

ERS 110 - Environmental Analysis and Solutions I: Foundations (Fall 2014 Course Syllabus)

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(For those interested, I [also do lots of other environmental and educational stuff](#)).

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¹Call me "Steve", "Stephen" or "Smurph" - but you never have to use the formal "Dr. Murphy" or "Prof. Murphy" - that ain't our style in ERS. In the e-version of this syllabus, you can click on the hypertext to see my home page and all the stuff I am up to these days.

The only hardcopy text you need is Newcomb's Wildflower Guide (buy @ bookstore or elsewhere).

The rest of is a “meta-text” that consists of the syllabus, webpages, & on-line pdfs (i.e. minimizes costs & waste)

For the ppt slides of the class lessons, pdfs of the required readings, more information on this course, you will log into the University of Waterloo on-line learning resource known as “LEARN”²

ERS 110 Class Lessons are on Wednesdays 14:30-16:20 in MC 2034

ERS 110 Tutorials are on Thursdays (you will either be in PAS 2084 or 2085)

Tutorials start the 1st week of classes³ - see your course schedule for your assigned section/location

**Assignments will be uploaded to Waterloo's online system known as "LEARN"⁴;
all assignments are due before 23:59 h on the date indicated in the At-A-Glance Chart (next page)**

Students are encouraged to make one-to-one appointments (I suggest this be done by e-mail for speed and convenience) or to e-mail questions using the LEARN Communications tool.

Students are also welcome to drop by without appointments but should be aware there may be times when others have appointments with me so I will not necessarily be available. Because university professors also are required to perform research and administrative duties, there may be days when I am not available or have to re-schedule office hours so I post this information on my office door. I also have cookies. Lots and lots of cookie; it beats drinking Scotch all day (too clichéd). I will be in Sydney Australia at a United Nations conference Nov 14-23 so I have a guest star for the class lesson during the one class I will miss.

² Use your UW ID & password for access; sometimes access opens only on the 1st day of classes; I will not expect you to have read ahead during class 1 so don't panic.

³ If anyone tells you “there are no tutorials in 1st week”- they are wrong as far as ERS 110 goes (i.e. a few courses eschew them; ers 110 does not).

⁴ Or occasionally, we call it "Crash and Burn".

ERS 110 At-A-Glance Schedule (Includes Assignment Dates)

DATES	CLASS LESSON (WEDNESDAYS)	READINGS (@LEARN WEBSITE)	TUTORIALS (THURSDAYS)	LEARNING OBJECTIVES
Se 10, 11	Solving problems: thinking, visions, disputes, analysis	Murphy 2012	How to do analysis & the term assignments	Master basics of critical thinking & transdisciplinarity
Se 17, 18	Ecological principles	Ellis et al 2010 Kareiva et al 2011	Project Aster: Ecological field study I	Apply basic & advanced ecological & social analyses for problem solving; learn basic field ID & experimental skills
Se 24, 25	Analysis of ecological & social data - working with numbers	Spellerberg & Fedor 2003 Jamieson 2004	Project Aster: Ecological field study II	
Oc 1, 2	Using governance, policy & law for conserving ecosystems	Kranjc 2000 Milder 2007	Project Aster: Analyzing Data	Practice analysis of data & tie ecological data to policy issues
Oc 8, 9	Using ecological economics to solve problems	Venkatachalam 2007	Presentations I	Apply ecological economics in problem solving
Oc 15, 16	Using sustainability & impact assessment to solve problems	Afghan & Carvalho 2004 Lozano 2006	Presentations II	Apply sustainability & impact assessment
Oc 22, 23	Complexities of international environmental problem solving	Glaser & Diele 2004 Keyuan 2008 Fischhendler 2008	Presentations III	Environment & resource issues are often linked to larger political issues
Oc 29, 30	Complexities of urban socio-ecological action & planning	Murphy 2006	Assess & suggest how to “green” urban areas	Assess & act on greening urban areas
No 5, 6	The struggle and opportunities for environment & resource studies I	Shellenberger & Nordhaus 2004 Orr 2006 Folke et al 2007	Let's get creative: Planning, action & creative problem solving	Challenge yourself; think laterally under a deadline
No 12, 13	The struggle and opportunities for environment & resource studies II	Assigned: McKenzie & Rees 2007	<u>No tutorial</u> ; staple your eyelids open for other classes	Learn how to defeat idiotic & ideological arguments
No 19, 20	The struggle and opportunities for environment & resource studies III (by Katie Kishxu)	TBA	Final Research Paper Due Today @ 2359 h via LEARN. <u>No tutorial</u> ; go stark raving mad	Better ways of learning by doing - that's the ERS way
No 26, 27	The struggle and opportunities for environment & resource studies IV	Höchtel et al 2006	No tutorial; plan world domination just like some pundits claim; bwa-ha-ha-ha!	One outcome desired with different paths to get there: Exploring creative options

