



**University of Manitoba  
Clayton Riddell Faculty  
Department of Environment and Geography**

**Ecosystem Management Course Syllabus  
ENVR 4050, GEOG 4050, GEOG 7010  
Fall 2018**

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## COURSE DETAILS

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**Course Title & Number:** Ecosystem Management (ENVR 4050, GEOG 4050, GEOG 7010)

**Number of Credit Hours:** 3 Credit Hours

**Class Times & Days of Week:** Fridays, 1:30-4:15 pm, from Sept 7 – Dec 7, 2018

**Location for classes/labs/tutorials:** 218 Wallace Building

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## Instructor Contact Information

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**Instructor(s) Name:** Dr. Erin McCance

**Preferred Form of Address:** Dr. McCance

**Management Plan Coordinator:** Robert Wheeldon ([wheeldon@mymts.net](mailto:wheeldon@mymts.net)), Case Study throughout term on Parkland Mews Recovery Centre

**Office Location:** 309 Sinnott Building

**Office Hours or Availability:** Tuesday/Thursday 12:00-1:00 pm (By appointment only)

**Office Phone No.** (204) 232-2941

**Email:** E-mail: [erin.mccance@cc.umanitoba.ca](mailto:erin.mccance@cc.umanitoba.ca)  
Communication with students is only conducted only through @myumanitoba.ca email accounts  
All email communication will be responded to within 48 hours

**Contact:** Students should contact me by email

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## Course Description

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This course provides students with an understanding of the practical applications of ecological science, environmental policy, and resource management approaches in the large-scale planning of landscapes. The course reviews ecological principles and traces the historical development of the ecosystem concept. Comparisons are made to other possible environmental management approaches. The synthesis of major elements and environmental management concepts are reinforced through case studies on the Manitoba landscape, with an emphasis on practical learning by students through field seminars and group discussions.

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## General Course Information

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The course consists of weekly seminar meetings during which students will take an active role in discussing and questioning specific aspects of, or approaches to, ecosystem management. Background reading materials are provided for each seminar. Students should prepare themselves for weekly seminars and class discussions by referring to the designated reading materials as well as additional materials of their own choosing (i.e. web searches, newspapers, scientific peer-reviewed literature). Student need to be prepared to discuss and introduce the reading materials in each class in order to earn your 'participation' marks. Practical examples, generally from Manitoba, are used to supplement the material presented in each seminar. Students are evaluated through class participation, assignments, a team-based term assignment, and oral presentations. Resource materials and lecture content are posted on the U of M Learn website: (<https://universityofmanitoba.desire2learn.com/>) so students should be sure to have availed themselves of a University of Manitoba computer account.

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## Course Goals

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Ecosystem Management provides students with an understanding of the practical applications of ecological science, environmental policy, and resource management approaches in the large-scale planning of landscapes. The course begins with a review of ecological principles, historical development, and description of the ecosystem concept, along with comparisons to other management approaches. The synthesis of major elements and the various approaches to ecosystem management on the Manitoba landscape are examined during the course through case studies, with an emphasis on practical learning by students through individual and group assignments and discussions. A 'real-world' planning exercise enables students to demonstrate their understanding and implementation of the approach in a Manitoba situation.

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## Intended Learning Outcomes

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Upon completion of this course, students should be able to:

1. Understand and participate in discussions regarding various aspects of ecosystem management on a broad as well as a local scale.
2. Identify, examine, and assess the scientific literature and information sources relating to the concept of ecosystem management and related approaches to environmental and natural resources management.
3. Develop an ecosystem management plan as a member of a team for a specific area and interest in Manitoba.

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## Using Copyrighted Material

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Please respect copyright. Copyrighted content will be used in this course. I have ensured that the content I use is appropriately acknowledged and is copied in accordance with copyright laws and University guidelines. Copyrighted works, including those created by me, are made available for private study and research and must not be distributed in any format without permission. Do not upload copyrighted works to a learning management system (such as UM Learn), or any website, unless an exception to the *Copyright Act* applies or written permission has been confirmed. For more information, see the University's Copyright Office website at <http://umanitoba.ca/copyright/> or contact [um\\_copyright@umanitoba.ca](mailto:um_copyright@umanitoba.ca).

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## Recording Class Lectures

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Dr. McCance, Dr. Rick Baydack, and the University of Manitoba hold copyright over the course materials, presentations and lectures which form part of this course. No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part without permission of Dr. Erin McCance. Course materials (both paper and digital) are for the participant's private study and research.

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## Textbook, Readings, Materials

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**Optional text:** Berg, L.R., M.C. Hager, L.G. Goodman, and R.K. Baydack. 2010. Visualizing the Environment. Wiley, Toronto.

