



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

**Ecosystem Management Course Syllabus
ENVR 4050, GEOG 4050, GEOG 7010
Fall 2017**

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COURSE DETAILS

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 8, 2017

Location for classes/labs/tutorials: 217 Wallace Building

Instructor Contact Information

Instructor(s) Name: Dr. Erin McCance

Preferred Form of Address: Dr. McCance

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

Office Location: 255 Wallace Building

Office Hours or Availability: By appointment

Office Phone No. (204) 232-2941

Email: E-mail: 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

Course Description

This course will provide 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 will review ecological principles and trace the historical development of the ecosystem concept. Comparisons are made to other possible environmental management approaches. The synthesis of major elements and concepts will be reinforced through case studies on the Manitoba landscape, with an emphasis on practical learning by students through field seminars and group discussions.

General Course Information

The course will consist of weekly seminar meetings at which students will take an active role in discussing and questioning specific aspects of, or approaches to ecosystem management. Background reading materials will be 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). Be prepared to discuss and introduce the reading materials in each class in order to earn your 'participation' marks. Practical examples, generally from Manitoba, will be used to supplement the material presented in each seminar. Students will be evaluated through class participation, assignments, a team-based term assignment, oral presentations, as well as in-class testing. Resource materials and lecture content will be 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.

Course Goals

Ecosystem Management will provide 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 will be 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 will enable students to demonstrate their understanding and implementation of the approach in a Manitoba situation.

Intended Learning Outcomes

Upon completion of this course, students will 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.

Using Copyrighted Material

Please respect copyright. We will use copyrighted content 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.

Recording Class Lectures

Dr. McCance 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.

Textbook, Readings, Materials

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 will be 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.

Course Technology

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.

Class Communication

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.

Expectations: I Expect You To

The lecture material covered in each class will be 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 outlined chapter in the text book and be 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.

Students Accessibility Services

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 Student_accessibility@umanitoba.ca

Expectations: You Can Expect Me To

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 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.

Class Schedule

Sept. 8	<p>Introduction (Dr. McCance) 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. 15	<p>Getting a Grip on Ecosystem Management (Dr. McCance & Mr. Wheeldon) Holistic approach to Ecosystem Management Parkland Mews as a case study</p>
Sept. 22	<p>Step 1 – Stakeholders and Ecosystem Management Boundaries Field Trip to Parker Wetlands (3:00-4:15pm) A portion of the lecture will be a trip to Parker Wetlands - (Dr. McCance) Field Assignment – Parker Wetlands (worth 5%) due October 6, 2017</p>
Sept. 29	<p>Field Trip to Tall Grass Prairie – (Dr. McCance & Cary Hamel) How does Step 1 of Ecosystem Management relate to TGP Field Assignment (worth 5%) due October 13, 2017</p>

- Oct. 6 **FALL BREAK – NO CLASSES**
- Oct. 13 **Step 2 – Ecosystem Structure and Function - (Dr. McCance & Mr. Wheeldon)**
Discussion of ecological strata, trophic levels, and webs
Ecosystem management teams and topics determined
In-Class QUIZ (worth 10%)
- Oct. 20 **Field trip to PLMs – (Dr. McCance & Mr. Wheeldon)**
10 Stations illustrating Ecosystem Function
Field Assignment (worth 5%) due October 27, 2017
- Oct. 27 **Step 2 Ecosystem Structure and Function (Dr. McCance)**
Present Field Assignment results from PLMs Field Trip (worth 5%)
- Nov. 3 **Step 3 Legislation and Economics/Sustainable Development - (Dr. McCance and Speaker from Environmental Assessment and Licensing)**
- Nov. 10 **In-Class Quiz (worth 10%)**
Oral 5 min progress presentations and 1-page updates due (worth 5%)
- Nov. 17 **Voluntary Withdrawal Date**
- Nov. 17 **Step 4 – Adaptive management (Dr. McCance & Mr. Wheeldon)**
In-class Exercise (worth 5%)
- Nov. 24 **Step 5 – Long-term Goals - (Dr. McCance)**
12-step checklist
- Dec. 1 **Oral Presentations (Dr. McCance & Mr. Wheeldon)**
Draft Management Plans Due (worth 10%)
- Dec. 5 Draft management plans returned to students with comments
- Dec. 8 **Oral Presentations & Team Ecosystem Management Plans Due (Dr. McCance & Mr. Wheeldon) (worth 15%)**
- Dec. 12 **Final Management Plans Due (worth 15%)**

Course Evaluation Methods

A variety of methods will be 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 will be based on a combination of in-class testing, in-class and field assignments, essay/plan writing, and oral presentation skills.

Due Date:	Assessment Tool	Value of Final Grade
September 22, 2017	Parker Wetlands Field Assignment due October 6, 2017	5%
September 29, 2017	Tall Grass Prairie Field Assignment due October 13, 2017	5%
October 13, 2017	In-class Quiz	10%
October 20, 2017	Parkland Mews Field Assignment due October 27, 2017	5%
November 10, 2017	Oral Progress Presentations and 1-page updates	5%
November 10, 2017	In-Class Quiz	10%
November 17, 2017	In-Class Assignment	5%
December 1 & 8, 2017	Final Management Plan Oral Presentations	15%
December 1, 2017	Draft Management Plans	10%
December 12, 2017	Final Management Plans	15%
Overall class participation	Attendance in class and contribution to discussion	15%
Total		100%

Grading

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

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.

Ecosystem Management Plan Assignment Description

Team Projects will be organized and assigned by October 13, 2017. It is expected that groups of 4 or 5 students (maximum) each will 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.

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

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

Each team will organize themselves and divide the labour according to their individual knowledge and strengths for all aspects of 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 will be presented in class on Nov 10th (1 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 will 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.

A final oral presentation made by the full team for each plan will be presented to the class and to discipline specialists on December 1 and December 8th. The scheduling of which team presents on which day will be 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 15% of the total course grade.

A draft of each team's Ecosystem Management plan is due on December 1, 2017. This draft should be a completed and polished version of the plan. This plan should be what the group would present to their client or boss. Polished and complete in all ways. This plan will be reviewed by myself and a specialist and comments, suggestions, edits, etc., will be provided back to each team for consideration by December 5, 2017. Teams will be asked to review and address the comments provided and submit a finalized version of their Ecosystem Management Plans by Dec 12, 2017 by 4:00 pm into the Dropbox on U of M Learn under the file folder December 12, 2017.

Assignment Grading Times

In-Class Quizzes, Field and In-class assignments will be marked and returned to students by the next lecture session (one-week time).

Draft Ecosystem Management plans are due on December 1, 2017 and will be returned to students on December 5, 2017 with comments for consideration. Final Ecosystem Management plans are due on December 12, 2017.

Students are expected to come prepared to class having read the assigned readings. Students are expected to attend all classes and actively participate in the course material.

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.

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.

Assignment Extension and Late Submission Policy

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 will not be permitted to hand in assignments late, except for documented medical or compassionate reasons.

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"

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

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>