PRA007 (Thurs)	Sep 19	Oct 3	Oct 17	Nov 21
PRA008 (Thurs)	Sep 26	Oct 7	Oct 31	Nov 28
PRA009 (Thurs)	Sep 19	Oct 3	Oct 17	Nov 21
PRA0010 (Thurs)	Sep 26	Oct 7	Oct 31	Nov 28
PRA0011 (Thurs)	Sep 19	Oct 3	Oct 17	Nov 21
PRA0012 (Thurs)	Sep 26	Oct 7	Oct 31	Nov 28
PRA0018 (Wed)	Sep 26	Oct 7	Oct 31	Nov 28
PRA0019 (Wed)	Sep 19	Oct 3	Oct 17	Nov 21
PRA0020 (Wed)	Sep 26	Oct 7	Oct 31	Nov 28
PRA0021 (Wed)	Sep 19	Oct 3	Oct 17	Nov 21
PRA0022 (Wed)	Sep 26	Oct 7	Oct 31	Nov 28
PRA0023 (Fri)	Sep 19	Oct 3	Oct 17	Nov 21

Unfortunately, it is next to impossible to keep track of the hundreds of students in this class and as such, **late assignments will not be accepted and will be given a mark of zero.** The only time a late assignment will be accepted is if a student suffers a medical issue that interferes with completing the assignment and is substantiated by a doctor's note (above a grade of "moderate"), given to your TA. Take a pro-active approach and **consider handing in your assignment EARLY.** To ensure fairness to all students, this **rule will be followed very strictly.** Keep in mind that assignments are worth 10% each, for a total of 40% of your final grade, so a zero on an assignment can be very, very detrimental to your final mark!! We will strive for as short a turnaround in marking assignments as is possible so that you regularly know where you stand (~2 weeks).

Sign up for specific laboratory sections is on a first-come-first-served basis, starting when you first chose your classes for the semester. If you have a hard conflict with another class or tutorial, Professor Mitchell still cannot do anything about it. Your only option is to log in to ROSI/ACORN at least daily to check for openings in other sections as they come up. Generally, there is a lot of movement over the first couple of weeks of classes. I

To summarize, here are a few key points to keep in mind regarding tutorials:

1. Laboratory attendance is mandatory, attendance WILL be taken, and it will make up part of the mark on your assignments.
2. Come prepared for labs. You will need to purchase a lab coat and safety glasses or goggles if you don't already have them. You should purchase a laboratory notebook for use only in this course and bring it to every lab. Lab 1 is entirely in-lab (indoors), but large parts of labs 2, 3, and 4 take place outdoors, so come prepared for any weather and walking situation (e.g. rain gear, at least a good pair of sneakers, if not hiking boots). For all labs, meet at the lab whether you are going outdoors for the lab or not.
3. You alone are responsible for the timing of your laboratory section. If you need to change, you need to monitor ROSI/ACORN regularly to see if a slot opens for you.
4. Assignments are always due at 4pm on Mondays. Refer to the table on the previous page for clear and specific due dates for each lab section for each assignment. **Absolutely no late assignments will be accepted.** A white sheet with the words 4pm will be dropped in each assignment drop box at the exact due date and time. If your assignment is on top of this sheet, it will not be marked. If your assignment will be late due to a documented medical reason, you should contact your TA as early as possible. **Any assignment, for any reason, handed in more than 5 business days late, will not be accepted for marking. Note that this rule applies as well to students who decide to add the course later in the semester.** ALL students, regardless of when you are officially entered into the class, are responsible for all aspects of the course. **I realize this is a strict policy,** but this is the only **fair** means of evaluating all students in the course.
5. Make sure you hand your assignment in to the right place (the multiple drop boxes adjacent to room EV-262). The drop box area has numerous slots in it. Your particular tutorial time and TA's name will be above your slot. There is no excuse for making a mistake here.
6. **Plagiarism (cheating) will not be tolerated.** Do not let your friends "borrow" your assignment. Do not let your friends see your final answers. Working together through problems is ok, but there is a very fine line and specifically, the line is that **you are to be evaluated on your INDIVIDUAL work.** Every year at least one or two dozen students push this too far and end up with AT LEAST a zero on a particular assignment (which puts you down almost a full letter grade). **You will not be given a "first warning".** Depending on your past academic history, penalties CAN be harsher. You should also refer to the Student Code of Conduct near the end of this syllabus.