**Reference:** Shepherd, G. 2004. The ecosystem approach: 5 steps to implementation. IUCN, Gland (<http://data.iucn.org/dbtw-wpd/edocs/CEM-003.pdf>)

Required readings for each lecture are highlighted on U of M learn. Students are required to come to each lecture having found the source and read the required readings as well as bringing readings to the lecture of their own choosing that may assist with the class discussions.

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## Course Technology

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It is the general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical, and legal manner. Student may use all technology in classroom setting only for educational purposes as approved by instructor and/or the University of Manitoba Disability Services. Students should not participate in personal direct electronic messaging / posting activities (e-mail, texting, video or voice chat, wikis, blogs, social networking (e.g. Facebook) online and offline “gaming” during scheduled class time. If student is on call (emergency) the student should switch his/her cell phone on vibrate mode and leave the classroom before using it.

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## Class Communication

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The University requires all students to activate an official University email account. For full details of the Electronic Communication with Students please visit: [http://umanitoba.ca/admin/governance/media/Electronic Communication with Students Policy - 2014 06 05.pdf](http://umanitoba.ca/admin/governance/media/Electronic%20Communication%20with%20Students%20Policy%20-%202014%2006%2005.pdf)

Please note that all communication between myself and you as a student must comply with the electronic communication with student policy ([http://umanitoba.ca/admin/governance/governing\\_documents/community/electronic communication with students policy.html](http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html)). You are required to obtain and use your U of M email account for all communication between yourself and the university.

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## Expectations: I Expect You To

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The lecture material covered in each class is provided on UM Learn. Since the notes are made available to you, I expect each student to be actively involved in class discussions. Given this is a seminar course with 15% of your grade allocated to your participation in course lectures, you are required to attend every class. I expect you to come to class each week having read the required materials and prepared to discuss the topics outlined. You may use your computer to take notes during class. I will treat you with respect and would appreciate the same courtesy in return. See [Respectful Work and Learning Environment Policy](#).

### Academic Integrity:

In addition to the general information about academic integrity and student discipline that you provide (Schedule “A” Policies and Resources), references to specific course requirements for individual work and group work, such as:

- (i) Group projects are subject to the rules of academic dishonesty;
- (ii) Group members must ensure that a group project adheres to the principles of academic integrity.
- (iii) Students should also be made aware of any specific instructions concerning study groups and individual assignments;
- (iv) The limits of collaboration on assignments should be defined as explicitly as possible; and
- (v) All work is to be completed independently unless otherwise specified.

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## Students Accessibility Services

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### Student Accessibility Services (SAS)

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 presentation 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 [Student\\_accessibility@umanitoba.ca](mailto:Student_accessibility@umanitoba.ca)

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## Expectations: You Can Expect Me To

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I will be in class for 10 minutes prior to and after the class time. I will ensure that course grade requirements are clearly articulated and repeated several times throughout the course. I will be very responsive to student emails and phone calls and will return those messages within 48 hours. Should the student wish to discuss course materials in more detail, I am available during office hours, and/or I will arrange a time with the student to meet. I will be consistent with all of my marking and constructive feedback and I ask that in return, students meet the deadlines that are clearly defined within this syllabus. I will treat each of you with respect and ask that you do the same toward me in return.

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## Class Schedule

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Sept. 7	<p><b>Introduction</b>          Introduction to the course          Review of Syllabus/Housekeeping          Discussion on 'How to write a paper'          Introductory lecture and moral discussion of Ecosystem Management</p>
Sept. 14	<p><b>Getting a Grip on Ecosystem Management</b>          Holistic approach to Ecosystem Management          Environmental Ethics and role of the Anthropocene          Parkland Mews as a case study  <u>Robert Wheeldon – Parkland Mews</u></p>
Sept. 21	<p><b>Step 1 – Stakeholders and Ecosystem Management Boundaries</b>          Definition of project boundaries          Engagement Formats          How to engage stakeholders?          Public Participation  <u>Catharine Brazeau – Outreach and Education Officer, Riding Mountain National Park</u></p>

