

Biology 4065F/5065F Sustainability and Global Change

Professor Pat Lane

1-three hour discussion/lecture per week

CLASS DESCRIPTION

Sustainable Development has become a worldwide concept embraced by both the North and the South. This concept emphasizes the intersection of society, economy, and environment, in an attempt to reconcile human development with growing populations in a deteriorating biosphere, to harmonize the North-South relationship, to realize human potential, and to achieve social justice now and in the future. The final goal of achieving sustainable development includes: equitable and just societies, protected environments with ecosystem integrity, and robust economies. All of this must be achieved in a world that is undergoing unprecedented global change. Most countries include Sustainable Development in their national priorities of development. In Canada, it is a critical component of both domestic and foreign policies. Sustainable development has also become a main organizing principle for many approaches to global environmental management; for example, most multilateral environmental agreements and international environmental agencies are mandated to enhance sustainability. At the same time, the concept is controversial, and often defined differently in the North and the South or based upon various political-economic viewpoints and ideologies. Besides definitional and conceptual problems, making the concept operational has proven extremely difficult.

The global trends portion of the class will deal largely with those trends that relate directly to environmental management, existential risk, and achievement of sustainability at the global level. These trends include: the worsening global environmental crisis, the loss of biodiversity and ecologically productive areas and resources, increasing population pressures on existing ecosystem production and services, the waning potential for human well-being, the lack of an operable ecological theory to address the human-environment interface in practical terms, rise of divergent environmental philosophies, the linking of environment, economy and society through the sustainable development concept, failure of current economic systems to reflect true environmental values, increasing economic and political pressures to assess environmental damages from pollution, war, terrorism, and other harmful human activities, growing environmental risks and their links to human security and international relationships, the increasing realization that power and environment are intricately linked, increasing numbers of environmental refugees, the public outcry for local to global environmental management, increasing numbers of multilateral environmental agreements, and responses to the environmental risks of globalization and the world trade system.

Part I of the class will focus upon the principles and applications of sustainable development and Part II will include a detailed case study of sustainability in Cuba.

This class has a lecture and discussion format. This is a web-based class employing the Blackboard Learning System (BLS) to supplement the in-class work.

Class Schedule

Textbook: Principles of Sustainability (PS) (2nd Ed.) by Simon Drescher

WEEK NO.	LECTURE	WEBSITE VISIT and TEXTBOOK*	ASSIGN. DATE DUE
0	Introduction to Class/Logistics Sustainable Development and Globalization Progress and Its Discontents	Website Visit 0 Textbook: PS 1	
1	From Muir to Meadows Sustainability Emerging Overview of World Views/Ecological Paradigms	Website Visit 1 Textbook: PS 2-3 Readings: 1	
2	From Rio to Kyoto/Disappointments Meaning of Sustainable Development Social Capital Envisioning a Sustainable Society	Website Visit 2 Textbook: PS 4-5 Readings: 2	
3	Taking Sustainability into Economics Putting a Price on the Planet The Green Economy	Website Visit 3 Textbook: PS 6-7 Readings: 3	Assignment No. 1
4	The Ethics of Sustainability Social and Environmental Justice Measuring Sustainability The End of Sustainability?	Website Visit 4 Textbook: PS 8-9 Readings: 4	
5	Introduction to Cuba Cuban History	Website Visit 5 Readings: 5	
6	Test No. 1 (No Lecture)	No Assignment Study for Test	
7	Cuban Society, Model, SWOT and Ideology	Website Visit 7 Readings: 7	Assignment No. 2
8	Cuban Economy	Website Visit 8 Readings: 8	
9	NO CLASS-STUDY DAY	Website Visit 9 Readings: 9	
10	Graduate Presentations	Website Visit 1 Readings: 10	Assignment No. 3
11	Graduate Presentations		
12	Test No. 2 (No Lecture)	No Assignments Study for Test	

Marking Scale for Undergraduate and Graduate Students

Requirement	Details	Points
Assignments (1-3) @ 12 pts each		36
Test 1	45 multiple choice questions (1/3 point each) plus 3 out of 4 essays each worth 6 points.	33
Test 2	45 multiple choice questions (1/3 point each) plus 2 out of 3 essays each worth 5 points	25
Attendance 12 weeks @ .5 points/class		6
Total		100

Marking: Graduate Students (Biol 5065)

Graduate students will be responsible for all of the undergraduate assignments listed above for a total of 80 points (directly prorated). In addition, for 20 points, graduate students will be required to give a presentation on an approved topic in Sustainability toward the end of term. The presentation should include a discussion involving critical issues, approaches, methodologies and controversies in Sustainability that were not well-developed in the textbook. Please submit a one page proposal on your topic by October 20th to Dr. Lane. Regardless of the topic you select, it would be useful to discuss it with the Professor early in the term. A marking sheet will be provided. Note that the presentation should be original and not a talk used in another class or thesis research.

Faculty of Science Marking Scale

A+	90-100	C+	62-64.9
A	85-89.9	C	58-61.9
A-	80-84.9	C-	55-57.9
B+	75-79.9	D	50-54.9
B	70-74.9	F	<50
B-	65-69.9		