IMPORTANT MID-TERM POLICIES

The 2-hour mid-term examination will be held during the mid-term period, exact time, date and room(s) to be announced in class when this information becomes available. The mid-term exam will be entirely multiple choice and will be worth 20% of your final grade. If you miss the examination for a verifiable reason (i.e. you have a Doctor's note), the weight of the mid-term will be added to the weight of your final exam. This puts a very heavy weight on your success in the final exam and I highly DO NOT recommend this. **If you simply "miss" the mid-term, you will receive a mark of zero.** Note that Professor Mitchell will assess the validity of your having missed the mid-term. Do not leave your marks to something subjective!

INTERACTION WITH THE PROFESSOR AND TEACHING ASSISTANTS

Although I have listed a number of very strict sounding rules, I assure you that I care deeply for your success as a university student. Please do not be intimidated to come and speak with me regarding anything to do with the course or your interest in Environmental Science. The rules are necessary to make sure that the course runs smoothly **and fairly** for all students enrolled. I (Professor Mitchell) very much enjoy speaking with students face-to-face, especially about Environmental Science and you are welcome to discuss all facets of the course material with me immediately after class, during my office hours, or by appointment. I am very friendly (honestly!). Your TAs also have office hours and you should take advantage of these for questions pertaining to your laboratory assignments. Note that the **TAs are not required to be intimately familiar with lecture material** (e.g. the material for your midterm test and final exam). If you attend all lectures and all tutorials in an attentive manner, your chances of doing well in the course are maximized.

Each and every student is expected to attend EVERY lecture, but for your benefit, I have “weboptionned” the course, meaning that all lectures will be video-recorded and made available online. Please rely on your fellow colleagues in the class for missing notes, if necessary. Lecture slides will be posted on Blackboard, but little of what I may “say” will actually be on those slides so **it is important to note that the following is fair game for examination material: what is on lecture slides, what is in your readings (even if not expressly covered in a particular lecture!), EVERYTHING that I say in lecture.** I duly understand that this sounds like a lot, but this is the level of academic commitment that is expected of you. Lecture slides are posted to facilitate your learning DURING lecture and for you to avoid having to, for example, copy large diagrams while you should be taking notes or listening. All lecture notes will be posted on Blackboard prior to each scheduled lecture. ***My advice is that you annotate the posted lecture notes with your own notes during lecture.***

Email policy: For questions pertaining to the course and assignments, students should directly ask the Professor or your TA or preferably, post the question on the Blackboard “Discussion Board”. Short emails will usually be answered with appropriate, short responses. Long, drawn out questions and/or questions pertaining to very general subjects, which are likely to be of interest to the entire class, should be posted on the Blackboard (Discussion Board module) so that the entire class may benefit from the answer. All students should check the Discussion Board module of Blackboard at least weekly and please do **check the Discussion Board to see if your question is already answered**; oftentimes this is the case. Think of Discussion Board as an ever-evolving Frequently Asked Questions wiki page. All emails should be sent via a “.utoronto.ca” or “mail.utoronto.ca” email address to ensure a response (most Hotmail, Gmail, etc end up in my junkmail never to be seen). **Please note that due to the extremely large number of students I teach during the fall term (>450) and the very large number of “real” emails I get a day (generally in excess of 50), I will only respond to emails from students in this course on Mondays and Thursdays between 4 and 5 pm. As such, there is no such thing as an “emergency” email. If it is a true emergency, come to my office.** I do not check my email constantly because I am too busy to do so. Thus, it is not a good form of communication when a quick response is desired. Note alternatively that I will have at least one TA (and/or myself) check the Blackboard Discussion Board at least daily during weekdays throughout the term, meaning Blackboard is your best bet for a <24-hour response time.