- Sept. 28      **Field Trip to Tall Grass Prairie**  
 How does Step 1 of Ecosystem Management relate to TGP  
 Field Assignment (worth 5%) due on Oct. 12, 2018  
Cary Hamel - Conservation Scientists, Nature Conservancy of Canada  
**Ecosystem Management Teams and Topics must be in place**
- Oct. 5        **Step 2 – Ecosystem Structure and Function**  
 Discussion of ecological strata, trophic levels, and webs  
 Ecosystem management teams and topics determined  
**Large Landscape Management – Protected Areas Initiative**  
 Wildlife Management Areas  
Jenny Harms - Protected Areas Initiative
- Oct. 12      **Field trip to Parkland Mews Recovery Centre**  
**Carpool** – Meet at Parkland Mews  
 4394 Waverley St, La Salle, MB R0G 0A1  
Robert Wheeldon – Parkland Mews  
 Field Assignment (worth 5%) due Oct. 26, 2018  
**TGP Assignment Due (worth 5%)**
- Oct. 19      **Oral Presentations and 1 page updates due (worth 10% of course grade)**
- Oct. 26      **Field Trip to Seine River Riparian Corridor, South St. Vital**  
**Carpool** - Meet at SE corner, Extra Foods Parking Lot, 740 St. Anne's Road,  
 Seine River Corridor Management  
Michele Kading, Save Our Seine  
Rodney Penner, City of Winnipeg  
 Field Assignment (worth 5%) due Nov. 9, 2018  
**PLMs Field Assignment Due (worth 5%)**
- Nov. 2        **Urban Ecosystem Management**  
 Critical thinking and exploration of the role of ethics in environmental  
 management  
**Architecture, Urban Planning, and Ecosystem Management**  
Alyssa Schwan, Department of Architecture
- Nov. 9        **Step 3 Legislation and Economics/Sustainable Development**  
 Environmental Legislation, Federal, Provincial, and Municipal  
**Case Study: Aquatic Ecosystems/Wetlands Management and Policy**  
**Implications** Tracy Maconachi, Ducks Unlimited Canada  
 Policy relationships to ecosystem management  
**Seine River Corridor Field Assignment Due (worth 5%)**
- Nov. 16      **U of M Fall Break – No Classes**
- Nov. 19      **Voluntary Withdrawal Date**



- Nov. 23      **Step 4 – Adaptive management & Step 5 – Long-term Goals  
Case Study: Forestry & Landscape Regional Planning  
Dr. Brian Kotak, Manitoba Wildlife Federation**
- Nov. 30      **Oral Presentations on Ecosystem Management Plans**
- Dec. 7        **Oral Presentations on Ecosystem Management Plans**
- Dec. 10      **Team Ecosystem Management Plans Due**

## **Course Evaluation Methods**

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A variety of methods are used to evaluate students within the course. In doing so, there is an opportunity given to all types of learners to excel. Student evaluation in this course are based on a combination of in-class and field assignments, essay/plan writing, and oral presentation skills.

Due Date:	Assessment Tool	Value of Final Grade
September 28, 2018	Tall Grass Prairie Field Assignment due October 12, 2018	5%
October 12, 2018	Parkland Mews Field Assignment due October 26, 2018	5%
October 26, 2018	Seine River Corridor Field Assignment due Nov. 9, 2018	5%
October 19, 2018	Oral Progress Presentations and 1-page updates	10%
November 30 & Dec. 7, 2018	Final Management Plan Oral Presentations	20%
December 10, 2018	Final Management Plans	40%
Overall class participation	Attendance in class and contribution to discussion	15%
<b>Total</b>		<b>100%</b>

## **Grading**

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The grading scale used by the Department of Environment and Geography is:

Letter Grade	Percentage out of 100	Grade Point Range	Final Grade Point
A+	90-100	4.25-4.5	4.5
A	80-89	3.75-4.24	4.0
B+	75-79	3.25-3.74	3.5
B	70-74	2.75-3.24	3.0
C+	65-69	2.25-2.74	2.5
C	60-64	2.0-2.24	2.0
D	50-59	Less than 2.0	1.0
F	Less than 50		0

## Referencing Style

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Assignments should use the APA reference style as outlined in the text:

American Psychological Association. (2009). Publication manual of the American Psychological Association (6th ed.). Washington, DC: Author.

## Field Assignments

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There are three field assignments worth 5% each associated with each of the three field trips in the course. On the day of each field trip, the assignment is handed out and explained. Students have two weeks to complete their assignments and submit their completed assignments into the U of M Dropbox by 4pm on the assignment due date. All assignments should be written in Times Roman 12 pt Font and double spaced. All assignments must be submitted electronically. Assignments must use scientific literature and be properly cited. Late/incomplete assignments are subject to penalty as outlined within this syllabus.

## Ecosystem Management Plan Assignment Description

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Team Projects are organized and assigned by September 28, 2018. It is expected that groups of 4 or 5 students (maximum) each take a team approach to ecosystem management, and prepare and present an Ecosystem Management Plan or enhance an existing Management Plan based on current knowledge from internet sources, information in the scientific literature and other sources, and views from local stakeholders, on a 'location of interest' to members of the team. Locations should be selected by the team through consensus, on a 'first come, first serve' basis and must be approved by the course instructor by September 28, 2018.

