UNIVERSITY OF BRITISH COLUMBIA
SCHOOL OF COMMUNITY AND REGIONAL PLANNING

PLAN 510  Environmental and Sustainability Concepts in Planning Practice
2 Credits
Term 1 – Fall 2018
Tuesday 9:00-12:00
1933 West Mall Rm. 150

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Course Description and Overview
This is an introductory course to environmental and sustainability planning. In only eight weeks, we will rapidly review the essential concepts that planners should know about environmental and sustainability planning. Topics include: an introduction to ecology; traditional ecological knowledge, ecological restoration; landscape ecology; spatial analysis and planning; the ecological footprint; ecosystem services; energy planning; climate change and adaptation; transportation policy, and environmental governance. Each of these topics will be studied within a planning context, and with the goal of preparing you to address these issues in professional practice.

As a survey course, our focus will be on major themes and core principles, rather than detailed or technical analysis that might be offered in a more specialized course. However the advantage of reviewing multiple environmental topics is that we will be able to consider the connections across sustainability problems.

Course Format
We will meet once a week for three hours. Classes will be a mixture of lectures and case-based discussions. The lectures will provide us with the substantive knowledge, core principles, or tools used to address sustainability challenges. The cases will allow us to apply this knowledge to a specific scenario. In most cases, there will be no obvious solution or answer to the planning problem studied. However in most instances, a firm understanding of sustainability principles may suggest alternative courses of action.

Learning Objectives
Our goal is to become proficient in the fundamental principles and themes of sustainability planning. By the end of the course, students should be able to:
- Describe core principles in ecology and their application to planning practice
- Propose site designs that meet ecological objectives
- Perform basic manipulations and calculations with spatial data
- Identify planning tools used to address sustainability challenges
- Understand your personal knowledge gaps with regard to sustainability planning

Attendance
Students are expected to attend all class sessions and actively participate in discussion.
Requirements and Grading
There will be four assignments and occasional quizzes. Given the large size of the class, feedback on the assignments will be limited in scope.

Class Participation 30%
Quizzes 10%
Assignment 1. Sustainability Plans 15%
Assignment 2. Designing Ecological Plans 15%
Assignment 3. Spatial Data and GIS 15%
Assignment 4. Negotiation Debrief 15%

Class Participation & Learning with the Case Method
Engaging in class discussion is an important part of this course and a considerable amount of time is needed to prepare for the case-based discussions. During the case discussions, we will seek to apply the sustainability principles discussed in lecture to a real-world planning problem. Cases are organized around a problem or decision that needs to be made, and students will be expected to present a recommendation and defend their position.

Suggestions and guidance on how to prepare for case based learning will be provided. The aim of the cases is to train you to think like a decision maker. The cases will require you to select a course of action based on sound reasoning. What would you do and why? You should come to class prepared to defend your recommendation. Strong recommendations about choice of action should involve some clarity about objectives, alternatives, and consequences.

Quizzes
Short and unannounced quizzes will be sprinkled throughout the semester. They will be three to five questions on the assigned readings. The quizzes are meant to reward students that have prepared for class but be less likely to participate in discussion.

Assignment 1. Sustainability Plans
Our first assignment will take a look at how cities are developing sustainability plans. As a class, we will collectively analyzing the central elements of sustainability or biodiversity plans in cities throughout Canada and the world. Each student will select a city, read their plan and contribute to a collective document in which these plans are compared. We will discuss our collective findings in class.

Assignment 2. Designing Ecological Plans
You will be asked to complete the two exercises on designing ecological plans in the Perlman and Milder book to prepare for our class discussion on October 9th. For this assignment only, you may work with a colleague or on your own. We will discuss your assignments in class on the day it is due.

Assignment 3. Spatial Data and GIS
As planners you should be familiar with spatial data. This assignment is designed to introduce you to geographic information systems (GIS) and show you basic manipulations and transformations. This assignment is due October 16th.
Assignment 4. Negotiation Debrief
On October 30th we will have a negotiation exercise that will introduce you to how environmental policy is crafted on the international stage and allow you to practice your negotiation skills. After the negotiation exercise, you will be asked to write a one-page essay that debriefs your experience. This assignment is due on Friday, November 2nd. Please print a copy and leave it in my mailbox.

Course Materials
The readings for the course have been printed by the Course Materials Office and will be available at the UBC bookstore. Students should bring the assigned readings with them to class for use in discussion. The bookstore will also have the two assigned books for this course:


Office Hours
My office hours are Thursday 3:00-4:00. You may schedule an appointment on a sign up sheet posted outside my office door. Come to talk to me about questions you have or come tell me how you think the course can be improved.

Academic Integrity
The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President’s Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences.

A more detailed description of academic integrity, including the University’s policies and procedures, may be found in the Academic Calendar at http://calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,0.
Week 1. Introduction September 11

Session 1. Course Overview, Sustainability & Planet Earth

Introduction, pgs 2-4
Chapter 1. Human Plans pgs 7-20.


Session 2. Traditional Ecological Knowledge


Week 2. Ecological and Sustainability Planning Assignment 1 Due September 18

Session 1. Ecological Principles, Populations, Communities and Resilience

Chapter 2. An Introduction to Ecology and Biodiversity
Chapter 3. When Humans and Nature Collides
Chapter 4. Change through Time
Chapter 5. Populations and Communities

Session 2. Sustainability and Biodiversity Plans
Guest, Jennifer Rae Pierce, SCARP PhD student

Week 3. Urban Metabolism September 25

Session 1. Urban Ecology, Urban Metabolism & Water

Session 2. Case: Minto-Brown Island Park


Minto-Brown Island Park: A Case Study of Farming the Urban-Agricultural Interface. The Electronic
Week 4. Ecological Restoration
Session 1
Lecture: Ecological Restoration (or GIS Session)

Chapter 9. Restoration & Management

Session 2
Case: Savanna Restoration in Illinois


Week 5. Spatial Environmental Planning
Assignment 2 Due
Session 1. Landscape Ecology

Chapter 6. The Ecology of Landscapes
Chapter 1. Foundations pgs 3-22;
Chapter 13. Land planning and management pgs 435-441

Session 2. Designing Ecological Plans

Chapter 10. Ecologically Based Planning and Design Techniques
Chapter 11. Principles in Practice
Part 1. Residential Development at the Site Scale
Part 2. Planning for Growth by Listening to Ecology

Week 6. Ecological Economics
Assignment 3 (GIS) Due
Session 1. Ecological Footprint, Resilience & Ecosystem Services


Session 2. Case: Adaptation to Sea Level Rise
Harvard Kennedy School: Miami Dade County and Sea Level Rise. HKS 2084.


**Week 7. Climate Change and Energy Policy**
Case: Climate Change and Iceland’s Energy Policy


Case: Electrical Vehicles in San Francisco


**Week 8. Negotiation Exercise & Wrap Up**
Negotiation Exercise: The Mercury Game

The Mercury Game. MIT. General Instructions + Confidential Instructions.