BLACKBOARD INFORMATION

Logging in to your Blackboard Course Website

Like many other courses, EESA01 uses Blackboard for its course website. To access the EESA01 website, or any other Blackboard-based course website, go to the UofT portal login page at <http://portal.utoronto.ca> and log in using your UTORid and password. Once you have logged in to the portal using your UTORid and password, look for the My Courses module, where you'll find the link to the EESA01 course website along with the link to all your other Blackboard-based courses.

Activating your UTORid and Password

If you need information on how to activate your UTORid and set your password for the first time, please go to <http://www.utorid.utoronto.ca>. Under the “First Time Users” area, click on “activate your UTORid” (if you are new to the university) or “create your UTORid” (if you are a returning student), then follow the instructions. New students who use the link to “activate your UTORid” will find reference to a “Secret Activation Key”. This was originally issued to you when you picked up your Tcard at the library. If you have lost your Secret Activation Key you can call 416-978-HELP or visit the Help Desk. The course instructor will not be able to help you with this.

Email Communication with the Course Instructor

At times, the course Instructor may decide to send out important course information by email. To that end, all UofT students are required to have a valid UofT email address. You are responsible for ensuring that your UofT email address is set up AND properly entered in the ROSI/ACORN system.

You can check your UofT email account from

1. The UofT home page <http://www.utoronto.ca>: From the Quick Links menu on the top right, choose "my.utoronto.ca". Enter your UTORid and password, and when the Welcome page opens, click "WEBMAIL".
2. Email software installed on your computer, for example Microsoft Outlook or Mozilla Thunderbird. Visit the Help Desk at the Information Commons or call 416-978-HELP for help with the set up.

Forwarding your utoronto.ca email to a Hotmail, Gmail, Yahoo or other type of email account is not advisable. In some cases, messages from utoronto.ca addresses sent to Hotmail, Gmail or Yahoo accounts are filtered as junk mail, which means that emails from your course instructor may end up in your spam or junk mail folder.

You are responsible for:

1. Ensuring you have a valid UofT email address that is properly entered in the ROSI/ACORN system.
2. Checking your UofT email account on a regular basis.

STUDENT CODE OF CONDUCT

Please arrive promptly for lecture and do not forget to turn off cell phones. I am fine with you annotating notes directly on your laptops, however, I will under no circumstances tolerate other uses of your computers during lecture (like students laughing over a funny YouTube clip or checking Facebook). You are fully expected to abide by the Code of Student Conduct as set out by The Governing Council at the University of Toronto (<http://www.utoronto.ca/govcncl/pap/policies/studentc.html>). This document defines the standards by which students are to conduct themselves within class and within the University community at large. Please be advised that misconduct of any form will not be tolerated in this class. This includes plagiarism on tests, assignments, and exams, which will be strictly enforced and is easily detected. If you have further questions regarding what constitutes plagiarism or other academic offences, feel free to speak with Prof. Mitchell or your TA.

SOME FINAL WORDS OF ADVICE

This course is moderately technically demanding and there are plenty of things that will be unfamiliar. I am not oblivious to the fact that most students will have little previous experience with Environmental Science, or possibly science in general. As long as you are willing to learn, I am willing to provide you with whatever resources you require to learn. It is difficult to "crash and burn" because of the large number of elements in the course. It is, however (and for the same reason), a considerable task to maintain a high standard. You cannot do really well if you do very poorly on any element, so be vigilant: a really bad mid-term, for example, can make a difference of at least a letter grade to your final mark.

Given the size of this class, I ask that we all conduct ourselves professionally and with respect. There are 300+ students in this lecture hall at the same time and given our limited time with each other (only 24 hours for the entire term), it is important that 1) you put your best effort forward in paying attention in class, and 2) you do nothing that might disturb your fellow students or myself (cellphones must be put on silent, do not arrive late, do not discuss yesterday's Netflix episode (or watch it) with your friend, do not check email, Tweet, or update your Facebook page while I lecture). You and all the other students have paid a lot of money to be here, so following these quite reasonable rules will provide an enriching learning experience for everyone.