Ecosystem Management plan options must be selected from the below list:

- Riding Mountain National Park
- Lake Winnipeg or Lake Manitoba
- Duck Mountains Provincial Park
- Winnipeg Airport Authority Landscape
- White Water Lake
- CFB Shilo
- Sprucewoods Provincial Park
- Lake St. Martin
- Wuskwatim Generating Station
- East side of Lake Winnipeg (GHA 26, 17, 17A)

Each team organizes themselves and divides the labour according to their individual knowledge and strengths for all aspects of Ecosystem Management Plan, including researching the literature, contacting local area individuals, preparing the plan, and providing a formal oral summary in class. **A Progress Summary of each team's approach to the assignment is presented in class on October 19, 2018 (2-page maximum and 10-minute presentation per team).**

The Final Management Plan should be of sufficient length (~ **15-20 pages**) to adequately outline a strategy for the use of ecosystem management in the chosen location and be documented with the appropriate technical and non-technical literature. The role/responsibility of each student must be briefly described in the Acknowledgements to the Plan. The format for the Plan is flexible, but should contain all of the information needed to lead to implementation of the team's ideas and recommendations. Ecosystem Management Plans should be professionally presented in Times Roman 12 pt. Font and double spaced. Late/Incomplete management plans will be subject to penalty as outlined within this syllabus.

A final oral presentation made by the full team for each plan is presented to the class and to discipline specialists on November 30 and December 7<sup>th</sup>. The scheduling of which team presents on which day is based on a 'first come, first serve' basis. Students are requested to email me their preference as soon as possible to secure their day and time to present. The final oral presentation of each team's Ecosystem Management Plans should be 15 mins in length and are worth 20% of the total course grade.

The final Ecosystem Management plan for each team is due December 10, 2018 by 4 pm into the U of M Learn Dropbox. The Final Ecosystem Management Plans are worth 40% of the total course grade. Late/Incomplete management plans will be subject to penalty as outlined within this syllabus.

Graduate students will be expected to provide a longer, more detailed response to assignment questions, a more technical term paper, and a 25-minute oral presentation.

## **Assignment Extension and Late Submission Policy**

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**Late submission Policy for Assignments, Reports and Presentations:** Late submissions will be awarded an automatic "F" without permission of the instructor and supporting documentation (e.g. medical certificate) or reasons provided. Failure to hand-in one or more assignments/reports will result in a grade of "F" for the course. Students are not permitted to hand in assignments late, except for documented medical or compassionate reasons.

Requirements for course attendance and rules regarding plagiarism may be found in the General Academic Regulations and Policy Section of the University of Manitoba Graduate and Undergraduate Calendars.

**Note:** electronic submission is required for all assignments using the Dropbox function on the U of M Learn site.

**Assignment Submissions:** All assignments MUST be complete and MUST open to be considered finished. I will accept MS Word documents or PDFs.

**Academic Supports:** The University of Manitoba provides many services and supports to encourage good scholarship and overall health and wellness including: instruction to improve writing skills, best use practices for copyrighted materials, and supports for studying for examinations etc., personal health (both mental and physical) including: student advocacy, student

counseling and health services, etc. and supports for assaults (both verbal and physical). These are designed to make each student's experience positive, safe and assist in successful completion of courses and programs of study. The University provides and encourages all members and students to maintain a respectful work and learning environment. Policies have been developed regarding threatening behavior, or assaults whether verbal or physical to support victims and discipline offenders. For more information on these see Schedule "A" found at the end of the course syllabus.

### Schedule "A"

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#### Section (a) Academic Supports

**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 in a group-learning format.

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, your liaison librarian (if they weren't recently fired by Central Administration) can play a vital role when completing academic papers and assignments. Liaisons can answer questions about managing citations, or locating appropriate resources, and will address any other concerns you may have, regarding the research process. 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](http://www.umanitoba.ca/libraries)

**Section (b) Mental Health**

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

**Student Counselling Centre:** Contact 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. SCC offers crisis services as well as individual, couple, and group counselling. Student Counselling Centre: <http://umanitoba.ca/student/counselling/> 474 University Centre S207 Medical Services (204) 474-8592

**Student Support Case Management:** Contact the Student Support Case Management team if you are concerned about yourself or another student and don't know where to turn. 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:** Contact UHS for any medical concerns, including mental health problems. 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:** Contact our 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>