

SUS 20010 [1/13/14]
Sustainability: Principles and Practices
 Spring 2014

Course Time and Location
 T/Th, 2:00 - 3:15 PM, DeBartolo 140

Instructors

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Office Hours: TBC.

Honor Code

All students must familiarize themselves with the Honor Code on the University's website and pledge to observe its tenets in all written and oral work, including oral presentations, exams, and drafts and final versions of essays.

Required Books/Texts

1. E.O. Wilson, *The Creation: An Appeal to Save Life on Earth* (New York: Norton, 2007)
2. Willis Jenkins, *The Future of Ethics: Sustainability, Social Justice and Religious Creativity* (Washington: Georgetown, 2013).
3. The World Watch Institute, *State of the World 2013: Is Sustainability Still Possible* (Washington: Island Press, 2013).
4. Leslie Paul Thiele, *Sustainability* (Polity Press, 2013).

Abbreviations Used in this Syllabus

ISSP = *Is Sustainability Still Possible*
 Thiele = Leslie Paul Thiele, *Sustainability*
 Jenkins = *The Future of Ethics*
 Wilson = *The Creation*

ER= Electronic Reserves in the library reserve for this course, or in Sakai.

COURSE AIMS

1. To enable students to gain knowledge and critical understanding of ethical, cultural, religious and scientific issues involved in current debates about sustainability at both local and global scales.
2. To provide the relevant critical tools to analyze particular problems in securing sustainable futures.
3. To demonstrate the worth of a transdisciplinary approach to solving complex problems facing the human community.

COURSE LEARNING GOALS

By the end of this course, students will be able to:

1. Demonstrate knowledge and understanding of the language, terminology, and rhetoric of sustainability and the problems of implementation at local and global scales.
2. Show critical understanding of the underlying scientific and economic factors that are relevant in a discussion of sustainability.
3. Demonstrate familiarity with philosophical and ethical arguments about sustainable futures.
4. Show competence in the analysis of religious debates about the ethics of sustainability.
5. Recognize unsustainable practices in their personal and professional lives, and serve as catalysts for change in these practices in the real world.
6. Understand the difference between fact-based knowledge and conjecture in the context of sustainability discussions.

ASSESSMENT METHODS

Students will be assessed by three written examinations, class participation, and one group oral presentation with associated write-up, according to the following distribution:

Written Assignments

Reflective papers (15%)

1. You are required to submit THREE reflective papers of 2 pages EACH on any three of the required readings for this course, using different primary sources in each case. Submission dates are ONE by the end of February and TWO more by the end of March.
2. You are required to calculate your carbon footprint in an exercise during Section B. Full instructions will be provided later.

First Midterm Examination - February 13, 2014 (15%)

This exam will cover work in **Section A** discussed up to 2/6.

Second Midterm Examination - March 25, 2014) (15%)

This exam will cover facets of environmental ethics (13/2-20/2) in Section A as well as scientific aspects of problems in sustainability (Section B).

Group Oral Presentation - April 15 and 17, 2014) (15%) - 5% for oral presentation, 10% for written report.

Case Studies on explicit environmental problems and associated ethical analyses. Students will form groups, choose a particular issue or problem raised in Section B, and come to critically informed ethical conclusions about possible approaches to the problem. Students will be allocated a particular presentation group by the second week of class; each group will consist up to eight students depending on final class size. There will be three presentations in each class, and each presentation should be no longer than **15 minutes with five minutes for class discussion**. Your grade will be reduced if you go over time.

After completing the presentation the group will write up its results and submit not more than 5 pages or 1,500 words in the light of the discussion in class. The written oral version should reflect the oral delivery, but needs to include full bibliographic material. Groups should report non-participation to the tutors and marks will be reduced accordingly unless there are specific and official mitigating

circumstances. Please submit your written version not more than ONE week after you have presented in class.

Seminar/Class Participation (15%)

Some work you will undertake in this class will be devoted to seminar work on given texts that you will discuss in groups. Please sit in these groups in class once you have been given your allocation. Please take into account the layout of the classroom and sit in two rows of four. Your seminar groups are the same as your presentation groups.

Class Attendance

Full attendance is required for this course. If you miss more than three sessions without mitigating circumstances your mark will be adjusted by 15%. If you miss more than six sessions you are liable to failure.

Final Examination – May 7 (25%)

This exam will concentrate on the third section of this course, but all aspects can be tested in the final examination.

CLASS SCHEDULE

Readings listed under each section are REQUIRED readings in advance of the session, unless otherwise stated. Further readings will be added as the course progresses.

Section A. What is Sustainability? Why is an Inter-disciplinary & Trans-Disciplinary Approach Needed?

1/14 John Sitter (with Celia Deane-Drummond) *Sustainability and Diversity of Meaning*

Required reading

Thiele, Intro (pp.1-12) and ch. 1: "Sustainability and Time" (13-38); Engelman, "Beyond Sustainability" (ISPP, 1-16)

1/16 Celia Deane-Drummond *What might a sustainable ethics look like?*

Required reading

Jenkins, Introduction: "Ethics in the Anthropocene" (pp.1-15) and ch. 1: "Atmospheric Powers: Climate Change and Moral Incompetence" pp. 16-46

Further Reading

Jenkins pp. 46-66

Patrick Curry, *Ecological Ethics* (Cambridge, Polity, 2011).

