COURSE DESCRIPTION AND OBJECTIVES

For decades, environmental scientists have been documenting anthropogenic impacts on the planet’s ecosystems. Currently, the weight of scientific evidence showing the severity of the biodiversity and climate crises is immense, and many scientists are advocating for increased governmental engagement with environmental issues. As such, environmental science is closely tied to human valuation of the environment—a linkage that requires one to be able to identify sound science and also understand how science is communicated and used in public policy. This is scientific literacy.

It is increasingly recognized that environmental considerations need to be integrated into all aspects of our economies; a trend that is evidenced by the steady growth of the environmental sector as well as increasing public concern for environmental sustainability. In order to prepare for a career in environmental management or conservation science, it is vital that students develop science literacy skills. Environmental professionals employ a range of tools that fall under the umbrella of scientific literacy; it is the goal of this course that students develop 1) a clear understanding of the scientific process & scientific analysis, 2) the ability to communicate environmental science to different audiences, 3) the ability to think critically about environmental issues, how they are studied, and how they are discussed in public discourse, and 4) the ability to place individual environmental studies and issues in the larger context of environmental and conservation science. We will achieve these learning objectives through lectures, the completion of some small individual assignments, a large group term project involving a systematic review of an environmental science issue and engaging in discussion with leading environmental practitioners and science communicators.
SCHEDULE

<table>
<thead>
<tr>
<th>Date</th>
<th>Subject</th>
<th>Assignment due</th>
<th>In-class</th>
<th>Guest speaker</th>
<th>Readings</th>
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<tr>
<td>Jan 7</td>
<td>Introduction</td>
<td>Rapid Review: topic brainstorm</td>
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<tr>
<td>Jan 14</td>
<td>Group project orientation</td>
<td>Synopsis</td>
<td>Form groups</td>
<td>Sarah Forbes &amp; Sarah Guay</td>
<td>Pita et al. 2011</td>
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<td>Jan 28</td>
<td>SciComm 1</td>
<td>TBA</td>
<td>time for group work</td>
<td>Kidd et al. 2019</td>
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<td>Feb 4</td>
<td>SciComm 2</td>
<td>Press Release</td>
<td>group update</td>
<td>Jode Roberts (11:00)</td>
<td>Flockhart et al. 2010</td>
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<td>Feb 11</td>
<td>TBA</td>
<td>TBA</td>
<td>time for group work</td>
<td>Serra Buchanen</td>
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<td>Feb 18</td>
<td>Reading Week</td>
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<td>TBA</td>
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<td>Feb 25</td>
<td>Research methods &amp; basic stats</td>
<td>Blog</td>
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<td>Christie et al. 2018</td>
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<td>Feb 3</td>
<td>Conservation Science by NGOs</td>
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<td>Legagneaux et al. 2016</td>
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<td>Feb 10</td>
<td>Topics in Sci Lit 1: Invasion Biology</td>
<td>Experimental Design</td>
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<td>Moore Reeves</td>
<td>Moore et al. 2018</td>
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<td>Feb 17</td>
<td>Topics in Sci Lit 2: Biological Control</td>
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<td>Reeves chapters 6 &amp; 9</td>
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<td>Feb 24</td>
<td>Topics in Sci Lit 2: Ecosystem services</td>
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<td>Serra Buchanen</td>
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<td>March 31</td>
<td>Group presentations</td>
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<td>TBA</td>
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EVALUATION

Assignments:
- Synopsis & Critique: Systematic Review (10%) – Due Jan 14th in class
- Press release: Advance in Conservation Science (10%) – Due Feb. 4th in class
- Blog post (10%) – Due Feb. 25th – electronic submission
- Experimental Methods (10%) – Due March 10th in class
- Group Review Paper & Presentation (40%) – Due March 31st in class & electronic
- Participation (20%)

Evaluation will be carried out in accordance with the Graduate Grading and Evaluation Practices Policy (and how that policy is interpreted and applied in this Dept.)
http://www.governingcouncil.utoronto.ca/policies/uniassgpp.htm

READINGS

Week 1: Introduction

1. No readings

Week 2: Group project orientation – Guest UTSC librarians Sarah Forbes & Sarah Guay


Week 3: The Science-Policy Interface

**Week 4: Science Communication 1**


**Week 5: Science Communication 2, Guest Lecture – Jode Roberts**


**Week 6: Guest Lecture – Serra Buchanan**

1. TBA

**Week 7: Reading Week**

**Week 8: Experimental design & basic statistical analysis**


**Week 9: Science Partnerships – NGOs, Guest Lecture Dan Kraus (NCC)**


**Week 10: Topics in Sci Lit 1 – Invasion Biology, Guest Lecture – Andrew Reeves**


**Week 11: Topics in Sci Lit 2: Biological Control**

**Week 12: Topics in Sci Lit 3: Ecosystem Services/Nature’s contributions**


**Week 13: Group presentations, no readings**

**COURSE POLICIES**

You are expected to have read the assigned readings prior to class. This will provide a contextual grounding for in-class discussions. There is no assigned textbook for this course. Required Readings and Lecture Notes: Electronic versions of required readings and lecture notes will be placed on the Quercus course website immediately after the lecture. In the case of primary literature, a link to the library electronic version will be provided. Posting of the presentations of guest lectures will be at the discretion of the guest.

**EMERGENCY PLANNING**

Students are advised to consult the university’s preparedness site (http://www.preparedness.utoronto.ca) for information and regular updates regarding procedures relating to emergency planning.

**ACCESSIBILITY NEEDS**

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact the UTSC Accessibility Services as soon as possible: http://www.utsc.utoronto.ca/~ability/

We also suggest you also refer to the following University of Toronto Scarborough Library link: http://utsc.library.utoronto.ca/services-persons-disabilities

**PLAGIARISM**

University of Toronto code of Behaviour on Academic Matters states that "it shall be an offense for a student knowingly: to represent as one's own any idea or expression of an idea or work of another in any academic examination or term test or in connection with any other form of academic work, i.e., to commit plagiarism."
For accepted methods of standard documentation formats, including electronic citation of internet sources please see the UofT writing website at: http://www.writing.utoronto.ca/advice/using-sources/documentation

The full Code of Behaviour regulations could be found from consulting http://www.sgs.utoronto.ca/facultyandstaff/Pages/Academic-Integrity.aspx

WRITING AND ENGLISH LANGUAGE
As well as the faculty writing support, please see English Language and writing support at University of Toronto: http://www.sgs.utoronto.ca/currentstudents/Pages/English-Language-and-Writing-Support.aspx

Students have commented that they found the latter address extremely helpful for writing term papers.
The following are also useful:

LATE WORK
Assignments must be handed in at the beginning of class. A penalty of 10% per day, including weekend days, will be incurred for late assignments.