Course description
From the local to the national level, this course examines the role of protecting and managing terrestrial, aquatic and marine ecosystems. This course also examines the tension between the development of natural resources and conservation by exploring a variety of major themes including biodiversity, ecological integrity and restoration. In this course, we will develop analytical approaches and field-based activities. Yes, this course is on-line this year but we have some great ideas for how to make it engaging and action-packed!
I see that the learning that will occur in this course will happen in many different directions. I want you to learn from me and I want to learn from you. We all bring such varied perspectives to the conversation. Journal articles and other forms of media will also help us distill ideas and provide essential resolution to our ideas. Knowledge, like landscapes, changes across space and through time.

By the end of this course, you should be on a path to life-long learning as an ecologically-literate citizen and well-versed in ecosystem management. More specifically, you should be able to do the following (our course learning outcomes):

- **identify** and **explain**, with examples, the main principles of ecosystem management from a variety of perspectives and across a variety of scales;
- **demonstrate** how these principles and concepts apply to real-world situations;
- **analyze** the elements of ecosystem managements from research that you designed and implemented; and
- **evaluate** the success and failures of ecosystem management.

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. And yes, we are doing this all on-line.
paper tweets & Qs: 10%
For each assigned item throughout the semester, please submit a tweet-length hard-hitting press-release style synopsis (280 characters including spaces) AND 3 questions. Be creative with the tweets! Must be entered on LEARN by Friday of the week they are assigned.

infographics: 10%
1. Sign-up for a group (via google docs, link in the LEARN calendar) and choose one of the selected readings
2. Make an infographic that communicates the main messages in the paper in a way that others (scientists and non-scientists) can understand
3. Make a short (3-4min) video (will go over this in class) and post to Bongo (via LEARN) for others to see.

Assignments: 15%
#1: Science communication (Week 2: due Sept 18th by 11:59pm)
#2: Methods and design (Week 4: due Oct 2nd by 11:59pm)
#3: Stats (Week 9: due Nov 6th by 11:59pm)

plan: 5%
Prepare a 1-page summary of research questions, hypotheses, study design, and a plan for data analysis. You must meet with your research pod before submitting your plan during week 5. More information on this will be given in class.
Due on Friday Oct 16 (through LEARN) by 11:59pm

research pods: 10%
You will be assigned research 'pods' that you will meet with at least three times throughout the semester to help guide your research project. More information will be given in L1a.

video presentation: 20%
The 5 min presentation will be posted to Bongo (on LEARN). In this presentation, you need to let us know what you did, why you did it, and what you found. More details on what is required of the presentation will be given throughout the term.
The presentations must be uploaded to Bongo (via LEARN) by Nov 20th at 11:50pm.

presentation Qs: 5%
You will provide feedback and questions on your colleagues' final video presentations throughout Week 12 (deadline: Nov 27th at 11:59pm).

final exam: 25%
This will be a do-at-home exam. The structure of the exam will be in the form of applied questions and a case study. You will need to incorporate readings, lecture and assignment material. The exam take place over a 63-hour period from Dec 2nd at 9am to Dec 4th at 11:59pm. I expect it will take 3-4 hours to complete.

Late penalties:
5%: 1 - 60 minutes late
10%: every day after that

Late penalties on tweets & Qs:
Grace period: up to 60 minutes
25% if submitted within the first 24 hours after which you will be unable to submit them
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 engage with class material throughout the term. Your Professor and TAs will have weekly check-ins where you can ask them questions ‘in person’.

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. No “make up” examinations are provided to accommodate you.

tip:
If you are having any trouble, let us know ASAP. We are here for you. Please don’t wait.
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 your TAs, to be received by Sept 18, 2020, 11:59pm. 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): 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.

Writing and Communication
The Writing and Communication Centre works across all faculties to help students clarify their ideas, develop their voices, and write in the style appropriate to their disciplines. Writing and Communication Centre staff offer one-on-one e-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. To book an appointment and to meet with them or for more information, click HERE. Please note that writing and communication 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.
## Schedule

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<th>Week</th>
<th>Day</th>
<th>Topic</th>
<th>Details</th>
<th>Deadlines</th>
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<tr>
<td>1</td>
<td>Sept 8-11</td>
<td>Intro and overview</td>
<td>Lectures (L1)</td>
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<tr>
<td>2</td>
<td>Sept 14-18</td>
<td>Ecological integrity + science communication</td>
<td>Lectures and Assignment (L2 + Assign1)</td>
<td>Assignment 1 due Sept 18 by 11:59pm - 2 infographics</td>
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<tr>
<td>3</td>
<td>Sept 21-25</td>
<td>Ecosystem management + methods</td>
<td>Lectures (L3)</td>
<td>- 3 infographics</td>
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<td>4</td>
<td>Sept 28-Oct 2</td>
<td>Regional perspectives + stats</td>
<td>Lectures and Assignment (L4 + Assign2)</td>
<td>Assignment 2 due Oct 2 by 11:59pm - 2 infographics</td>
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<td>5</td>
<td>Oct 5-9</td>
<td>Research time!</td>
<td>Meet with your research pods (Pod1)</td>
<td>- 2 infographics</td>
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<td>6</td>
<td>Oct 12-16</td>
<td>Provincial perspectives</td>
<td>Lectures (L5)</td>
<td>Research plan due Oct 16 (5%)</td>
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<td>7</td>
<td>Oct 19-23</td>
<td>READING WEEK</td>
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<td>8</td>
<td>Oct 26-30</td>
<td>National and Indigenous perspectives</td>
<td>Lectures (L8)</td>
<td>- 3 infographics</td>
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<td>9</td>
<td>Nov 2-6</td>
<td>Urban parks</td>
<td>Lectures + Assignment (L9 + Assign3)</td>
<td>Assignment 3 due Nov 6 by 11:59pm - 3 infographics</td>
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<td>10</td>
<td>Nov 9-13</td>
<td>Climate change</td>
<td>Lectures + Research (L10 + Pod2)</td>
<td>- 3 infographics</td>
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<tr>
<td>11</td>
<td>Nov 16-20</td>
<td>Climate change</td>
<td>Lectures + Research (L11 + Pod3)</td>
<td>Presentations due Nov 20, by 11:59pm</td>
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<td>12</td>
<td>Nov 23-27</td>
<td>Big picture</td>
<td>Lecture (L12) + Presentation viewing</td>
<td>Presentation questions/feedback due Nov 27th by 11:59pm</td>
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<tr>
<td>13</td>
<td>Nov 30-Dec 4</td>
<td>Review + Exam</td>
<td>Review lecture (L13)</td>
<td>Exam available on Dec 2nd and due on Dec 4th by 11:59pm</td>
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How to read Lecture/Lab codes: L2 (L = Lecture, 2 = week 2)
Assign2 (Assign = Assignment; 2 = the second one)
Pod2 (Pod = your research pod, which we assign; 2 = your second meeting with them)