1/21 John Sitter (with Celia Deane-Drummond) *Facing the Challenges of Global Ethics*

Required reading

Thiele, ch. 2: The Geography of Sustainability (39-64);

Jenkins, ch.2: "Christian Ethics and Unprecedented Problems" (67-75; 105-6)

Jenkins, ch. 3: "Global Ethics: Moral Pluralism and Planetary Problems" (pp. 111-128; 141-2);

Further Reading

Jenkins, pp. 75-105; 128-141.

1/23 John Sitter

Required reading

Folke, "Respecting Planetary Boundaries & Reconnecting to the Biosphere" (ISPP, ch. 2: 19-27); Raworth, "Defining a Safe and Just Space for Humanity" (ISPP, ch 3: 28-38); Moore and Rees, "Getting to One-Planet Living" (ISPP, ch 4: 39-50); Thiele, ch. 3: "Ecological Resilience and Environmental Health" (65-89)

1/28, 1/30 & 2/4 Anthony Serianni

Topics: Core Terminology; Linear vs Exponential Functions; Biological Cycles; Thermodynamics; Climate Science/Change/Sensitivity; CO₂ and Combustion

Required reading

Thiele, ch. 4; ISPP chs 4-7; IPCC Report, Executive Summary; ISPP chs. 8, 9, 14, 15, 16.

2/6 John Sitter *Economics & Ecological Economics I*

Required reading

Chs. 5-6 of Thiele "Political and Legal Challenges" and "Sustaining Economies"

2/11 John Sitter and Anthony Serianni

Population, IPAT, Ecological footprint.

Required reading

Ch 17 of ISPP (agriculture)

2/13 **First Examination**

2/18 Celia Deane-Drummond *Sustainability and Structural Evil*

Required reading

Jenkins, ch. 4: "Sustainability Science and the Ethics of Wicked Problems" (149-89); Camillus, "Strategy as a Wicked Problem," *Harvard Business Review*, May, 2008, pp. 99-106.

Further reading

Cynthia Moe-Lbeda, "Structural Violence as Structural Evil", in *Resisting Structural Evil: Love as Ecological-Economic Vocation* (Minneapolis: Fortress Press, 2013), pp. 49-80, **ER**.

2/20 Celia Deane-Drummond *Religious and Motivating Factors in Sustainable Action*

Required reading

Jenkins ch. 6: "Impoverishment and the Economy of Desire (232-81)

Further reading

Celia Deane-Drummond, "The Good, the Bad and the Ugly: Wonder, Awe and Paying Attention to Nature", in S. Bergmann, Irmgard Blindow and Konrad Ott (eds.), *Aesth/Ethics in Environmental Change: Studies in Religion and Environment*, Vol 7 (LIT-Verlag, 2013), pp. 71-84. **ER**.

B. The Science Behind Sustainable Systems

2/25	Anthony Serianni	PPT Slides: Energy Sources/GHG (cont.); Resource Depletion
2/27	Anthony Serianni	PPT Slides: Agriculture/Food
3/4	Anthony Serianni	PPT Slides: Systems Thinking/Analysis Nicholson, "The Promises and Perils of Geoengineering" (ISPP ch. 29: 317-31)
3/6	Anthony Serianni	PPT Slides: Biodiversity; Ecosystem Services; Social Complexity and Decline

3/11 and 3/13 No Class: Spring Break

3/18	Anthony Serianni	PPT Slides: Water; Consumption and Waste
3/20	Anthony Serianni	PPT Slides: Ways of Thinking: Scientific Method; Error and Uncertainty; Social Psychology (Nash Equilibrium); Ignorance Hierarchies

3/25 Second Examination

C. Human Responsibilities in Sustainable Futures

3/27 Celia Deane-Drummond *Ecological and Environmental Justice*

Required reading

Toxic Wombs and Ecology of Justice & Intergenerational Justice/Equity (chs. 5 Jenkins) pp. 190-224.

4/1 John Sitter

Required reading

Aldo Leopold: "The Land Ethic" and "Thinking Like a Mountain" (Sakai)

4/3 John Sitter

Required reading

EO Wilson on Nature, Science, and Religion: *Creation: An Appeal to Save Life on Earth*

4/8 John Sitter with Celia Deane-Drummond

Required reading

EO Wilson, *Creation: An Appeal to Save Life on Earth*

4/10 John Sitter Economics II

Required reading

Chapter from Bartlemus, *Sustainability Economics*(Sakai), ISPP ch 11: Costanaz et al on sustainable economies; articles on various welfare & happiness indices; Zero Growth (Steady State) Economy Nordhaus, *Climate Casino?*

4/15 Oral Presentations

Group Projects (15 min presentations)

4/17 Oral Presentations
Group Projects (15 min presentations)

4/22 Celia Deane-Drummond *Religious environmentalism and developing a climate conscience*

Required reading

'A Case for Collective Conscience: Climategate, COP-15, and Climate Justice', *Studies in Christian Ethics*, 24 (1) 2011, pp. 1-18, ER.

4/24 John Sitter

Required reading

Thiele ch. 7 "Culture and Change" & Conclusion from *Just Sustainabilities* [Sakai]

4/29 John Sitter, Anthony Serianni and Celia Deane-Drummond
Conclusions/Reflections/Overview

Final Examination: 5/7, 10:30-12:30