The Fundamentals of ERS 110

ERS 110 Has Three Main Objectives

- Introduce analytical approaches for defining and resolving environment and resource issues.
- Introduce transdisciplinary approaches. Environment and resource issues often are defined and analyzed on a narrow disciplinary basis. While this background is essential most issues are not isolated and originate across ecological and socio-economic systems and institutions.
- Introduce students to the requirements of scholarly research and communication.

Assessment of Students in ERS 110 (Assignments & Exams)

- RESEARCH (TERM) PROJECT: 40% OF FINAL GRADE IN TOTAL. See At-A-Glance chart for due dates.
 - Verbal Presentation of Research Project. 5% of final grade
 - Final Research Project. 35% of final grade.
- FINAL EXAM: 60% OF FINAL GRADE IN TOTAL. Final exams are scheduled *by the Registrar's Office* for the December exam period (**I do not have control over the final exam date or time**). Usually, the date/time is announced mid-November and the location announced at month's end. Note that there usually is a final day scheduled after the anticipated end of exams – this is reserved as a day in case an exam is cancelled because of weather or other serious reason. ***The final exam assesses material covered in tutorials and class lessons and includes the term long media assignment.***

Course Readings (Via LEARN, Listed in the ERS 110 At-A-Glance Schedule)

The course readings will be referenced in the course reader but most of these will not be supplied as paper copies – instead they will be posted to the ERS 110 webpage in LEARN. This saves you money and saves paper - the marginal cost of power to run computers is much lower than paper duplication. Students are responsible for reading material before class, relating it to class lessons and tutorials (the lessons will emphasize the readings), and understanding it all because the readings will be examined – though emphasis will be placed on the aspects covered in course lessons and tutorials. You are expected to review assigned readings before and after each class. All material from readings may be examined but material in lessons will be the emphasis. For your assignments you can use the readings as a way to determine key words and key ideas and help find additional resources; for exams, readings may further explain and illustrate your answers. I *will not* expect obscure details from readings on exam answers – *this course will not focus on trivial information*. Examples of trivia that will NOT be showing up: recalling the scientific name of organisms studied, birth and death dates of historical figures, memorizing every detail of a graph from an article, memorizing boring shit in general.

Term Assignment I: The Media and Environment & Resource Issues

You will be tested on this cumulative term assignment during the final exam

CONTEXT.

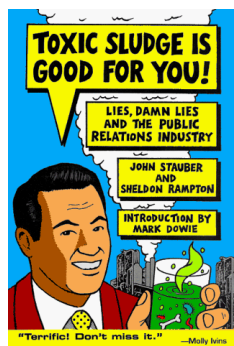
- A main source of news about environment and resource issues is the media – how in depth & accurate is the information you get from various sources and types of media?

RATIONALE.

- As students and citizens, it is important that you are aware of current issues and controversies surrounding environment and resource issues.
- Unfortunately, newspapers are declining in popularity as a resource; newspapers generally provide more in-depth or at least current coverage of issues than sources such as television and often the web (especially blogs).
- You need to be aware that media sources may contain bias in their stories; it is up to you to read stories with a healthy skepticism. This means getting information from several different sources.
- Elsewhere in this course, you do a research paper using *academic journals* to help you discover more detailed and objective sources of information.

