Principles of Sustainability SOIL/FS 436/536 (3 cr) Spring 2026 (v.2.1.26)

Documentary styled lectures: Online Scheduled/Bundled Weekly

Prerequisites for class: None; Upper-division or graduate student standing required.

Instructor: Professor Greg Möller

Office Location: Sandpoint Organic Agriculture Center (SOAC) and UI Moscow campus, 242 Ag Sci Bldg

Telephone: 208-885-0401 (desk) or personal cell phone (preferred)

E-mail: gmoller@uidaho.edu

Delivery: Online via HD streaming video. Students are required to have modern computer hardware and software, and access to a broadband internet connection. Documentary style lectures (doculectures) are available by streaming video. The doculectures are available in HD streaming embedded on the Principles of Sustainability course website (external to Canvas).

Textbook:

Introduction to Sustainability: Road to a Better Future, by Nolberto Munier. Springer; 1st edition; 456 pages;
ISBN-10: 1402035578 (Available online to students free from UI Library Course Reserves, or new ($$) and used ($) from online booksellers; in ebook, paperback).

Course Web Site: https://www.uidaho.online

Canvas: UI Canvas LMS for assignments, readings, homework, quizzes and exams.

Course Abstract

Sustainability is a broad area of inquiry, rapidly changing as we develop new knowledge of human practices that are more sustainable or less sustainable. Seek a hard vision of sustainability, and you will surely be disappointed. Our gaps in knowledge are great, but the task of growing a more sustainable global community is greater. We are faced with immense challenges that grow greater by the day. The social, political, economic, and environmental complexity of the task often confounds and defeats simplistic approaches. Yet, many of our solutions will lie in a simplification of our approach to community and commerce. Crafting a sustainable present and future has all the elements of a "super wicked problem" (Levin et al., 2007): Time is running out; No central authority; Those seeking to solve the problem are also causing it; Hyperbolic discounting occurs.

It is the mission of the **Principles of Sustainability** course to provide students with a broad understanding of sustainability in the multiple human dimensions that it is manifested. Upper-division and graduate-level students from many disciplines will find the courseware of broad interest, intense in some areas and introductory in others, but complete in a desire to present the landscape of a general study in sustainability. The course attempts to synthesize linkages and

commonalities of understanding through a presentation of the major elements in the field. Other specialty courses in a student's disciplinary area may give a sidebar or complete disciplinary treatment to sustainability that will help organize a more complete understanding in a particular focus area of sustainability and thus complement this course.

Frequently Asked Questions (FAQs): A comprehensive listing of FAQs and answers regarding the course is downloadable from the course website and Canvas.

Student Learning Outcomes

Upon successful completion of this course, students will:

- Be able to demonstrate a fundamental knowledge of issues, principles, concepts, processes, and practices related to sustainability.

- Be able to demonstrate a fundamental knowledge of the history of relationships to nature and how that has influenced the success of societies in the ancient world and the modern era; demonstrate an understanding of the major international organization efforts to advance sustainability from the late 20th Century onwards.

- Acquire mastery with the major issues, concepts, documents, and subject areas in some of the major arenas and domains of critical concern to sustainability.

- Acquire mastery of sourcing and synthesizing information in aspects of sustainability, especially as it related to resources management, social and economic systems, and the basic science and engineering of critical aspects of sustainable development.

- Be able to demonstrate a high quality of knowledge about the occurrence and significance of major concerns and developments in progress towards more sustainable communities, commerce, and management of natural resources.

Learning outcomes are assessed through student papers, including the midterm exam, case study, and grad-credit topic reviews, as well as completion of homework and the final exam.

Artificial Intelligence in Academic Work

New for Spring 2026

Generative AI tools (such as ChatGPT, Claude, and Gemini) can be powerful assistants in the learning process when used responsibly. You are permitted to use these tools to support your coursework—including papers, take-home assignments, and open-book assessments—for tasks such as explaining complex concepts, brainstorming topics, outlining arguments, or checking grammar. **However, you must not use AI to write your papers, answer quiz questions, or generate exam responses for you.**

Educational Risk: The primary goal of this course is to develop your own critical thinking, synthesis, and subject mastery. When you outsource the actual drafting, problem-solving, or intellectual labor to an AI, you bypass the cognitive struggle that leads to learning. Relying on an algorithm to formulate your thoughts or answer test questions results in a "hollow" credential—you may get the grade, but you will not possess the knowledge that grade represents. **Failing to develop critical communication talents, analytical skills, and subject area mastery as a student can limit your competitiveness in your desired career path and goals achievement.**

Policy: If you use AI tools to support your work, you are expected to use them as a tutor, study partner, or editor—not as an author or test-taker. Content generated entirely or primarily by AI and presented as your own work (whether in a paper, quiz, or exam) is considered plagiarism. All submitted work, including narrative responses in quizzes and exams, will be subject to scanning for AI-generated composition. Evidence of *de novo* AI composition will result in a zero for the assignment/assessment and potential academic dishonesty sanctions.

