

# SCIN140

**STUDENT WARNING:** This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

## Course Summary

### Description

**Course Description:** This course will give students the opportunity to learn and connect with the central issues of environmental science. This is a course primarily for the non-scientist. The basic concepts of ecology, geography, chemistry, economics, ethics, policy, and many other disciplines will be used to examine the overarching role that humans play in our planet's environmental problems and successes. The laboratory exercises will allow students to use hands-on, field, and/or Internet resources to collect and evaluate qualitative and quantitative data regarding the human-environment relationship. Lifestyle examination, ethical considerations, and critical analysis of individual contributions to local and global impacts in regards to environmental sustainability will be emphasized in the laboratory portion of this course.

#### Course Scope:

This course provides students with an overview of the relationship between humans and their environment. Environmental problems, including human population growth, air pollution, water pollution, loss of biological diversity, and energy usage are introduced in this course. In addition, potential solutions to these problems are discussed.

The laboratory portion requires some basic math and internet research skills. Basic research, data collection, and evaluation and synthesis of material will be used to complete the activities in this laboratory course.

### Objectives

The successful student will fulfill the following learning objectives:

**LO-1** Define environmental science and environmental sustainability.

**LO-2** Relate human population size to impacts on the environment and sustainability.

**LO-3** Describe the role of ethics and values in environmental issues, as well as environmental science in the context of history, politics, and economics.

**LO-4** Distinguish among the various types of solid and hazardous wastes and ways to reduce and manage wastes.

**LO-5** Describe the major components of the atmosphere, impacts of air pollution, potential causes and

consequences of global atmospheric change.

**LO-6** Identify world food problems, major types of agriculture, and challenges and solutions to food production problems.

**LO-7** Illustrate the geologic properties of the lithosphere and the environmental effects of humans on mineral and soil resources.

**LO-8** Explain the importance of water resources, management, pollution, conservation, and water quality, including the global ocean.

**LO-9** Compare energy consumption of highly developed and developing countries.

**LO-10** Discuss the technological, political, and environmental issues associated with fossil fuel and nuclear energy sources.

The laboratories will enable students to:

- Define “ecological footprint” and the relationship between the conservation of biological diversity and the consumption of resources by humans.
- Explained toxicity and some potential hazards that can result from consumer products in the home.
- Describe the composition and structure of the atmosphere and map trends of important meteorological variables.
- Describe air pollution and key sources of local air pollutants.
- Explain the importance of water conservation and ways to conserve water.
- Explain the relationship between the carbon cycle and global warming and ways to reduce carbon dioxide emissions through lifestyle alterations.
- Analyze personal usage of natural resources
- Describe alternatives that will lessen the impact on the environment.

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## Outline

### **Week 1: Human Impacts on the Environment, Sustainability and Earth’s Capacity to Support Humans, Ecological Footprint**

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Learning Objectives

LO-1, LO-2

Readings

Chapter 1.  
The Environmental Challenges We Face

Chapter 2.  
Environmental Sustainability and Human Values

Week 1 Ecological Footprint Lesson File (found in the Assignments Section in the classroom)

Assignments

Forum 1

Chapter Quiz 1

ESA21Activity Sheet: Determining Your Ecological Footprint

## Lab Quiz 1

### **Week 2: Environmental History, Politics, and Economics, Risk Analysis, Environmental Health Hazards, Ecosystems, Home Chemicals**

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#### Learning Objectives

LO-2, LO-3

#### Readings

##### Chapter 3

Environmental History, Politics, and Economics

##### Chapter 4

Risk Analysis and Environmental Health Hazards

##### Chapter 5

How Ecosystems Work

Week 2 Lesson File: Home Chemicals (found in the Assignments Section in the classroom)

#### Assignments

Forum 2

Chapter Quiz 2

ESA21 Activity Sheet: Home Chemicals

Lab Quiz 2

### **Week 3: Ecosystems and Evolution, Human Population Ecology, The Atmosphere and Air Pollution**

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#### Learning Objectives

LO-1, LO-4

#### Readings

##### Chapter 6

Ecosystems and Evolution

##### Chapter 7

Human Population Change and the Environment

##### Chapter 8

Air and Air Pollution

Week 3 Lesson File: The Weather (found in the Assignments Section in the classroom)

#### Assignments

Forum 3

Chapter Quiz 3

ESA21 Activity Sheet: The Weather

## Lab Quiz 3

### **Week 4: Human Effects on the Atmosphere, Freshwater, and Water Pollution, Oceanography, and Ocean Resources, Home Water Use**

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#### Learning Objectives

LO-3, LO-4, LO-5, LO-7

#### Readings

Chapter 9  
Global Atmospheric Changes

Chapter 10  
Freshwater Resources and Water Pollution

Chapter 11  
The Ocean and Fisheries

Week 4 Lesson File: Water Use (found in the Assignments Section in the classroom)

#### Assignments

Forum 4

Chapter Quiz 4

ESA21 Activity Sheet: Water Use

Lab Quiz 4

### **Week 5: Environmental Geology, Trees and the Carbon Cycle**

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#### Learning Objectives

LO-6, LO-7

#### Readings

Chapter 12  
Mineral and Soil Resources

Chapter 13  
Land Resources

Week 5 Lesson Lessons: Trees and Carbon (found in the Assignments Section in the classroom)