REQUIREMENTS.

- Read. A lot. There are thousands of media sites or sources. I provide some links to the better ones on the LEARN site. I am also going to have you ferret out some of the worst ones. I recommend that you maintain an awareness of any issues that indirectly affect the environment and resource issues and the reporting of stories on these.
- Essentially, I will test your awareness of issues and the influence of media. What you will find on the final exam? I will ask you to:
 - Discuss how the more environmentally-focused sites have analyzed and 'spun' any one environment or resource issue.
 - Discuss the most egregious example of poor reporting on an environment and resource issue that you can find. You should strive to be original, i.e. don't just repeat one that several major websites or blogs have already dissected. The student with the best 'find' and analysis of a particularly terrible job of a source mangling an environment or resource issue gets an award - The Weasel of the Year Award (2014 marks our 3rd year for this!).



Term Assignment II: Research Project on an Environment/Resource Issue⁵

LEARNING OBJECTIVES.

- Learn to narrow down your study from a big unwieldy problem/issue (i.e. “the *context*” of an issue) to a research question that you can do something about.
- Learn to search for information from the libraries, World Wide Web, and media sources. Specifically, you will learn how to differentiate good evidence from bad evidence and learn to use academic journals as sources of evidence and analysis.
- Learn how to structure a research paper in a scholarly but still interesting manner to ensure you can convince people to act.

BASIC REQUIREMENTS.

- You are to investigate and research almost any environment/resource issue or problem. Your task is basically to analyze why it is (or is not, or should be recognized as) a problem or important issue, assess what alternative solutions or resolutions exist, and suggest the best course(s) of action(s) to solve or resolve the issue or problem. ***The only real requirements are that you have at least 6 journal articles being used for your project and that all information is credible (it’s up to you to demonstrate credibility).*** You are welcome to use additional sources other than journal articles.

THERE ARE SOME RESTRICTIONS ON YOUR ALLOWABLE CHOICE OF ISSUE OR PROBLEM.

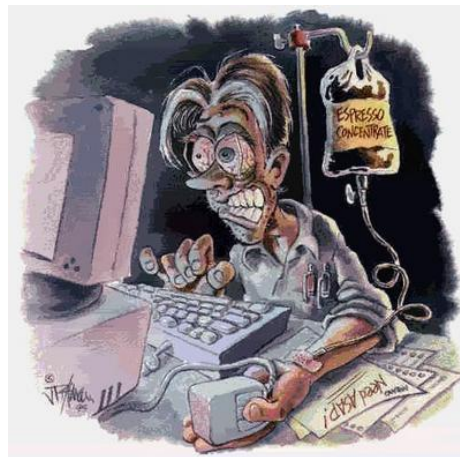
- You cannot use the same issue you examine for *any* of your other assignments in other courses (the reason for this is that there is too much risk of inadvertent [plagiarism](#)) or the issues we use as examples that are interpreted in detail in ERS 110.

THE ASSIGNMENT HAS TWO PARTS (SEE “AT-A-GLANCE” CHART ON PAGE 3 FOR DUE DATES/TIMES).

- **The verbal presentation (Presentations I, II or III)** is based on your outline is held in tutorials Oc 9, 16, & 23 (the TA will assign you a slot within one of these tutorials). It is meant to give you practice in public presentations and to give your colleagues a chance to offer constructive suggestions. Details are found in the section describing the tutorial exercises on the LEARN site (i.e. go to the appropriate “folder” under the “Lessons” submenu and read there.
- **The final research paper** will be no more than 2000 words in length and shall include:
 - An “**abstract**” of no more than 200 words that describes, in one continuous paragraph, the broad and narrow issues/problems. 5% of grade.
 - An “**introduction**” of approximately 500 words that describes the broad context of the issues/problems, sufficient relevant literature (e.g. at least 6 articles from peer reviewed and well recognized journals), and narrows down the main issue/problem of interest for the reader. 20% of grade.
 - A brief section on “**methods**” that describes your research approach (interviews, library research, experiments) – this may be *very brief* (e.g. describe your keywords used in searching Web of Knowledge) if you simply used the available published literature. Not weighted per se but it has to be there or we lop off 5% of your erstwhile grade.