Week-to-Week Course Outline

There are a variable number of Chapter Parts assigned per week, and each doculecture Part will have an assigned homework question set that is available in UI Canvas LMS. Doculectures can be 12-50 minutes long. As these are PowerPoint-free presentations, there are no slide notes, and students are encouraged to take notes after/during the presentations. Video transcripts are available in Canvas. There will be prompt questions for discussion in Canvas, and peer-review of postings is encouraged.

The schedule below is advisory and there is significant student-driven flexibility in accommodating student workload, commitments, and crises.

Week 1 & 2: January 14 – January 23 (Classes Begin Wed Jan 14; MLK Day Mon Jan 19)

Chapter 1 - The Origins of Sustainability

- **Part 1 -** The Ancients and Nature (18:02)

- **Part 2 -** The Great Naturalists (33:15)

- **Part 3 -** Religion and the Environment (11:40)

- **Part 4 -** 20th Century Awakening of Sustainability*

- **Part 5 -** Silent Spring as a Watershed Moment (59:43)

- **Part 6 -** A Planet in Peril (34:48)

Week 3 & 4: January 26 – February 6

Chapter 2 - Standards of Sustainability

- **Part 1 -** Definitions of Sustainability (14:09)

- **Part 2 -** Methods and Markers for Sustainability (17:04)

- **Part 3 -** Sustainable Development (28:21)

- **Part 4 -** Resilience Thinking in the 21st Century (27:56)

- **Part 5 -** The Precautionary Principle (30:30)

- **Part 6 -** Emergy (21:15)

- **Part 7 -** People + Planet + Profit (15:23)

Week 5 & 6: February 9 – February 20 (Presidents' Day Mon Feb 16)

Chapter 3 - A Culture of Waste

- **Part 1 -** Solid Waste Generation in the Developed and Developing World (42:43)

- **Part 2 -** Solid Waste Management in the Developed and Developing World (41:50)

- **Part 3 -** Reduce Reuse Recycle (16:23)

- **Part 4 -** Hazardous Waste Management (20:19)

- **Part 5 -** E-Waste (22:49)

- **Part 6 -** Our Plastic Footprint (36:59)

Week 7: February 23 – February 27

Chapter 4 - The Built Environment

- **Part 1 -** Green Urbanism*

- **Part 2 -** Community Sustainability (16:54)

- **Part 3 -** Green Building (20:25)

Week 8 & 9: March 2 – March 13 (Midterm Window)

Chapter 4 (continued)

- **Part 4 -** The Urbanization of Poverty and Slums: Challenges for Sustainability (21:53)

- **Part 5 -** Urban Heat Island Effect*

- **Part 6 -** Sustainable Transportation I (17:16)

- **Part 7 -** Sustainable Transportation II (15:45)

Chapter 5 - Industrial Approaches to Sustainability

- **Part 1 -** Sustainable Practices in Industry (13:25)

- **Part 2 -** Life Cycle Assessment (42:40)

- **Part 3 -** Materials Flow Analysis*

SPRING BREAK: March 16 – March 20 (No Classes)

Week 10, 11 & 12: March 23 – April 10

Chapter 5 (continued)

- **Part 4 -** Design for the Environment*

- **Part 5 -** Managing for Sustainability (13:22)

- **Part 6 -** Sustainable Agriculture (48:42)

- **Part 7 -** Sustainable Forestry*

- **Part 8 -** Principles of Green Engineering and Green Chemistry*

Chapter 6 - Energy Sustainability

- **Part 1 -** Fundamentals of Electricity (33:29)

- **Part 2 -** Electricity: Generation (40:08)

- **Part 3 -** Electricity: Transmission, Distribution, Economics*

- **Part 4 -** Fossil Fuels: Coal (18:30)

- **Part 5 -** Fossil Fuels: Oil (27:54)

- **Part 6 -** Fossil Fuels: Natural Gas (19:39)

- **Part 7 -** Climate Change*

Week 13, 14 & 15: April 13 – May 1

Chapter 6 (continued)

- **Part 8 -** Alternative Energy (22:23)

- **Part 9 -** Energy Efficiency as a Resource (19:23)

