

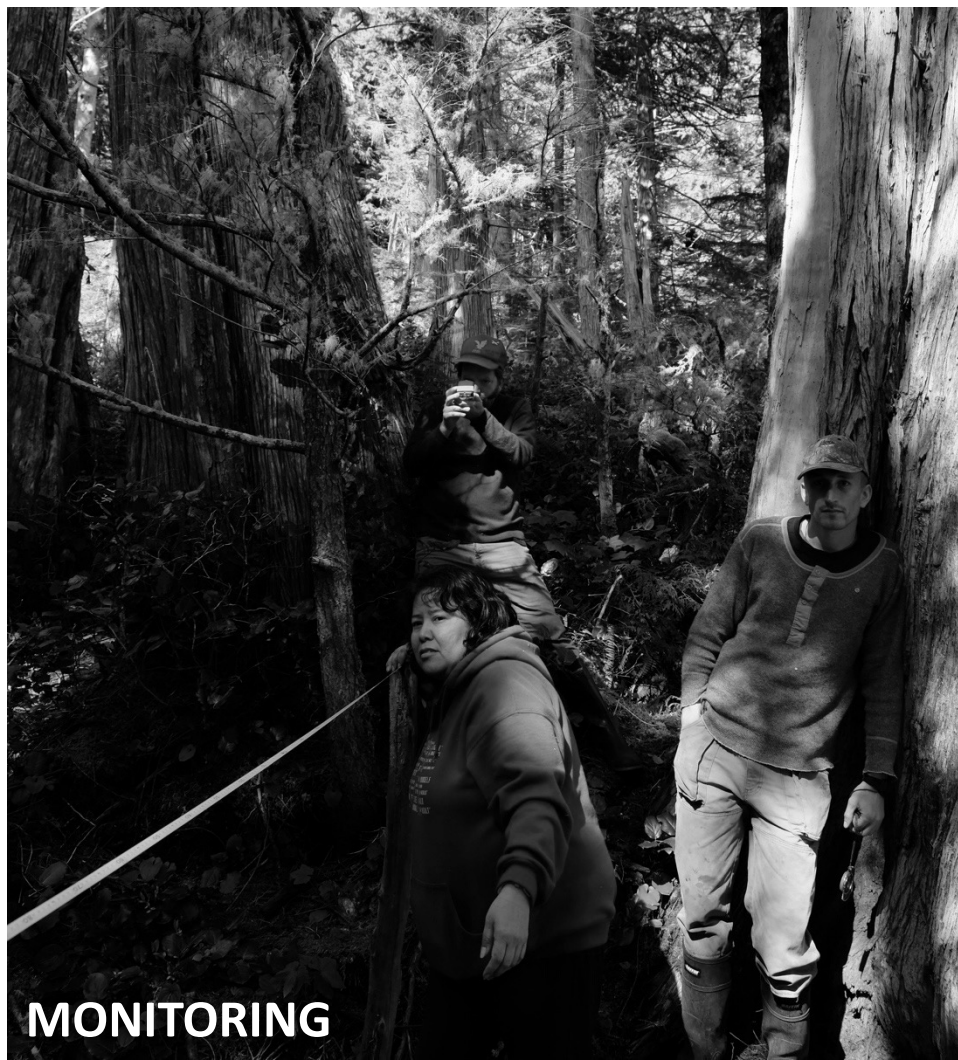
# NATURAL resources reCOLOGY

ERS 202

T/Th: 1:00-2:20  
SJ2-2003

## Course description

Building on the ecological foundation of ENVS 200, this class explores the ecology and context of Canada's main natural resources including forestry, fisheries and agriculture. This course will explore the monitoring, management and conservation of these natural resources and will discuss alternatives to status-quo approaches including organic agriculture and sustainable forestry. This course will be a combination of lecture, discussion and hands on exploration of topics.