#### Assignments

Forum 5

Chapter Quiz 5

ESA21 Activity Sheet: Trees and Carbon

Lab Quiz 5

## **Week 6: Agriculture and Food, Biological Diversity, Solid and Hazardous Waste, Personal Carbon Impacts**

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Learning Objectives

LO-3, LO-5

Readings

Chapter 14

Agriculture and Food Resources

Chapter 15

Biological Resources

Chapter 16

Solid and Hazardous Waste

Week 6 Lesson File: Personal Impact Analysis - Carbon (found in the Assignments Section in the classroom)

Assignments

Forum 6

Chapter Quiz 6

ESA21 Activity Sheet: Personal Impact Analysis

Lab Quiz 6

## **Week 7: Energy Resources, Fossil Fuels Capstone**

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Learning Objectives

LO-2, LO-8

Readings

Chapter 17

Nonrenewable Energy Resources

Chapter 18

Renewable Energy Resources

Week 7 Lesson File: Fossil Fuels (found in the Assignments Section in the classroom)

Assignments

Forum 7

Chapter Quiz 7

PowerPoint Presentation due

ESA21 Activity Sheet: Fossil Fuel Capstone

Lab Quiz 7

## **Week 8: Final Comprehensive Exam, Renewable Capstone**

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## Learning Objectives

LO-1-LO-8

## Readings

Week 8 Lesson File: Renewable Energy (found in the Assignments Section in the classroom)

## Assignments

Forum 8

Final Exam

ESA21 Activity Sheet: Renewable Capstone

Lab Quiz 8

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## Evaluation

### Grading:

Name	Grade %
Forums	16.00 %
Forum 1	2.00 %
Forum 2	2.00 %
Forum 3	2.00 %
Forum 4	2.00 %
Forum 5	2.00 %
Forum 6	2.00 %
Forum 7	2.00 %
Forum 8	2.00 %
Laboratories	28.00 %
Week 1 Lab - Ecological Footprint	1.75 %
Lab 1 Quiz	1.75 %
Week 2 Lab - Home Chemicals	1.75 %
Lab 2 Quiz	1.75 %
Week 3 Lab - Weather	1.75 %
Lab 3 Quiz	1.75 %
Week 4 Lab - Water Use	1.75 %
Lab 4 Quiz	1.75 %
Week 5 Lab - Trees and Carbon	1.75 %
Lab 5 Quiz	1.75 %
Week 6 Lab - Personal Impact Analysis - Carbon	1.75 %
Lab 6 Quiz	1.75 %
Week 7 Lab - Fossil Fuel Capstone	1.75 %
Lab 7 Quiz	1.75 %
Week 8 Lab - Renewable Capstone	1.75 %
Lab 8 Quiz	1.75 %
Chapter Quizzes	28.00 %
Quiz 1: Chapters 1 and 2	4.00 %

Quiz 2: Chapters 3, 4, and 5	4.00 %
Quiz 3: Chapters 6, 7, and 8	4.00 %
Quiz 4: Chapters 9, 10, and 11	4.00 %
Quiz 5: Chapters 12 and 13	4.00 %
Quiz 6: Chapters 14, 15, and 16	4.00 %
Quiz 7: Chapters 17 and 18	4.00 %
Research Project	14.00 %
PowerPoint Presentation	14.00 %
Final Exam	14.00 %
Final Exam Chapter 1-18	14.00 %

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## Materials

**Book Title:** Visualizing Environmental Science, 4th Ed - The VitalSource e-book is provided via the APUS Bookstore

**Author:** Berg

**Publication Info:** Wiley

**ISBN:** 9781118169834

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**Book Title:** You must validate your cart to get access to your VitalSource e-book(s). If needed, instructions are available here - <http://apus.libguides.com/bookstore/undergraduate>

**Author:** N/A

**Publication Info:** N/A

**ISBN:** N/A

Software:

- Microsoft Office (MS Word and MS PowerPoint)
  - If you do not have Microsoft Office, you may use any office suite that is capable of reading Word, Excel, and PowerPoint files. A free, open-source alternative to Microsoft Office may be downloaded from [OpenOffice.org](http://OpenOffice.org)
- Adobe Acrobat Reader (Free download from <http://www.adobe.com/support/downloads/main.html>)

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## Course Guidelines

### Citation and Reference Style

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

### Tutoring

- [Tutor.com](http://Tutor.com) offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours\* of tutoring provided

by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

## **Late Assignments**

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 15% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

## **Turn It In**

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

## **Academic Dishonesty**

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

## **Submission Guidelines**

- Some assignments may have specific requirements for formatting (such as font, margins, etc.) and submission file type (such as .docx, .pdf, etc.) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

## **Disclaimer Statement**

- Course content may vary from the outline to meet the needs of this particular group.

## **Communicating on the Forum**

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- "Substantive" means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says "I agree" is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

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# University Policies

## [Student Handbook](#)

- [Drop/Withdrawal policy](#)
- [Extension Requests](#)
- [Academic Probation](#)
- [Appeals](#)
- [Disability Accommodations](#)

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