

Fall 2023

ENVIRONMENTAL CONSERVATION AND RESTORATION (ENVR 3110)

Sept 14, 2023

GENERAL INFORMATION

Instructor: Steph McLachlan, PhD

Office and Lab: 303 Wallace

Tel (Office): 204-474-9316

Tel (Cell): 204-293-4500

Email: steph.mclachlan@umanitoba.ca

Contact times: Virtual coffee hour, Fridays 1:30-2:30pm (commencing Sept 22 2023)

<https://umanitoba.zoom.us/j/65449448134?pwd=dG9pUWJXQVByK0ZzaXNlUjUvNlpyZz09>

Otherwise open-door; please arrange by email

Delivery: In person at the University of Manitoba

Lecture:

- Tuesday & Thursday 11:30 - 12:45 PM, 315 Wallace

Labs:

- Thursday 2:30 - 5:30 PM, 202 St John's College

Assigned Readings:

- reading package (electronic only, posted on UML)
Please read them before class as they will provide background for the lectures/discussions
- course updates and occasional skeletal notes will be uploaded on UML

Teacher Assistant:

- Stephanie Murray
 - Email: stephanie.p.murray@outlook.com
 - Office hours: please email to arrange

Other:

- late submissions will be penalized 5% per day (unless arrangements are made with TAs)
- students should be familiar with the University's policy on academic dishonesty including plagiarism, cheating, and exam impersonation (pp.32 of General Calendar)
- marking scheme is: A+ (≥ 90), A (80-89), B+ (75-79), B (70-74), C+ (65-69), C (60-64), D (50-59), F (0-49)

COURSE STRUCTURE

- Lectures
- Small-group and whole-class discussion
- Hands-on project work
- Fieldwork
- Site Visits
- Small group work (~4 people per brief group)
- Research projects and reports (4-6 people per group)
- Student presentations

COURSE GOAL, AND OBJECTIVES

- i) encounter and evaluate many current conservation and restoration issues;
- ii) assess the current state of the science-based conservation and restoration;
- iii) become familiar with "real world" management responses such as protection, ecological restoration, reintroductions, protected area design, and the theory underlying these responses;
- iv) develop hands-on, technical data collection and analytical skills in conservation and restoration
- v) critically evaluate these conventional management responses, in particular the science-based "world views" that currently dominate the conservation and restoration literature;
- vi) examine community-based efforts that complement and, in many cases, actively undermine expert-based conservation and restoration strategies
- vii) explore Indigenous (and Indigenist) approaches to environmental management and protection; and
- viii) develop your own informed ability to make decisions regarding many of the controversial issues that percolate through conservation and restoration

ASSIGNMENTS

- All assignments are to be submitted on UML except for the Final Take Home exam. This assignments should be submitted to Steph at steph.mclachlan@umanitoba.ca

MARK ALLOCATION

- **E-bio sheets** (Pass/Fail: participation mark)
 - picture, contact info, academic background
 - expectations of course, expectations of the instructor and TA, what you hope to do in 10 years
 - **Due: Sept 14. Please email to Stephanie** <stephanie.p.murray@outlook.com> **and Steph** <steph.mclachlan@umanitoba.ca>
- **Experiential Research Projects** (50%)
 - **Choose Research Topic** (Pass/Fail)
 - Find information about the research topic options here: <https://docs.google.com/document/d/1rg1omvqkZzeeyuKxcqU2HBAQcaahk8hDiDMCYJ0eYH8/edit>
 - **Please sign up for a topic by Sept 19.**
 - **Research Proposal and Individual Learning Outcomes** (group/individual) (10%)
 - description of project goal, activities, and schedule (group, 3pp)
 - learning outcomes and responsibilities (individual, 1pp)
 - **Due: Sept 28** on UML.
 - **Oral presentation** (15%, individual/group)
 - 30 min each; presented by whole group
 - **Due: Dec 7** (in class and lab)
 - **Final technical report** (25%, individual/group)
 - 10 pages (min) – 15 pages (max); *plus* tables, figures, photos, references etc. (group)
 - learning outcomes, critical evaluation (individual, 2pp)
 - **Due Dec 14.** Emailed to Steph as a Word Document at steph.mclachlan@umanitoba.ca

