

**University of Manitoba
Department of Environment and Geography**

ENVR 4050 K01, GEOG 4050 K01 and GEOG 7010 K01

Ecosystem Management

Fall Term 2016

Instructor: Dr. Erin McCance 204-232-2941 (erin.mccance@umanitoba.ca)

TA/Grader Marker: Michel LeClaire (mleclaire@ecologic-environmental.com)

Office Hours: By appointment 255 Wallace

Classes: Fridays 1:30 – 4:15 pm in 218 Wallace

Text: Meffe, G.K., L.A. Nielsen, R.L. Knight, & D.A. Schenborn. 2012. Ecosystem management: adaptive, community-based conservation. Island Press, Washington.

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

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

A. 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.

B. Objectives:

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.

C. Course Content:

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 from the textbook and/or other sources will be provided for each seminar. Students should prepare themselves for weekly seminars and class discussions by referring to the designated chapters of the textbook (please try to just ‘skim over’ the US content) and other materials of their own choosing (i.e., web searches). 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 seminars. Students will be evaluated through class participation, a team-based term assignment, oral presentations, and a final take-home assignment. Resource materials and lecture content will be posted on the U of M Desire 2 Learn (D2L) website: (<https://universityofmanitoba.desire2learn.com/>) so students should be sure to have availed themselves of a (cc.umanitoba.ca) computer account.

D. Evaluation:

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| • Participation | 20% |
| • Team Assignment Introduction/Progress Report/Oral Summaries | 10% |
| • Team Assignment Final Report & Oral Presentation (Due: December 2) | 30% |
| • Individual Take-Home Assignment (Due: Dec. 9) | 40% |

Note that electronic submission is required for all assignments using the Dropbox function on the U of M D2L site.

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

E. Grading Scale

The grading scale to be used in this course is:

A+	90-100	C+	65-69
A	80-89	C	60-64
B+	75-79	D	50-59
B	70-74	F	0-49

F. General

Graduate students will be expected to provide more in-depth discussion, contributions to the team assignment, perhaps by serving as team leaders, and more in-depth responses to the final individual take home assignment.

Students are expected to attend all classes and actively participate in the seminar discussions. 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.

Evaluative feedback will be provided upon request of the individual student before the voluntary withdrawal deadline date, which for this course is November 18, 2016.

Plagiarism: Plagiarism, cheating or impersonation in the completion of assignments, and at examinations, are very serious offences. Students caught plagiarizing on assignments may be debarred from class with further risk of academic penalty and possible expulsion. All graded work must be independent.

Using Copyrighted Material: Please respect copyright. We will use copyrighted content in this course. We have ensured that the content we use is appropriately acknowledged and is copied in accordance with copyright laws and University guidelines. Copyrighted works, including those created by us, 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.

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.

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.

G. Team Assignment

Team Projects will be organized and assigned by September 30. It is expected that groups of 4 or 5 students 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, and should be defined in a maximum 1-page Introductory report that **will be presented in the class meeting on October 7 (maximum 5 minute presentation per team)**.

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

- a. Riding Mountain National Park (field trip)
- b. Oak Hammock Marsh

- c. Siene River Corridor (field trip)
- d. Parkland Mews (field trip)
- e. Tall Grass Prairie (field trip)
- f. Fort Whyte Alive
- g. Delta Marsh
- h. Manitoba's East Side of Lake Winnipeg

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 October 28 (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 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. The Journal of Wildlife Management or other suitable scientific journal should serve as source documents to guide style and format presentations and Literature Cited. **The Final Ecosystem Management Plan and Oral Presentations are due on December 2.**

H. Individual Take-Home Assignment

On **December 9**, each student will also be expected to hand in their answers to a take-home assignment that will have been previously distributed. Students will be expected to draw upon textbook readings, seminar presentations, scientific literature, personal communications, internet sources, and other materials in formulating their answers.

