

**SOUTHERN CONNECTICUT STATE UNIVERSITY**  
**ENV 300 Environmental Studies I**

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**Office Hours:** Jennings Hall 340  
**Tuesday:** 3:00 -5:00 pm  
**Wednesday:** 11:00 – 1:00 pm  
**Friday:** 11:00 – 12:00 pm

<b><u>COURSE NUMBER</u></b> ENV 300	<b><u>CREDIT HOURS:</u></b> 3	<b><u>PREREQUISITES:</u></b> None listed
<b><u>COURSE TITLE:</u></b> Environmental Studies I		

**COURSE DESCRIPTION:**

**An overview of the major scientific concepts that underlie current environmental problems. A multidisciplinary approach to the nature and extent of the pollution jeopardizing our air, water, resources, wildlife and quality of human life.**

**COURSE'S CONTRIBUTION:**

**To provide the student with a general introduction to environmental science, relating this discipline to basic physical and life science principles, and to constraining elements derived from economic and political considerations.**

**LEARNER OUTCOMES**

The student will:

- I. Acquire skill in retrieving and *evaluating* (for veracity, objectivity and completeness) available information on current environmental issues. (INTASC 1, 4, 5; NSTA 1, 2, 3, 4; CCCT 1.1, 2.1, 2.4, 2.5, 2.6)
- II. Be able to describe/explain, both in writing and orally, major *current environmental issues*, including the main arguments on both sides of these issues, and the positions of affected interest groups. (INTASC 1, 4, 5, 6; NSTA 3, 4, 7; CCCT 1.1, 1.2, 1.3, 1.6, 2.1, 2.2, 2.5, 2.6, 2.7)
- III. Demonstrate an understanding of how *fundamental scientific concepts* (evolution, conservation of matter and energy, 1<sup>st</sup> and 2<sup>nd</sup> laws of thermodynamics) help shape environmental principles and issues. (INTASC 1, 7; NSTA 1, 2, 3, 4, 5; CCCT 1.4, 2.1)
- IV. Develop an appreciation of the *complexities and interrelatedness of environmental issues*, and the need to invoke elements of economics, law, politics, ethics, etc., when formulating intelligent solutions. (INTASC 1, 3, 7; NSTA 1, 3, 4, 7; CCCT 1.4, 2.1, 2.2)
- V. Gain and be able to illustrate an awareness of how his/her *personal activities impact the environment*. (INTASC 6,10; NSTA 3,4,7; CCCT 1.2,1.6,2.2,2.3,2.6)
- VI. Gain *first-hand knowledge of the practical aspects of making environmental decisions* through exposure to professional outside lecturers, and (encouraged) attendance of local wetlands or zoning committee meetings. (INTASC 1, 2, 3, 4, 5, 6, 10; NSTA 3, 4, 5, 7, 10; CCCT 1.1, 1.2, 1.6, 2.1, 2.2, 2.6, 3.6)
- VII. Develop an *in-depth understanding and a detailed point of view (opinion)* of at least one current environmental issue. (INTASC 1, 2, 4, 4,10; NSTA 3, 4, 7; CCCT 1.2, 1.4, 1.6, 2.1, 2.2, 2.4, 2.6)
- VIII. Learn the concepts of “risk assessment” and “risk analysis,” and be able to use these parameters to rank environmental threats or prioritize courses of action. (INTASC 1, 7; NSTA 3, 4; CCCT 1.4, 2.1, 2.2)
- IX. Be able to model and calculate simple economic parameters (“payback”, “cost-benefit”) associated with solution options to environmental issues. (INTASC 1, 2, 7; NSTA 3, 6; CCCT 1.4, 2.1, 2.2, 2.6, 2.7)
- X. Be expected to possess or attain computer competency per NCATES Gate 1 standards. The student will demonstrate proficiency in retrieving information from the web, and in the use of “word” and “spreadsheet” applications (See IX.)

## **EVALUATION CRITERIA**

In general, “Learner Outcomes” will be assessed via “Course Requirements” numbered 1 through 4, and 5b. In addition, Learner Outcome V. will be primarily assessed via Course Requirement 5c. Learner Outcomes IX. and X. will be primarily assessed through Course Requirement 5d.

## **MODES OF LEARNING**

Comprehensive text, multi-media lectures (Power Point, Excel®, video, etc.), extensive class discussion with strong encouragement for students to make short oral presentations, assigned readings from the web, outside lecturer (professional in environmental area), incentive for student participation in (outside-class) environmental activities.

## **COURSE CONTENT OUTLINE SEE ATTACHED**

## **REQUIRED TEXTS:**

Eldon D. Enger and Bradley F. Smith, *Environmental Science, A Study of Interrelationships*, 9<sup>th</sup> Ed. McGraw Hill, New York, N.Y. 2004.