- **Briefs** (10%, individual)
 - in-class reading and Briefs 1-8 (two briefs /person)
 - two-pager (400-600 words); point form, pamphlet etc.
 - brief-a (5%) + brief-b (5%)
 - **attendance in your brief session is mandatory, otherwise F-grade**
 - **Submit Brief on UML assignment folder by the beginning of class that your Brief is due.**
- **Conservation / restoration in the news** (5%, individual)
 - case study of topical issue and response of your choice
 - 5-minute presentation at the beginning of corresponding class
 - **due: on presentation date.**
 - **Sign up for a date here:**
<https://docs.google.com/spreadsheets/d/16mnAxejuf0DNCgfJf2Mw0h4Z7InYDjVX6mp24Q4IMAc/edit#gid=790052539>
- **Participation** (10%)
 - e-bio sheets
 - Attending class (and singing sign in sheet)
 - Participating in class discussions
- **Final exam** (25%, individual)
 - take-home
 - in-lab screening and group discussion of documentary film on **Nov 30**
 - **hand out date: Nov 30**
Due date: Dec 22. Emailed to Steph as a Word document at steph.mclachlan@umanitoba.ca

CLASS SCHEDULE

DATE	TOPIC	READINGS AND ASSIGNMENTS
Sept 7 - Zoom	Class Introduction; e-bio sheets, teaching philosophy * content review	
Sept 12 - Zoom	Fragmentation and connectivity Introduce briefs and In the News	Wilson et al. 2016, Keeley et al. 2018
Sept 14 - Zoom	(re)conceptualizing cities	Hartig and Kahn 2016 E-Bio Sheet Due
Sept 14 - LAB	Delayed	
Sept 19	One thing every ecologist should know about urban systems <i>Discussion of NCC projects: Stephanie Murray</i>	McPhearson et al. 2018
Sept 21	Ecology in, of and for cities Brief 1	Pickett et al. 2016
Sept 21 – LAB	Visit to Parkland Mews and discussion of term projects <i>Host: Robert Wheeldon</i>	Research Topic Due (Sept 22) Development of functional field plans for individuals and for each group/ Site Proposals Due (Sept 28)
Sept 26	National parks: past and present	Watson et al. 2014
Sept 28	Parks and conservation; a pointless privilege?	Editors, 2009 Research Proposal Due