I. Preliminary Seminar Schedule

- Sept. 9 **Introduction** (Shepherd)
Introduction to the course (Chapter 1, 10)
Definitions, basic concepts and terms used
Royalwood example
The ecosystem approach: 5 steps to implementation
Dr. Erin McCance, Dept. of Environment & Geography
- Sept. 16 **Getting a Grip on Ecosystem Management** (Chapters 2 & 10)
What is/isn't ecosystem management, ecosystem classification
Dr. Erin McCance, Dept. of Environment & Geography
Introduction to Parkland Mews, Recovery Plan and Strategy for the Peregrine Falcon
in Manitoba, and the challenges of Ecosystem Management
Robert Wheeldon, Parkland Mews, Falconer and Founding Director of Parkland
Mews <http://www.parklandmews.com/contact-parkland-mews.php>
- Sept. 23 **Field Seminar to Riding Mountain National Park** (Chapter 8)
(Chartered Bus Depart 130 pm Friday, Return 7 pm Saturday)
The Canadian Parks Service Approach to Ecosystem Management
Ecological integrity, ecosystem health, landscape planning
Paul Tarleton, Parks Canada
- Sept. 30 **Team Assignment Oral Summaries of Study Locations (5 minutes each)**
Landscape Approaches of Developing Landscapes (Chapter 11)
Fiona Scurrah, Manitoba Hydro, BiPole III Landscape Management
- Oct. 7 **FALL BREAK – NO CLASSES**
- Oct. 14 **Field Trip to Seine River Riparian Corridor, South St. Vital** (Chapter 10)
130-530 pm, 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
- Oct. 21 **Architecture, Urban Planning, and Ecosystem Management** (Chapters 10)
Dr. Alyssa Schwan, Department of Architecture
Urban Ecosystem Management - Living with White-tailed Deer
Dr. Erin McCance, Department of Environment & Geography
Critical thinking and exploration of the role of ethics in environmental management
- Oct. 28 **Large Landscape Management – Protected Areas Initiative** (Chapter 8 & 7)
Wildlife Management Areas
Jenny Harms - Protected Areas Initiative
Environmental Impact Assessments: Terrestrial Mammals, Boreal Woodland
Caribou and Forestry

Dr. Erin McCance, Dept. of Environment and Geography

- Nov. 4 **Team Assignment Progress Summaries (10 minutes each)**
- Nov. 11 **University Closed – Remembrance Day**
- Nov. 18 **Voluntary Withdrawal Date**
- Nov. 18 **Field Trip to Parkland Mews** (Chapter 8 & 9)
Site Tour, Species at Risk, genetics, and captive breeding
Robert Wheeldon, Parkland Mews, Falconer and Founding Director of Parkland Mews
Dr. James Duncan, Director, Manitoba Conservation and Water Stewardship
- Nov. 25 **Manitoba Conservation Districts and Integrated Water Management**
Dale Timmerman, Watershed Planning and Programs, Manitoba Conservation and Water Stewardship
Aquatic Ecosystems/Wetlands Management and Policy Implications
Tracy Maconachi, Ducks Unlimited Canada (Chapters 4 & 7)
(Policy relationships to ecosystem management)
- Dec. 2 **Team Assignments Due & Oral Presentations**
- Dec. 9 **Oral Presentations & Individual Assignments Due**

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>

Section (c) Copyright Information

All students are required to respect copyright as per Canada's *Copyright Act*. Staff and students 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. For more information: <http://umanitoba.ca/copyright>

Section (d) Rights and Responsibilities

Your rights and responsibilities: As a student of the University of Manitoba you have 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. Become familiar with the policies and procedures of the University and the regulations that are specific to your faculty, college or school.

The [Academic Calendar](http://umanitoba.ca/student/records/academiccalendar.html) <http://umanitoba.ca/student/records/academiccalendar.html> is one important source of information. View the sections *University Policies and Procedures* and *General Academic Regulations*.

While all of the information contained in these two sections is important, the following information is highlighted.

- If you have questions about your grades, talk to your instructor. There is a process for term work and final **grade appeals**. Note that you have the right to access your final examination scripts. See the Registrar's Office website for more information including appeal deadline dates and the appeal form:

<http://umanitoba.ca/registrar/>

- You are expected to view the General Academic Regulation section within the Academic Calendar and specifically read the **Academic Integrity** regulation. Consult the course syllabus or ask your instructor for additional information about demonstrating academic integrity in your academic work. Visit the Academic Integrity Site for tools and support <http://umanitoba.ca/academicintegrity/> View the **Student Academic Misconduct** procedure for more information.
- The University is committed to a respectful work and learning environment. You have the right to be treated with respect and you are expected to conduct yourself in an appropriate respectful manner. Policies governing behavior are included in the next section.

Section (e) Policies and Services Information

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 and,

Violent or Threatening Behaviour

http://umanitoba.ca/admin/governance/governing_documents/community/669.html

- If you experience **Sexual Assault** or know a member of the University community who has, 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. The **Sexual Assault** policy may be found at: http://umanitoba.ca/admin/governance/governing_documents/community/230.html
More information and resources can be found by reviewing the Sexual Assault site <http://umanitoba.ca/student/sexual-assault/>

Intellectual Property

- For information about rights and responsibilities regarding **Intellectual Property** view the policy:
http://umanitoba.ca/admin/governance/media/Intellectual_Property_Policy_-_2013_10_01.pdf

Department Policies

For information on regulations that are specific to Environment and Geography, read the section in the Academic Calendar for the Department and on:

<http://umanitoba.ca/faculties/environment/departments/geography/index.html>

Contact an **Academic Advisor** within our faculty/college or school for questions about your academic program and regulations <http://umanitoba.ca/academic-advisors/>

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 or discipline concerns.

<http://umanitoba.ca/student/advocacy/>

520 University Centre

204 474 7423

student_advocacy@umanitoba.ca