## **COURSE REQUIREMENTS (with percent contributions to final course grade)**

1. (20 %) On-time class attendance and class participation.
2. (45 %) Three Exams, all including Essay questions (one exam is open book).
3. (20 %) Final Exam (comprehensive)
4. (15 %) Homework: including
  - a. Reading of text/assigned articles, and
  - b. Bi-weekly submittal of a current environmental article, with at least one short oral presentation on content, point of view.

**STATEMENT ON ACCOMMODATIONS FOR ENV 300:**

**Students with disabilities or diverse learning needs are welcome in this class. Any student who requires special accommodations is encouraged to speak with me, and also needs to contact the Disability Resource Office in Engleman Hall (392-6828) to provide appropriate documentation.**

**Also, any student who is having difficulty understanding the course material or satisfying the course requirements should speak with me. All students are expected to satisfy the competencies outlined in the learner outcomes in this syllabus. If you are having difficulty doing this, please speak privately with me, so that I might be able to make suggestions that will help you succeed in this course.**

**ACADEMIC HONESTY:**

**Any form of academic misconduct or dishonesty will result in a failing grade for the course, and other possible penalty as outlined in the *SCSU Student Handbook*. Academic dishonesty includes receiving any assistance not authorized by the Instructor in the creation of work submitted for academic evaluation. Such work includes exams, papers, homework, etc. Academic dishonesty also includes the presentation of the words or ideas of another person, as one's own words, without proper acknowledgement.**

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TENTATIVE COURSE CALENDAR

ENV 300 -- FALL

SYLLABUS\*

WEEK	TOPICS	RELATED READING**
<b>I. INTRO TO ENV. STUDIES</b>		
1	Intro. To Env. Studies/ "Interrelatedness" Characteristics of Env. Studies Regional (U.S.) Env. Issues Env. Ethics/ Corp. Env. Ethics--Exxon Valdez	Ch. 1 & 2
2	Global Env. Issues/ Env. Justice Earth Summits/ Sustainable Development	
3	Making Env. Decisions Risk Analysis/Cost-Benefit Analysis Economics & the Env. Market "Disconnects"/ "Tragedy of the Commons"	Ch. 3
<b>EXAM #1</b>		
<b>II. ENVIRONMENTAL PRINCIPLES AND INTERACTIONS</b>		
4	Ecological Principles/ Scientific Method Atoms/ Molecules/ Compounds Acids-Bases/ Chemical Reactions in the Envir. Energy Principles/ 1st Law/ 2nd Law	Ch. 4
5	Interactions betw. Organisms & Their Envir. Habitat/ Niche/ Natural Selection/ Evolutionary Patterns Predation/ Competition/ Symbiosis "Energy Flow" Through Ecosystems Carbon/ Nitrogen Cycles	Ch. 5
6	Population Principles/ Pop. Growth Curve	Ch. 7 & 8
7	Carrying Capacity/ Limiting Factors Human Population Growth/ Issues & Implications	Ch. 7 & 8

8	Land-use Management/ Wetlands Urban Issues/ Environmental Planning & Design	Ch. 13
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**EXAM #2**

**III. ENERGY USAGE, SOURCES AND ISSUES**

9	Types of Energy/ Energy Conversion Usage/ Availability/ Trends/ Global Issues	Ch. 9
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	Energy Sources (Non-Renewable)	Ch. 10
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10	Renewable Energy Sources/ Nuclear Energy Energy Conservation/ Pollution	Ch. 11
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**IV. HEALTH AND THE ENVIRONMENT**

11	Air Quality/ Common Outdoor Pollutants Particulates/ Smog/ Acid Rain/ Deposition	Ch. 17
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12	Indoor Air Pollutants/ Radon/ ETS Global Warming/ Kyoto Treaty	
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13	Ozone "Hole"/ Montreal Protocol/ Climate Control Managing "Air Quality"/ Legislation/ Future Decisions	
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**EXAM # 3**

**V. ENVIRONMENTAL POLICY--PAST, PRESENT & FUTURE**

14	Env. Policy & Decision-Making at the National Level Terrorism/ Int'l. Env. Policy/ Future Directions	Ch. 20
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WEEK OF DEC. 13

**FINAL EXAM**

**NOTES:** Dates and topic selection are subject to change, depending on class interest and background, current environmental issues and the whim of the Instructor.

Reading assignments given here are from Enger & Smith, 9th Edition, *Environmental Science--A Study of Interrelationships*. Additional reading assignments (from the Web, etc.) will be assigned periodically.

Exact dates of exams "to be announced".