



Independent Study IN IDAHO

EnvS 101

Introduction to Environmental Science

Independent Study in Idaho
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The University of Idaho in statewide cooperation with
Boise State University — Idaho State University
Lewis-Clark State College

Study Guide

Independent

Study IN IDAHO

PO Box 443225

Moscow ID 83844-3225

Self-paced study. Anytime. Anywhere!

Environmental Science 101 Introduction to Environmental Science

University of Idaho
3 Semester-Hour Credits

Prepared by:

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Web-based units:

Unit	1: Introduction to Environmental Science
Unit	2: Population Issues
Unit	3: Dealing with the Population Problem
Unit	4: Nonrenewable Energy Resources
Unit	5: Renewable Energy Resources
Unit	6: Ecology
Unit	7: Biodiversity
Unit	8: Feeding the Population
Unit	9: Water Quantity
Unit	10: Water Quality — Drinking Water
Unit	11: Surface Water Pollution
Unit	12: Sewage Disposal
Unit	13: Air Pollution
Unit	14: Ozone Depletion
Unit	15: Acid Rainfall
Unit	16: Global Warming
Unit	17: Trash — Liability or Resource?
Unit	18: Soils and the Soil Ecosystem

Independent Study in Idaho

This course is offered by the University of Idaho.


Introduction to Environmental Science

3 Semester-Hour Credits: UI

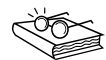
Welcome!

Whether you are a new or returning student, welcome to the Independent Study in Idaho (ISI) program. Before beginning this course, read the information provided below, including course description, prerequisites, required materials, course objectives, and information about lessons, exams, and grading.

Important!

As you read this section, you will see the following icon: 

Use this icon to direct yourself to the **Appendix** in the back of this study guide for essential registration information, Independent Study in Idaho policies and procedures, and forms you will need to successfully complete this course. You are responsible for understanding and following ISI policies and procedures.



Turn to the **Appendix** now. Familiarize yourself with the information in the *Registration* section, student responsibilities in *Academic Integrity*, and the necessary forms. If there is anything you do not understand, please contact the ISI office for clarification before starting your course.

Course Description

Introduction to basic principles in the biological, physical, and social science areas of environmental science. The course is required for all University of Idaho Environmental Science majors to acquire a basic understanding of environmental science.

Prerequisites

There are no prerequisites for this course.

Course Materials

Required Course Materials

- Withgott, Jay, and Scott Brennan. *Environment: The Science Behind the Stories*, 2nd ed. San Francisco, CA: Pearson Education, Inc., Benjamin Cummings, 2007. ISBN: 0-8053-8203-8.

Independent Study in Idaho course materials are available for purchase at the University of Idaho Bookstore. Visit the UI Bookstore's Web site, <http://www.uidahobookstore.com>, select *Textbook, Independent Study* for a list of course materials. You may order online, by telephone, (208) 885-7334, or by e-mail to uibooks@uidaho.edu.

Independent Study in Idaho courses are updated and revised periodically. Ordering course materials from the UI Bookstore at the time of registration allows you to purchase the correct edition(s) of textbooks, study guides, and supplemental materials. If purchasing textbooks from another source, refer to the ISBN(s) for the textbook(s) listed for this course to ensure that you obtain the correct edition(s). If you have questions regarding the course materials you have ordered and received, contact the UI Bookstore.

Additional Course Requirements

- Internet knowledge
- Access to the World Wide Web and e-mail (with at least a 28.8 Kbps modem)

Course Introduction

This course is designed in a series of module, which are broken down into contained units of study. The **Help** resource is provided to facilitate your understanding of how to navigate through the Web site. Please utilize this resource.

Course Objectives

- To gain an understanding of the concepts fundamental to environmental science
- To understand the complexity of ecosystems and how to sustain them
- To be exposed to current and controversial environmental issues.

Lessons

Overview

This is a Web-based course that is arranged into 18 units. Each unit covers an important aspect about environmental science and has from one to three narrated slide sets. Each topic also includes a reading assignment from your text and a written assignment.

Study Hints

- Complete all assigned readings.
- Set a schedule allowing for completion of the course one month prior to your desired deadline.



See the **Appendix (ISI Policies)** on the Independent Study in Idaho Web site at www.uidaho.edu/isi for essential *ISI policies on submitting lessons to your instructor*. See the letter sent in your registration packet for *your instructor's requirements: how to format and submit lessons, number of lessons you may submit at one time, and lesson guidelines*.

Exams

- There are no exams for this course.

Grading

The course grade will be based upon the following considerations:

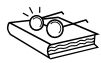
You can determine your current course grade by adding up your scores and dividing by the possible number of points earned to date. Then use the 90, 80, 70 and 60 percent values to determine your current grade. Please e-mail me with any specific questions you have about your current grade status.

Your final grade for the course will be determined by calculating the total number of points you earn on lessons. The basis for letter grades is shown below:

Grade	Percentage	Points
A	at least 90% of 500	= 450 total points
B	at least 80% of 500	= 400 total points
C	at least 70% of 500	= 350 total points
D	at least 60% of 500	= 300 total points

F less than 60% of 500 = 299 total points or less

The final course grade is issued after **all** lessons have been graded.