⁵Basic formatting of your assignment: Type all assignments. Use Calibri 12 pt font with 2.4 cm margins all around and left justification. Single space since this is e-submitted. Pages must be numbered.

- As the **major section of the paper**, a detailed “**discussion/resolution**” of the problem or issue that uses your research (including relevant journal articles) to analyze, assess, and act on the issue or problem. 75% of grade.
 - *If relevant*, include a brief “**acknowledgments**” section that thanks anyone who you legally interview or who helps you (include names, affiliation, location – unless confidential).
 - A “**literature cited**” section that follows the exact format required and cites all sources used in the text of your report (grades will be *deducted or adjusted* if you ignore the style below).
 - Good written organization, grammar, sentence structure (grades will be *deducted or adjusted* according to how well or how poorly you accomplish this).
- **General Format for Your Assignment.**
 - Type all assignments; use a truetype (e.g. Calibri) 12 pt font with at least 2.0 cm margins all around and left justification.
 - Single space - the submissions are electronic.
 - Do not start sections on a separate page if this means leaving a substantial portion of a page blank (it is annoying). Pages must be numbered.
 - Good use of sub-headings and use of 1st person active voice are my preferred styles.
 - Do NOT simply cut/paste copyrighted tables, figures, or photos from sources; they must be cleared for ‘fair use’ (they would say this on a website and you must allude to that statement) or you need written permission if the copyright requires it. Do NOT violate copyright.
 - Consistent with most other ERS courses, we will use [APA style](#) (to see what this means and how to do it, just follow the link embedded in “APA style” term above or just Google it).
 - Use a format that is compatible with MS Word 2012 (or MS Word 2010 if you prefer).
 - Submit files with a unique and meaningful file name, e.g. best idea is to use something like “murphy sd 110 a1.doc”. *Failure to do this important step means we will deduct 2% off your final grade. Why so harsh? Ever try sorting through 120 assignments with the same name (e.g. “assignment 1”).*



The Key ERS 110 Course Policies

- *Late assignment penalties* apply to all cases except for those few extensions granted for medical reasons or for professional counseling for serious personal problems – extensions can be granted with proper documentation or discussion well in advance (at least 10 days) before deadline if the reason for extension is not an emergency situation. I am sympathetic to those who recognize early that other responsibilities may create problems meeting deadlines (this is especially true for those who are parents or work horrendous hours to afford tuition and living expenses). I am less sympathetic if cumulative stresses finally dawn on you the morning an assignment is finally due.
 - Assignments submitted past the deadline but before 72 hours have elapsed receive a flat 10% deduction.
 - Assignments submitted after 72 hours but before 168 hours past due have elapsed are assessed a flat 25% deduction.
 - Assignments more than 168 hours past due are given a grade of “0” (zero).
 - If you miss your verbal presentation because of a legitimate medical/counselling reason, inform your TA immediately to reschedule. Otherwise, a grade of "0" (zero) is assigned.
- The University of Waterloo has a series of specific *academic policies, procedures and guidelines* that students must be aware of and follow; all course syllabi in the Faculty of Environment are required to include the following information:
 - **Students with Disabilities:** Help is available via the [Office for Persons with Disabilities](#)
 - **Academic Integrity:** To create and promote a culture of academic integrity, the behaviour of all members of the University of Waterloo is based on 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](#).
 - **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. When misconduct has been found to have occurred, disciplinary penalties will be imposed under [Policy 71 – Student Discipline](#) (this also has information on categories of offenses and types of penalties).
 - **Appeals:** A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. [Read Policy 72 - Student Appeals](#).

“Ignorance more frequently begets confidence than does knowledge”

- Charles Darwin