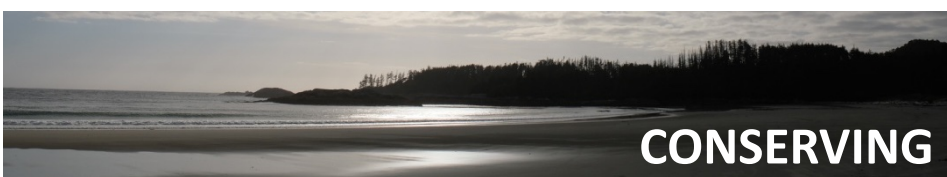


**MONITORING**



**MANAGING**

We are meeting and learning on the traditional territories of the Haunenosaunee, Ojibway/Chippewa, Anishinabek and Neutral



**CONSERVING**

## Important info



**Prof:** Dr. Andrew Trant  
**Email:** atrant@uwaterloo.ca  
**Office hours:** Th 9-11, EV2-2026



**TA:** Alana Closs  
**Email:** amcloss@uwaterloo.ca  
**Office hours:** Th 10-12, EV2-2048

**FOLLOW  
US**



**#ers202**

## What's inside?

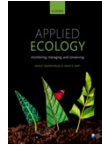
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# Requirements

*I WON'T TEXT IF YOU WON'T*

**No text for this class:**

*Life is too expensive as is BUT BUT BUT here is a good resource*



*Applied Ecology*, Goodenough & Hart 2017. This book is well-priced and full of good context for this course.

How we will learn:

Lectures

Journal articles

You

Podcasts

Popular media

## How to stay fresh

I want to keep this super current so every Friday, I will post (on LEARN) the readings for the following week. With this dynamic model, readings can better reflect our discussions and discoveries throughout the semester. For each reading, you should summarize the findings, identify the ecological issue, and understand how they vary across space and through time (when relevant).

By the end of this course, you should be on a path to life-long learning as an **ecologically-literate citizen**. More specifically, you should be able to do the following:

**identify** and **explain**, with examples, the main principles of ecology as they related to natural resources;

**demonstrate** how these principles and concepts apply to real-world situations (in context of both lectures and labs);

**analyze** the elements of scientific inquiry as they apply to natural resource ecology; and

**evaluate** ecological arguments presented in the media and elsewhere (e.g., for application within your future career).

These course learning outcomes will not only prepare you to be an informed citizen and member of the community of life on earth, but also provide the basis for knowledge, humility, and wisdom in your dealings with ecological problems in your daily life and eventual career.

Objectives

# Assessment

## lab 1: 15%

This lab will explore ways of **monitoring** changes in the Canadian Mountain West using the Mountain Legacy Project. For this project, you will work in groups of 2 that will be assigned in class.

**Due on Oct 5<sup>th</sup> by midnight (through LEARN).**

## lab 2: 15%

This lab will explore ways in which we **manage** resources by getting you outside quantifying changes in biodiversity based on different management practices. It's going to be great.

**Due on Nov 2<sup>nd</sup> by midnight (through LEARN).**

## lab 3: 15%

This lab will explore ways in which we conserve natural resources by integrating knowledge and practice related to sustainability.

**Due on Nov 23<sup>rd</sup> by midnight (through LEARN).**

## midterm: 15%

This will be an open-book take-home midterm that will take the form of a case study. You will need to incorporate readings, lecture and lab material.

**It will be completed during our schedules class time on Oct 19 (80 min).**

## e-journal: 20%

You will hear way more about this in class but the idea is to compile website/journal/media articles on natural resources ecology issues throughout the semester. For each entry, include a short paragraph on the natural resource being presented, what ecological principles are being discussed, what the specific issue is and do we have enough information to assess this? Discuss this in the context of monitoring, managing and conserving. To lighten your work load at the end of the semester, you will need two articles a week for the entirety of the semester (n=24). The entries must correspond to the topics being discussed in class (but obviously not the same sources that I use).

**Due by Dec 7<sup>th</sup> by midnight (through LEARN).**

## final exam: 20%

This exam will consist of a mix of short and long answer questions. You will need to apply readings, lecture and lab material. It will be tough but fair!

**The exam will be in class on Nov 30 (80 min).**

**your mark**

# Policies & resources

This syllabus is a contract between us, so you must abide by the policies and schemes laid out here (as will I, for my part). If you have any questions or concerns, please speak with me as soon as possible.