- **Part 10 -** Renewable Energy (16:56)

Chapter 7 - Sustainable Solutions for Water Resources

- **Part 1 -** US and Global Water Resources (19:00)

- **Part 2 -** Water-Related Disease (17:04)

- **Part 3 -** Wastewater Treatment in Developed Countries (23:32)

- **Part 4 -** Sanitation Challenges and Approaches in Developing Countries*

- **Part 5 -** Water Reuse and Recycling*

- **Part 6 -** Land and Water Resources for Food and Agriculture*

- **Part 7 -** Water Competition (12:50, 10:29, 11:30)

Week 16 (Dead Week): May 4 – May 8

Chapter 8 - Measuring Sustainability

- **Part 1 -** Indicators of Sustainability (29:23)

- **Part 2 -** Environmental, Economic, and Social Carrying Capacity (12:51)

- **Part 3 -** Sustainability: Strategies for Monitoring Progress (11:34)

Week 17: May 8 – May 11 (Final Exam Open)

Examinations & Assignments

Readings: As assigned on course Web site via UI Canvas LMS.

Homework: As assigned on the course Web site. Delivered by Canvas LMS. Most Chapter Parts have an online homework quiz submission that will take a variable amount of time, usually 15-30 minutes if the reading and lectures have been completed.

Midterm Exam:

The midterm writing exam is planned for the week of March 2nd to March 11th.

- The midterm exam is a written exam paper (hard target is 4000 words and at least 12 references).

- Depending on your writing efficiency, the midterm writing challenge can take days to complete (in a 7 to 10 day window of exam receipt/submission opportunity).

Case Study Report:

All students will be required to prepare a case study report (hard target is 4000 words, double or single-spaced; 1-inch margins; 12 pt font; 12 references minimum).

- The full paper is to be submitted no later than midnight on the evening of **April 14th**.

- You are required to submit the paper in Word via email to gmoller@uidaho.edu with the file name "lastname.firstinitial.SustS26casestudy.docx".

Graduate Credit Topic Review (536 Students Only):

Students taking the course for graduate credit will be required to write a review paper using one of the doculecture Part titles of the Principles of Sustainability course.

- The completed review is to be submitted no later than midnight on the evening of **May 8th**.

- You are required to submit the paper via email to gmoller@uidaho.edu with the file name "lastname.firstinitial.SustS26topicreview.docx".

Final Exam:

The timed, online Final Exam (50 multiple-choice questions) is planned to be opened and accessible in Canvas from May 11th to May 14th at midnight.

Academic Integrity

Instructors and students are jointly responsible for maintaining academic standards and integrity in university courses. Having AI write your papers is plagiarism. Plagiarism is dishonest and is not tolerated. If caught using all or portions of a current or former classmate's writing or other sources of information (including AI), a grade of "zero" will be given for the exercise. All papers submitted will be electronically scanned by Turnitin for evidence of plagiarism or ghostwriting.

Disability Support Services

Reasonable accommodations are available for students who have documented temporary or permanent disabilities. All accommodations must be approved through the Center for Disability Access and Resources (CDAR) located in the Bruce M. Pitman Center, Suite 127.

- Phone: 208-885-6307

- Email: cdar@uidaho.edu

- Website: www.uidaho.edu/current-students/cdar

Student Support Resources

The University of Idaho provides student support to ensure a successful learning experience.

Library Help

The UofI Library website has many databases that will help you find relevant and reliable books, articles, images, and more. Don't hesitate to contact a librarian for research assistance.

- **Website:** https://www.lib.uidaho.edu/

- **Help for Distance Ed Students:** https://www.lib.uidaho.edu/help/distance.html

Technology Help

The UofI Student Technology Center (STC) provides many technology-related services to students.

- **Phone:** 208-885-HELP (208-885-4357)

- **Email:** support@uidaho.edu

- **Website:** https://support.uidaho.edu

Writing Support

The UofI Writing Center provides one-on-one assistance to student writers and other members of the campus community.

- **Phone:** 208-885-6644

- **Email:** writing@uidaho.edu

- **Website:** https://www.uidaho.edu/class/writing-center

Public Health & Safety

It is a longstanding tradition that Vandals take care of Vandals. Please bookmark the University of Idaho Health & Safety webpage and visit it often for the most up-to-date information regarding campus health policies and resources.

Course Sustainability Statement:

With the possible exception of the textbook, this course is designed to be electronically available, and paper-free. Exams, homework, and students' papers are all distributed and returned electronically. Think first about printing, and please only print course material if it is necessary.