

CE 458/558
Sustainable Development (WEB)
Fall 2003

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Office Hours: Tuesday: 10:30 AM – 12:30 PM
Wednesday: 1:00 PM to 3:00 PM or by appointment.

The class will meet on Wednesday August 27 to review the course contents. Please try to make it to the first meeting.

Course URL: **The course site will be activated on Wednesday, the day of first class meeting.** Here are the directions to the course web site. Please go to the ODU Homepage and go to Current Students then go to Course Web Page Links. Here you will have the necessary information to enter the web site. Or you can click on the URL below to go to the web site. If click on the course numbers a screen will pop up and you have to enter your ODU e-mail user name and PASS Word to have access to the contents of the course web site. One of the requirements is that you need to activate your ODU e-mail address and PW. There are procedures on this site on how to get a new ODU e-mail address. Below is the link to the website;

<http://www.odu.edu/webroot/instr/et/munal.nsf>

Course Description

An overview of the social, economic, technical, and environmental aspects of regional, national, and international efforts to achieve sustainable development. Discussion of the integration of industrial activity and ecological concerns utilizing principles of zero emissions, pollution prevention, and design for the environment. In addition to lectures, use is made of the case study method.

Course Texts

1. *Principles of Sustainable Development*, F. Douglas Muschett, ed., St. Lucie Press, (1997).
2. *Beyond Growth: Economics of Sustainable Development*, H. E. Daly, ed., St. Lucie Press (1997).
3. *Reuniting Economy and Ecology*, R. Beaton and C. Maser, Lewis Publishers (1999).

Extensive use of handout materials will serve as an additional text for the course.

Grading

The final grade will be based on the following percentages:

Homework assignments	15%
First Examination	35%
Second Examination	35%
Case Study Report	15%

COURSE SCHEDULE

Lecture and Examination Schedule: Reading, Homework and Report Assignments

Week #	UNIT #	TOPIC
Week 1	1	Principles of Sustainable Development 1-1 What is Sustainable Development - Class Notes 1-2 Measuring Effects of Sustainable Alternatives 1-3 Excerpts on Global Issues Papers
Week 2	1	1-4 Pollution Prevention Comes of Age 1-5 Smart Growth in Our Future Earth Summit II Outcomes Summary REF State of the World 99 REF
Week 3	2	Exercises 1-1 and 1-2 DUE Challenges of Sustainable Development 2-1 International Issues, Policies and Practices 2-2 Regional and Community Sustainable Development
Week 4	3	Exercises 2-1 and 2-2 DUE Addressing the Challenges 3-1 Proactive Environmental Management 3-2 Program Economic Assessment 3-3 Environmental Indicators 3-4 Identifying Opportunities and Analyzing Alternatives
Week 5	4	Exercises 3-1 and 3-2 DUE Global Infrastructure 4.1 Development Cooperation Review Series 4.2 Role of International Organizations 4.3 Voluntary World-Wide Cooperation - ISO 14000
Weeks 6,7	5	Exercises 4-1, 4-2 and 4-3 DUE Economics of Sustainable Development 5.1 Forecast For The U.S. Economy; Still Mostly Sunny 5.2 The Shape of Current Thought on Sust. Dev. 5.3 Economics Class NOTES

Lecture and Examination Schedule: Reading, Homework and Report Assignments

Week #	UNIT #	TOPIC
Week 8		EXAMINATION
Week 9,10	6	Exercises 5-1 and 5-2 DUE Environmental Management 6.1 Green Technology 6.2 Industrial Ecology — Pollution Prevention Life Cycle Analysis/Design for Environment! 6.3 Zero Emissions: Eco-Industrial Parks 6.4 Smart Development : Brownfields/Wetlands/Sustainable Agriculture
Week 12	7	Exercises 7-1, 7-2, and 7-3 DUE Integration of Industrial Activities and Ecological Concerns 7.1 Global Communications and Information Systems 7.2 Global Issues and Engineering Analysis 7.3 Energy Conservation and Resource Management
Week 13	8	The Period Ahead 8.1 Free Trade and Growth 8.2 Eco-Industrial Parks-Resources/Free Trade/Religion/Carrying Capacity 8.3 Population 8.4 Management and Leadership - Role of Women
Week 14		Exercises 8-1, 8-2, and 8-3 DUE EXAMINATION
Week 15		Term Projects Due (Final Exam Week)

Case Study

Select for study a sustainable development project dealing with a topic such as: an analysis of a given region's program (e.g. Cape Charles); analysis of the interrelational issues for sustainable development at the global and regional levels; assessment of environmental, technical, and economic tools available for sustainable development.

Conduct a literature survey, make environmental, technical and economic analyses and calculations, as appropriate, and prepare a report on the subject.

Your report should set forth the important features of the topic with comments and suggestions for the future. It should demonstrate an advanced understanding of the economic, environmental, technical, social, and managerial aspects of the project.

Note: The project to be studied must be selected by September 26.