## Academic integrity and offences

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. CLICK [HERE](#)

You are expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for your actions. If you are unsure whether an action constitutes an offence, or need help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration, please complete the [tutorial](#) and seek guidance from the course professor, your Undergraduate Advisor, or the office of the Associate Dean – Undergraduate. When misconduct has been detected, disciplinary penalties will be imposed under [Policy 71 – Student Discipline](#).

For information on categories of offences and types of penalties, refer to Policy 71. Within the Faculty of Environment, those committing academic offences (e.g. cheating, plagiarism) will be placed on disciplinary probation and will be subject to penalties that may include a grade of 0 on affected course elements, 0 on the course, suspension, and expulsion.

If you believe that a decision affecting some aspect of your university life has been unfair or unreasonable, you may have grounds for initiating a grievance; see [Policy 70 – Student Petitions and Grievances, Section 4](#).

When in doubt please contact your Undergraduate Advisor for details. A decision made or penalty imposed under Policy 70 or Policy 71 may be appealed if there is a ground (see [Policy 72 – Student Appeals](#)).

## Attendance and preparation

You are strongly encouraged to attend class meetings because they will be interactive in nature and develop the course material. Thus, please come to class prepared to discuss and engage.

## AccessAbility

AccessAbility Services (click [HERE](#) for info), 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.

## Availability for exams

Supplemental exams are only set for those with medical or similar problems. You are expected to be present for scheduled examinations, so please see the course schedule (above) for the midterm exam and consult UW’s final examination timetable before making travel plans. No “make up” examinations are provided to accommodate you for leaving campus early. For the UW policy on exams, go [HERE](#)

## Definition of grades

Please click [HERE](#) to see the following link for descriptions of the standards required for different grades.

## Digital distraction

Recent research has demonstrated that students cannot focus effectively on classroom activities and discussions if others around them are using laptops or electronic devices—and their grades, as well as those of their classmates, suffer (e.g., Fried 2008; Taneja *et al.* 2015). Accordingly, *please turn your cell phone off before class*. Further, this course involves extensive oral and listening participation, in addition to note-taking, so laptops will not be used regularly during class. Therefore, *I request that those of you who must use a laptop sit in the back half of the class*. If you have a special learning need that requires a laptop and sitting closer to the front of the room, please document it with AccessAbility Services and we will find an agreeable solution.

*tip:*

If you are having any trouble, come see me ASAP. Don't wait.



# Policies & resources

Continued from last page

## Mental health

Along with the University of Waterloo and the Faculty of Environment and its Departments, I consider your well-being to be extremely important. We recognize that many students face health challenges, physical and/or emotional. *Please note that help is available.* Mental health is a serious issue for everyone and can affect your ability to do your best work. [Counselling Services](#) is an inclusive, non-judgmental, and confidential space for anyone to seek support. They offer confidential counselling for a variety of areas including anxiety, depression, grief, relationship issues, sexuality, stress management, substance use, and much more.

## Religious observances

Please email me at the beginning of term if you require special accommodation for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.

## TurnItIn

Except as below, plagiarism detection software (TurnItIn) will be used to screen assignments in this course. This is being done to verify that materials and sources in assignments are appropriately documented. For further information on UW's TurnItIn guidelines, go [HERE](#). TurnItIn submissions will be stored on a server in the United States, so if you choose not to use TurnItIn you must make an Alternate Declaration in an email to the administrative TA, Stephanie Barr ([s2barr@uwaterloo.ca](mailto:s2barr@uwaterloo.ca)), to be received by January 10, 2016, 11:55pm. Students not using TurnItIn must provide alternative documentation submitted to the admin TA with a paper copy of the lab report or project by the assignment due date and time. The alternative documentation to be submitted is (as applicable): a plagiarism disclaimer form as in the lab template, complete raw data, a rough draft, an extended annotated bibliography for each citation, and original articles or materials used in preparation of the report. Additionally, an electronic copy of the final report is to be uploaded to UW-LEARN by the assignment due date and time.

*tip:*

We are here to help you learn, so put us to work!