Sept 28 - LAB	Field work for research projects	
Oct 3	Conservation and human-wildlife conflict <i>Brief 2</i>	Soulsbury and White, 2016
Oct 5	Case Study: Lake Winnipeg. Guests: Alexis Knispel Kanu (Lake Winnipeg Foundation) Chelsea Lobson (Lake Winnipeg Foundation)	LWF, 2018a LWF, 2018b
Oct 5 – LAB	Work on Research Projects	
Oct 10	Restoration vs. conservation	Young, 2000
Oct 12	Ecological restoration: introduction	Hobbs and Norton, 1996
Oct 12 – LAB	Work on Research project	
Oct 17	Challenging assumptions in urban restoration	Zeunert, 2013
Oct 19	Success in restoration <i>Brief 3</i>	Wortley et al. 2014
Oct 19– LAB	Interpretive Tour at Brokenhead Ojibway Nation Led by Taylor Galvin	
Oct 24	Reconceptualizing the wild	Steele et al. 2019
Oct 26	People-centered restoration <i>Brief 4</i>	Elias et al. 2022
Oct 26– LAB	Work on Research projects	
Oct 31	Re-imagining invasive species <i>Brief 5</i>	Phillips 2017
Nov 2	Guest Speaker – Julie Pelc & Stephanie Murray (Nature Conservancy of Canada)	
Nov 2 - LAB	Work on Research Projects	
Nov 7	Citizen science and conservation <i>Brief 6</i>	McKinley et al. 2017
Nov 9	Mining legacies and reclamation <i>Brief 7</i>	Beckett and Keeling 2019
Nov 9 - LAB	Mile 99. A story of pollution and resistance Guest Speaker: Donna Dumas (MCCN)	
Nov 13-17	Fall Term Break	
Nov 21	Indigenizing Restoration Guest Speaker- Daniel Gladu (Lake of Winnipeg Indigenous Collective)	Corburn 2017
Nov 23	Ecological consequences of racism in urban systems & Environmental Justice <i>Brief 8</i>	Schell et at. 2020 Final Take-home: handout. Due by Dec 22
Nov 23 - LAB	Conservation, restoration and the future Guest panel:	McDonnell and MacGregor-Fors 2016
Nov 28	Stakeholders, environmental management, and conflict	Turo and Gardiner, 2020 Redpath et al. 2013
Nov 30	Neoliberalism and urban environmental management	Gabriel, 2016
Nov 30 – LAB	Film: For final take-home exam Small group discussion	

Dec 5	So what and what's the future?	
Dec 7	Oral presentations (30min*2)	
Dec 7 - LAB	Oral presentations (30min*5)	

REFERENCES (AVAILABLE ON UM LEARN)

- Adams, T. S., Chase, M. J., Rogers, T. L., and Leggett, K. E. (2017). Taking the elephant out of the room and into the corridor: Can urban corridors work? *Oryx*, 51(2), 347-353.
- Angel, S., Parent, J., and Civco, D. L. (2012). The fragmentation of urban landscapes: global evidence of a key attribute of the spatial structure of cities, 1990–2000. *Environment and Urbanization*, 24(1), 249-283.
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- Corburn, J. (2017). Concepts for studying urban environmental justice. *Current environmental health reports*, 4(1), 61-67.
- David, C. and Beatley, T. (2010). The Nature of Cities. Film Documentary. <https://topdocumentaryfilms.com/nature-cities/>
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- Ens, E., Scott, M., Rangers, Y. M., Moritz, C., & Pirzl, R. (2016). Putting indigenous conservation policy into practice delivers biodiversity and cultural benefits. *Biodiversity and Conservation*, 25(14), 2889-2906.
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- Keeley, A.T.H., G. Basson, D.R. Cameron, N. E. Heller, P. R. Huber, C. A. Schloss, J.H. Thorne, and A.M. Merenlender. 2018. Making habitat connectivity a reality. *Conservation Biology*, <https://doi.org/10.1111/cobi.13158>
- Lamb, C. T., Willson, R., Richter, C., Owens-Beek, N., Napoleon, J., Muir, B., ... & Ford, A. T. (2022). Indigenous-led conservation: Pathways to recovery for the nearly extirpated Klinse-Za mountain caribou. *Ecological Applications*, 32(5), e2581.
- McDonnell, M. J., and MacGregor-Fors, I. (2016). The ecological future of cities. *Science*, 352(6288), 936-938.

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- McPhearson, T. et al. (2018). What is one thing every ecologist should know about urban ecology? <https://www.thenatureofcities.com/2018/01/29/one-thing-every-ecologist-know-urban-ecology/>
- Nature Conservancy (2019). *Field Guide to Conservation in Cities in North America*. VERSION 1.0.
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- Zeunert, J. (2013). Challenging assumptions in urban restoration ecology. *Landscape Journal*, *32*(2), 231-242.