See the **Appendix** on the ISI Web site at www.uidaho.edu/isi for information about *confidentiality of student grades, course completion and time considerations, and requesting a transcript.*

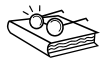
About the Course Developer

The course developer is Professor Mahler, a professor at the University of Idaho.

Education	Ph.D., North Carolina State University M.S., Washington State University B.S., Washington State University
Research	Conducts research on soil plant relationships, crop response to fertilizer placement, nutrient use efficiency, environmental losses of nutrients, fertilizer biotechnology, cereal crops—legumes, grass seed, and rapeseed.
Teaching	Soil fertility and plant nutrition, environmental science, and tropical soils. Extension: Works with agents in northern Idaho on soil fertility and its relationship to sustainable agriculture. Coordinates the water quality program for the College of Agriculture. Prepares and updates extension materials. Is an advocate for water quality and sustainable agriculture. Edits and produces Pacific Northwest Water Web.
Advising	Graduate major professor and graduate committee member.

Contacting Your Instructor

You will receive *course and instructor contact information* in your registration packet.



See the **Appendix (ISI Policies)** on the ISI Web site at www.uidaho.edu/isi for detailed information on *contacting your instructor.*

Disability Support Services



See the **Appendix (ISI Policies)** on the ISI Web site at www.uidaho.edu/isi for *information on Disability Support Services (DSS).*

Unit 1

Introduction to Environmental Science

Lesson Objectives

When you are finished with this unit you should be able to do the following:

1. Describe the world views of Cornucopianism and environmentalism.
2. Define environmental science and the concept of sustainability.
3. Name and describe the steps of the scientific method.
4. Describe the science literacy level of the typical American.
5. Describe the importance of science in society's environmental decisions.
6. Define environmental wisdom and distinguish between public and scientist priorities in environmental issues.
7. Know the impact of major bills passed by Congress in the 1970s.
8. Know and define the four principles of ecosystem sustainability.
9. Describe how people in the Pacific Northwest view the environment.

Reading Assignments

Withgott and Brennan

Ch. 1, pp. 2–22

Ch. 2, pp. 26–53

[View the Lecture Outline](#)

[Listen to the Audio presentation](#)

[View the PowerPoint presentation](#)

Important Terms

Cornucopian world view	hypothesis	environmental wisdom
environmentalism	controlled experiments	ecology
frontier ethic	Clean Water Act (CWA)	ecologists
natural resources	Endangered Species Act (ESA)	information overload
sustainability	Safe Drinking Water Act (SDWA)	theory
scientific method	Clean Air Act (CAA)	four principles of ecosystem sustainability

Lecture

The following is lecture outline for Unit 1.

Unit 1: Introduction to Environmental Science

1. Environmental Science – Aims and Challenges
 - a. World Views
 - i. DEP
 - ii. Cornucopianism
 - iii. Environmentalism
 - b. Public Views of the Environment in the Pacific Northwest
2. Sustainability and the Scientific Method
 - a. Concept of Sustainability
 - i. Sustainability
 - ii. Sustainable Society
 - iii.
 - b. The Scientific Method
3. Wisdom, Science and Laws
 - a. Environmental Wisdom
 - b. Science and Society
 - c. Major U.S. Laws
 - i. Clean Air Act (CAA)
 - ii. Clean Water Act (CWA)
 - iii. Safe Drinking Water Act (SDWA)
 - iv. Endangered Species Act (ESA)

Written Assignment



Please read the **Appendix (ISI Policies)** on the ISI Web site at www.uidaho.edu/isi for essential Independent Study in Idaho policies and procedures, and forms you will need to successfully complete this course. You are responsible for understanding and following ISI policies and procedures. If there is anything on these pages you do not understand, contact the ISI office for clarification. Before starting the written assignment for Lesson 1, see the letter in your registration packet for your instructor's requirements: **how to format and submit lessons, number of lessons you may submit at one time, and lesson guidelines.**

ENVIRONMENTAL SCIENCE 101 INDEPENDENT STUDY IN IDAHO COURSE

ASSIGNMENT #1 VALUE: 25 points

The answers for the following questions are based on the lecture material and/or the assigned readings in your text for this unit. Your answers for each question should not exceed 300 words.

1. Describe the scientific method. What is the typical sequence of steps? (7 points)
2. Where do you fit on the Cornucopian-environmentalism continuum discussed in the lecture? Defend your answer. List four of your views on the environment that can be considered Cornucopian ideas. List four of your views on the environment that can be considered environmental ideas. (10 points)
3. Based on the lecture material, discuss why the following observations occur (8 points):
 - a. On average, Idaho residents are more “Cornucopian” than Washington residents.
 - b. Younger people are closer to the environmental side of the continuum than older residents.
 - c. Rural people are closer to the Cornucopian side of the continuum than urban residents.
 - d. Residents who have higher secondary education degrees or years of study are likely to be closer to the environmental side of the continuum than residents with a high school diploma and no continuing education.