



**ERS 110 - Environmental Analysis and Solutions I: Foundations
Fall 2016**

Lectures: Wednesdays – 8:30 a.m. – 10:20 a.m.

Tutorials: Wednesdays 1:30-2:20; Thursdays 1:30-2:20, 2:30-3:20

**DRAFT: Dates, topics and assignments subject to change
Please consult LEARN for the complete syllabus**

Instructor: Dr. Andrea M. Collins

Teaching Assistants: To be announced

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Office Hours: Wednesdays 2:30 p.m. – 4:30 p.m. EV2-2007

Course Description

This course provides the theoretical foundations for studying in the School of Environment, Resources and Sustainability. The course emphasizes how we can use social, natural, and physical sciences to solve environmental and resource problems with a focus on social and ecological sustainability. Students will also learn foundational skills for research in SERS, including field research, library research, and interpreting data.

Course Objectives

By the end of the course, students will be able to:

- Understand the complexities of environmental problem-solving;
- Describe different dimensions of and analytical approaches to environment and resource issues;
- Explain the importance of an interdisciplinary approach to environmental problem-solving;
- Conduct research at the university level using a variety of on-campus resources;
- Synthesize research findings to share with their peers.

Required Texts:

- Newcomb's Wildflower Guide, by Lawrence Newcomb – Available in the UW Bookstore and elsewhere
- Selected readings featured online via Waterloo LEARN
- One book for review. List of eligible books available on Waterloo LEARN

Course Assignments (Dates subject to Change)

Field Exercise & Tutorial Participation	10%
Annotated Bibliography – Due Oct. 21	15%
Research Presentation – Week 8, 9, or 10	5%
Book Review – Due Nov. 18	30%
Final Exam – Date TBD	40%

Academic integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Check [the Office of Academic Integrity](#) for more information.]

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](#). When in doubt, please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline: A student is expected to know what constitutes academic integrity to avoid committing an academic offence, and to take responsibility for his/her actions. [Check [the Office of Academic Integrity](#) for more information.] A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate associate dean. For information on categories of offences and types of penalties, students should refer to [Policy 71, Student Discipline](#). For typical penalties, check [Guidelines for the Assessment of Penalties](#).

Appeals: A decision made or penalty imposed under [Policy 70, Student Petitions and Grievances](#) (other than a petition) or [Policy 71, Student Discipline](#) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72, Student Appeals](#).

Note for students with disabilities: [AccessAbility Services](#), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term.

Turnitin.com: Text matching software (Turnitin®) will be used to screen assignments in this course. This is being done to verify that use of all materials and sources in assignments is documented. Students will be given an option if they do not want to have their assignment screened by Turnitin®. In the first week of the term, details will be provided about arrangements and alternatives for the use of Turnitin® in this course.

Note: students must be given a reasonable option if they do not want to have their assignment screened by Turnitin. See: <https://uwaterloo.ca/academic-integrity/guidelines-instructors> for more information.

Course Outline

Weekly required readings available on LEARN

SECTION I – Welcome to the School of Environment, Resources and Sustainability (SERS)

Week 1 – Sept. 14 – What is SERS?

Week 2 – Sept. 21 – Understanding Data and Research on Sustainability

SECTION II – Frameworks for Understanding Environment and Resource Problems

Week 3 – Sept. 28 – Ecological Principles – Guest Lecturer: Dr. Stephen Murphy, SERS

Week 4 – Oct. 5 – Ecological Economics & Guest Lecture: Marian Davies, Liaison Librarian for SERS, Geography, Planning, and Knowledge Integration

Week 5 – **Oct. 14** – Environmental Governance, Policy and Law

- Lecture moved to **FRIDAY, October 14**.
- No tutorials this week.

Week 9 – Oct. 19 – Complexities of International Environmental Problem-solving

- Annotated Bibliography Due October 21

Week 6 – Oct. 26 – Complexities of Urban Socio-Ecological Action & Planning

- Tutorial Presentations

Week 7 – Nov. 2 – Incorporating Gender into Environmental Studies

- Tutorial Presentations

Week 8 – Nov. 9 – Gaps between Environmental Awareness, Behaviour, and Policies

- Tutorial Presentations

SECTION III – Problem-Solving for Complex Environment and Resource Problems

Week 10 – Nov. 16 – Principles of Sustainability and Impact Assessment

- Book Review due Nov. 18

Week 11 – Nov. 23 – Creative Problem-Solving through Public Participation

Week 12 – Nov. 30 – Exam Review: What Have We Learned about Transdisciplinary Approaches to Problem-Solving?