Schedule “A”

Schedule “A” is the new requirement passed by the University of Manitoba Senate in 2016, which requires that a list of available supports for services plus contact information be provided to all students. *While this information is important and useful, should you require advice and support, I will of course happy to meet with you and discuss any issues and concerns you might have*

Academics

The Academic Calendar

An important source of information that is relevant to your coursework is the academic calendar: <http://umanitoba.ca/student/records/academiccalendar.html>. Please review the sections on University Policies and Procedures and General Academic Regulations. While all of the information contained in these two sections is important, the following information is especially relevant:

- If you have questions about your grades, please talk to me as your instructor. There is a process for term work and final grade appeals. Note that you have the right to access your marked final exam. Please see the Registrar’s Office website for more information including appeal deadline dates and the appeal form <http://umanitoba.ca/registrar/>
- You are also expected to be conversant with the General Academic Regulation section within the Academic Calendar, and more specifically the regulations regarding Academic Integrity. Please review the above information on this syllabus regarding academic integrity and feel free to ask me as your instructor about any concerns you might have. For the Academic Integrity Site for tools and support: <http://umanitoba.ca/academicintegrity/> View the Student Academic Misconduct procedure for more information.

Academic Programs and Regulations

For information on regulations that are specific to your academic program, read the section in the Academic Calendar and on the respective faculty/college/school web site <http://umanitoba.ca/faculties/> For additional information on your academic program and regulations, please contact Ilka Cudmore (204-474-9847) or Jason Jorgenson (204-894-8710) as Academic Advisors within our Faculty.

Copyright

All students are expected to respect copyright as per Canada’s Copyright Act. Instructors and students both play a key role in the University’s copyright compliance as we balance user rights for educational purposes with the rights of content creators from around the world.

The Copyright Office provides copyright resources and support for all members of the University of Manitoba community. Visit <http://umanitoba.ca/copyright> for more information.

Your rights and responsibilities

As a student of the University of Manitoba you have both rights and responsibilities. It is important for you to know what you can expect from the University as a student and to understand what the University expects from you. Please become familiar with the policies and procedures of the University and our Faculty-specific regulations.

Writing and Learning Support

The Academic Learning Centre (ALC) offers services that may be helpful to you throughout your academic program. Through the ALC, you can meet with a learning specialist to discuss concerns such as time management, learning strategies, and test-taking strategies. The ALC also offers peer supported study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In these study groups, students have opportunities to ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies.

You can also meet one-to-one with a writing tutor who can give you feedback at any stage of the writing process, whether you are just beginning to work on a written assignment or already have a draft. If you are interested in meeting with a writing tutor, reserve your appointment two to three days in advance of the time you would like to meet. Also, plan to meet with a writing tutor a few days before your paper is due so that you have time to work with the tutor's feedback.

These Academic Learning Centre services are *free* for U of M students. For more information, please visit the Academic Learning Centre website at: <http://umanitoba.ca/student/academiclearning/>. You can also contact the Academic Learning Centre by calling 204-480-1481 or by visiting 201 Tier Building.

University of Manitoba Libraries (UML)

As the primary contact for all research needs, the librarian serving our Faculty (liaisons) can play an important role when completing academic papers and assignments. They can answer questions about managing citations or locating appropriate resources, and may be able address any other course-specific concerns you may have, regarding education and research. Liaisons can be contacted by email or phone, and are also available to meet with you in-person. A complete list of liaison librarians can be found by subject: <http://bit.ly/WcEbA1> or name: <http://bit.ly/1tJ0bB4>.

In addition, general library assistance is provided in person at 19 University Libraries, located on both the Fort Garry and Bannatyne campuses, as well as in many Winnipeg hospitals. For a listing of all libraries, please consult the following: <http://bit.ly/1sXe6RA>. When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the Libraries' homepage: www.umanitoba.ca/libraries.