## Unclaimed assignments

Unclaimed assignments will be retained until one month after term grades become official in Quest. After that time, they will be destroyed in compliance with UW's confidential shredding procedures.

## Writing

The Writing Centre works across all faculties to help students clarify their ideas, develop their voices, and write in the style appropriate to their disciplines. Writing Centre staff offer one-on-one support in planning assignments and presentations, using and documenting research, organizing and structuring papers, and revising for clarity and coherence. You can make multiple appointments throughout the term, or drop in at the Library for quick questions or feedback. To book a 50-minute appointment and to see drop-in hours, click [HERE](#). Group appointments for team-based projects, presentations, and papers are also available. Please note that writing specialists guide you to see your work as readers would. They can teach you revising skills and strategies, but will not proof-read or edit for you. Please bring hard copies of your assignment instructions and any notes or drafts to your appointment.

## References

Fried, C. B. (2008). In-class laptop use and its effects on student learning. *Computers & Education* 50: 906–914.  
Taneja, A., Fiore, V. and Fischer B. (2015). Cyber-slacking in the classroom: Potential for digital distraction in the new age. *Computers & Education* 82: 141-151.

# Schedule

SCHOOL OF ENVIRONMENT, RESOURCES AND SUSTAINABILITY

ERS 202

| Week    | Day         | Topic                                  | Important details                      | Deadlines             |
|---------|-------------|--|--|-----------------------|
| 1       | Sept 7: Th  | <b>Intros and overviews</b>            | This + that                            |                       |
| 2       | Sept 12: T  | <b>Review of ecological principles</b> | Lecture + discussion                   |                       |
|         | Sept 14: Th | <b>Monitoring resources I</b>          | w/ mini guest lecture                  |                       |
| 3       | Sept 19: T  | Statistics (and using R)               | Lecture + interactive demonstration    |                       |
|         | Sept 21: Th | Monitoring resources lab 1             | Lab 1, the first part, in class        |                       |
| 4       | Sept 26: T  | <b>Monitoring resources II</b>         | Lecture + discussion                   |                       |
|         | Sept 28: Th | Monitoring resources lab 1             | Lab 1, the second part, also in class  |                       |
| 5       | Oct 2: T    | <b>Managing resources I</b>            | Lecture + discussion                   |                       |
|         | Oct 5: Th   | Reporting on lab                       | Lab 1 group presentations & discussion | Lab 1 due by midnight |
| 6       | Oct 10: T   | FALL BREAK                             | Go outside and relax                   |                       |
|         | Oct 12: Th  | <b>Managing resources II</b>           | Lecture + discussion                   |                       |
| 7       | Oct 17: T   | Review + catch-up                      | I am away but am available via skype   |                       |
| MIDTERM | Oct 19: Th  | Midterm                                | In the form of a case study            | Take home             |
| 8       | Oct 24: T   | Managing resources lab 2               | Lab 2, the first part                  |                       |
|         | Oct 26: Th  | Managing resources lab 2               | Lab 2, the second part                 |                       |
| 9       | Oct 31: T   | <b>Managing resources II</b>           | Lecture + discussion                   |                       |
|         | Nov 2: Th   | Reporting on lab 2                     | Lab 2 group presentations & discussion | Lab 2 due by midnight |
| 10      | Nov 7: T    | <b>Conserving resources I</b>          | Managing resources lab 2               |                       |
|         | Nov 9: Th   | <b>Student selected topics</b>         | Lecture + discussion                   |                       |
| 11      | Nov 14: T   | Conserving resources lab 3             |  |                       |
|         | Nov 16: Th  | Conserving resources lab 3             |  |                       |
| 12      | Nov 21: T   | <b>Conserving resources II</b>         |  |                       |
|         | Nov 23: Th  | Reporting on Lab 3                     | Lab 3 group presentations & discussion | Lab 3 due by midnight |
| 13      | Nov 28: T   | <b>Synthesis / review</b>              | Lecture + discussion + Q&A             |                       |
| EXAM    | Nov 30: Th  | Exam                                   | This will be an in class exam          | In class              |

**e-journals due by Dec 7<sup>th</sup>**