Environmental Studies Basic Graduate Course Outline/Syllabus

FACULTY OF ENVIRONMENTAL AND URBAN CHANGE
YORK UNIVERSITY

ENVS 5016 Protected Area Management 3.0 credits
S1 2024

Course Instructor and Contact Information
Professor Gail Fraser
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Office HNES 269
Office hours – by appointment

Course Time and Location
Fridays, 9:30-3:30
This is a field/workshop style course. It will meet both on the Keele campus and in other locations in the GTA.

Official Course Description
This course will explore protected area management, which is a form of environmental management focusing on an area of land and/or freshwater/sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.

Note, there is an expectation that students will have some basic knowledge of ecology and use of Excel. This is a

Expanded Course Description (Overview and Learning Objectives or Outcomes)
The general topic of protected area management is extensive and all aspects cannot be covered in one course. A key requirement of managing a protected area is having the knowledge of what (i.e., flora and fauna) lives on the land (or water). Thus, one objective of this course is to learn some hands-on biological monitoring techniques. We will visit two off campus protected areas and conduct biodiversity surveys on campus and learn different sampling techniques for different taxa. You will not become experts in these techniques (that takes time and serious effort in learning how to identify organisms), but you will gain an understanding of these approaches and how to further these skills should you choose to. You will be collecting, analyzing, and presenting data. Another objective is to explore ideas around *Etuaptmumk,* Two-eyed Seeing, and how Indigenous Knowledge and Indigenous Peoples in Canada are essential to the preservation and conservation of the land.

Learning outcomes. At the end of this course students should be able to:
Engage with some biological monitoring techniques;
Understand how to use literature to design, develop, and implement bio-monitoring strategies in protected areas;
Be able to collate and present monitoring data collected; and
Ability to reflect on Two-eyed Seeing

Anticipated Course Readings or Texts
List a sampling of your readings with a note stating that additional readings may be assigned or recommended during the course.
Week 1:
Theberge, J.S. and J. B. Theberge 2009. Application of ecological concepts to the management of protected areas. Pg 84-110, In: Parks and protected areas in Canada, planning and management, Dearden, P. and R. Rollins (Eds). Oxford University Press: London.

Tengö et al. 2014. Connecting diverse knowledge systems for enhanced ecosystem governance: The multiple evidence base approach. Ambio 43:579-591.

Mistry, J. and A. Berardi 2016. Bridging indigenous and scientific knowledge. Science 352 (62911):1274-1275.

Week 2:

Ralph, C. J., S. Droege, and J. R. Sauer (1995a). Managing and monitoring birds using point counts: Standards and applications. In Monitoring Bird Populations by Point Counts (C. J. Ralph, J. R. Sauer, and S. Droege, Editors). USDA Forest Service General Technical Report PSW-GTR-149. pp. 161–175. (link for PDF on eClass)

Dunn et al. 2006. Monitoring bird populations in small geographic areas. Special Publication Canadian Wildlife Service March 2006. Sections: 1.1, 1.2, 1.3.2.2.1, 1.3.1.1.2, 1.5.1

Reynolds et al. 2016. A road map for designing and implementing a biological monitoring program. Environmental Monitoring and Assessment 188:399. DOI 10.1007/s10661-016-5397-x

Week 3:
Indigenous Circle of Experts' Report and Recommendations 2018. We Rise Together, Achieving Pathway to Canada Target 1 through the creation of Indigenous Protected and Conserved Areas in the spirit and practice of reconciliation. **Pgs 14-19; 27-66**
https://static1.squarespace.com/static/57e007452e69cf9a7af0a033/t/5ab94aca6d2a7338ecb1d05e/1522092766605/PA234-ICE_Report_2018_Mar_22_web.pdf

(and an additional paper that uses avian point counts)

Week 4:
McDonald, K., R. Toninger, A. Chreston, I. Feldmann and G.S. Fraser 2018. Living with double-crested cormorants (*Phalacrocorax auritus)*: A spatial approach for non-lethal management in Toronto, Canada. Waterbirds 41(2): 208-220.

Dupuis-Desormeaux, M., C. Davy, A. Lathrop, E. Followes, A. Ramesbottom, A. Chreston and S. E. MacDonald 2018. Colonization and usage of an artificial urban wetland complex by freshwater turtles. PeerJ 6:e5423; DOI 10.7717/peerj.5423

Week 5:
Reo, NJ, KP White, D McGregor, MA Smit, JF Jenkins 2017. Factors that support Indigenous involvement in multi-actor environmental stewardship. AlterNative 1-11; DOI: 10.1177/1177180117701028

Portman et al. 2020. The state of bee monitoring in the United States: to Refocus away from bowl traps and towards more effective methods. Annals of the Entomological Society of America 113(5):337-342. https://doi.org/10.1093/aesa/saaa010

Week 6:
Coristine et al. 2018. Informing Canada's commitment to biodiversity conservation: A science-based framework to help guide protected areas designation through Target 1 and beyond. FACETS 3: 531–562. doi:10.1139/facets-2017-0102

Cook, C.N. & M. Hockings 2011. Opportunities for improving the rigor of management effectiveness evaluations in protected areas. Conservation Letters 4:372-382. doi: 10.1111/j.1755-263X.2011.00189.x

Evaluation: Grading and Course Requirements
Assignment 1 – design a preliminary road map/overarching framework for YU biodiversity monitoring following Reynolds et al.'s (2016) recommendations. (50% June 30)

Assignment 2. Indigenous Protected Areas (graduate students only) – find one to share with the class (25% May 24).

Participation & Collegiality – Participation will be based on contributions to discussions, awareness of issues in required readings, and ability to relate issues to broader concerns of the course. Your participation grade will be based on a subjective assessment of these factors. (25% weekly)

Important Course information
All students are expected to familiarize themselves with the following information, available on the Senate Committee on Academic Standards, Curriculum & Pedagogy webpage

- Senate Policy on Academic Honesty and the Academic Integrity Website

- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation

Intellectual Property Notice

Notes:

A more detailed Basic Course Outline Model (Word) is available under "Related Resources" on the University Secretariat's Academic Standards, Curriculum and Pedagogy webpage.

Basic course outline/syllabus shall be available to students no later than two weeks prior to the commencement of classes. A more detailed course syllabus shall be available in the first week of class.