Respectful Work and Learning Environment

As an instructor, I am absolutely committed to a respectful learning and work environment. You, of course, have the right to be treated with respect as a student, but you are also expected to conduct yourself in an appropriate respectful manner with respect to the other students, teaching assistants, and me as your instructor. Policies governing such behavior include the:

- **Respectful Work and Learning Environment**
 - http://umanitoba.ca/admin/governance/governing_documents/community/230.html
 - **Student Discipline**
http://umanitoba.ca/admin/governance/governing_documents/students/student_discipline.html
 - **Violent or Threatening Behaviour**
http://umanitoba.ca/admin/governance/governing_documents/community/669.html

Student Support **Student Advocacy**

Contact Student Advocacy if you want to know more about your rights and responsibilities as a student, have questions about policies and procedures, and/or want support in dealing with academic concerns please consider contacting:

<http://umanitoba.ca/student/advocacy/>, 520 University Centre 204-474-7423, or student_advocacy@umanitoba.ca.

Student Counselling Centre (SCC)

Please consider contacting the Student Counselling Centre (SCC) if you are concerned about any aspect of your mental health, including anxiety, stress, or depression, or for help with relationships or other life concerns. The SCC offers crisis services as well as individual, couple, and group counselling.

Student Counselling Centre: <http://umanitoba.ca/student/counselling/index.html>
474 University Centre or S207 Medical Services, 204-474-8592

Mental Health

For 24/7 mental health support, please consider contacting the Mobile Crisis Service at 204-940-1781.

Student Accessibility Services

If you are a student with a disability, please contact SAS for academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g., mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation.

Student Accessibility Services <http://umanitoba.ca/student/saa/accessibility/>, 520 University Centre, 204-474-7423, TTY 204-474-9790, Student_accessibility@umanitoba.ca

If you are experiencing difficulties with your studies or assignments, or have a disability or illness which may affect your course of study, you should discuss these issues with me as instructor and/or mentors at one of the following Student Affairs offices as soon as possible:

- Indigenous Student Centre (ISC); Phone: 204-474-8850. 114 Sidney Smith St.
- International Centre for Students; Phone: 204-474-8501. 541 University Centre
- English Language Centre; Phone: 204-474-9251. 520 University Centre
- UMSU – University of Manitoba Students’ Union; 101 UMSU University Centre, umsu@umsu.ca , 204-474-8678 (UMSU)
- Numerous of campus ethno-cultural student groups and various communities of interest, action or belonging as funded or supported by UMSU.

Student Support Case Management

Please consider contacting the Student Support Case Management team (SSCM) if you are concerned about yourself or another student and don’t know where to turn. The SSCM helps connect students with on and off campus resources, provides safety planning, and offers other supports, including consultation, educational workshops, and referral to the STATIS threat assessment team.

Student Support Intake Assistant <http://umanitoba.ca/student/case-manager/index.html>. 520 University Centre, 204-474-7423

University Health Service

Please consider contacting UHS for any medical concerns, including mental health problems. The UHS offers a full range of medical services to students, including psychiatric consultation.

University Health Service <http://umanitoba.ca/student/health/>
104 University Centre, Fort Garry Campus, 204-474-8411 (Business hours or after hours/urgent calls)

Health and Wellness

Please consider contacting a Health and Wellness Educator if you are interested in information on a broad range of health topics, including physical and mental health concerns, alcohol and substance use harms, and sexual assault.

Health and Wellness Educator <http://umanitoba.ca/student/health-wellness/welcome.html>.

Katie.Kutryk@umanitoba.ca, 469 University Centre, 204-295-9032

Live Well @ UofM

For comprehensive information about the full range of health and wellness resources available on campus, visit the Live Well @ UofM site:

<http://umanitoba.ca/student/livewell/index.html>

Sexual Assault

If you experience sexual assault or know a member of the university community who has, the first thing you need to do is make sure that you or these community members are safe. It is also important to feel that you can reach out and find support regarding this experience it is important to know there is a policy that provides information about the supports available to those who disclose and outlines a process for reporting.

- More information and resources can be found by reviewing the Sexual Assault site <http://umanitoba.ca/student/sexual-assault/>