

GEOGRAPHY 368/PLANNING 341
Winter Term 2017

CONSERVATION & RESOURCE MANAGEMENT OF THE BUILT ENVIRONMENT

LECTURE: 10:00 – 11:20 AM Mon & Wed MC 2065

INSTRUCTOR: Dr. J. Beebe

OFFICE HOURS: EV1 Rm. 112, Mon 11:30 – 1:00 PM

COURSE CONTENT AND ORGANIZATION

The objective of this course is to provide a practical understanding of basic biophysical processes operating within the built environment and to understand their relationship to the planning and management of urban environments and associated landscape resources. Specifically, the course addresses the following five questions:

1. How do natural landscapes (ecosystems) function?
2. What are the essential physical and biogeochemical processes for healthy ecosystems?
3. How does landscape change (i.e. agriculture, urbanization, resource extraction, natural disturbance) alter the rate and magnitudes of these processes?
4. What are the environmental impacts of landscape change?
5. What are the planning/management/engineering opportunities to maintain important environmental resources?

TEXTBOOK

Marsh, W.M. (2010) Landscape Planning, Environmental Applications. 5th Edition, John Wiley & Sons.

STUDENT EVALUATION

Two Quizzes @ 30% each	60%
Final Exam	40%
Total	100%

QUIZ DATES:

Quiz 1: **Wednesday January 31 2018** **10:00 – 11:20 AM**

Quiz 2: **Wednesday March 14 2018** **10:00 – 11:20 AM**

Format and material for the quizzes will be discussed beforehand in the lectures.

COURSE OUTLINE:

We will cover the following topics (not necessarily in this order):

- **Introduction to the Course**
- **Watersheds, Ecosystems and Cumulative Impacts**
- **Topography, Slopes and Land Use Planning**

- **Soils, Land Use and Waste Disposal**
- **Groundwater, Urban Land Use and Aquifer Protection**
- **Runoff and Stormwater Management in a changing landscape**
- **Hydrologic Cycle and Water Balance**
- **Flooding and Flood Mitigation in Urban Systems**
- **Water Quality, Runoff and Urban Land Use**
- **Soil Erosion, Land Use and Stream Sedimentation**
- **Streams, Channel Form and the Riparian Landscape**
- **Systems Response to Change**
- **Wetlands and Land Use Planning**
- **Constructed Wetlands and Stormwater Management**
- **Best Management Practices**
- **Radiation: Urban Microclimates**
- **Climate Change and Stormwater Management**
- **Framing the Land Use Plan**
- **Course Review**

Lecture materials will be posted to Learn prior to the lecture being given in class. It is your responsibility to access the materials and come to class prepared to discuss the slides. You are responsible for lecture materials and readings from the text for all quizzes and the final examination.

From time to time I will contact the entire class via bulk email with information that concerns the class. Please ensure you access your University of Waterloo email on a regular basis as that email is the default email being used for the course. I will not be sending email to addresses that are not @uwaterloo.ca. Conversely, emailing me is to be done using your @uwaterloo.ca address; emails from any other sources will not be read (ie Hotmail, gmail, etc).

Important Information

1. Login info for students:

Users can login to LEARN via:

<http://learn.uwaterloo.ca/>

use your WatIAM/Quest username and password

2. When are my courses activated and disabled for the term?

By default, courses that use LEARN are activated the first day of classes for the term in which they are being taught. Courses from the previous term are disabled on that day as well (e.g. courses from Fall 2010). Students will have access to this course until the first day of class of the Spring Term (May 1, 2012).

3. Student Add/Drops

Student Add/Drops are processed daily using data from the Registrar's Office. If a student adds a course via Quest, it could take up to 24-48 hours to be processed and added to LEARN. If paper forms are signed, it could take longer.

Additional Information

Academic Integrity: To create and promote a culture of academic integrity, the behaviour of all members of the University of Waterloo is based on honesty, trust, fairness, respect and responsibility.

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4, <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline, <http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>

Appeals: A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals, <http://secretariat.uwaterloo.ca/Policies/policy72.htm>