

Yale-NUS College

YID1201: INTRODUCTION TO ENVIRONMENTAL STUDIES
Semester 2, AY 2016-17
Course Syllabus

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Environmental studies is an interdisciplinary area of scholarship that draws from the social sciences (geography, economics, history, politics, global affairs, psychology, and sociology), the natural sciences (ecology, physics, chemistry, and geology), and the humanities (religion, philosophy, literature, and the arts). Like all fields, ES has a set of operating assumptions, core ideas, accepted truths, and fights in the family. This course introduces students to these elements of the ES field. As such, discussions may at times feel more like a course in anthropology or psychology than one in the natural sciences.

YID1201 is the foundation for upper-level courses in Environmental Studies at Yale-NUS, and is required for both the major and the minor in the program. The primary objective of this course is to provide an introduction to the field of environmental studies. Students are expected to leave this course knowing how practitioners and theorists of ES think, what they study, and why. In particular, students should feel comfortable by the end of the semester with the following ideas:

- the dilemma of unlimited growth on a finite planet;
- the function of natural systems and the role of these systems in provisioning human society;
- the interplay of key ideas central to the field: systems, limits, resilience, sustainability, power, ethics, and history;
- how the close study of issues like energy use, food, biodiversity, technology, and climate-change demonstrates the utility of the aforementioned key elements to our thinking about the environmental predicament; and
- how ‘flashpoints’ of current environmental controversy present opportunities for reflection, action, and change.

This class is not meant to convert students to an environmentalist way of thinking, nor is it meant to privilege an environmental studies lens on contemporary issues over other perspectives. Instead, the aim is to understand, as fully as possible, how and why the environmental studies community (comprised of natural scientists, social scientists, humanists, activists, policymakers, political elites, and citizens) conceptualizes, understands, and reacts to environmental threats. This is a useful course for students contemplating a career in the field, and for students who may later interact with environmental scientists and others in the environmental studies world.

Assignments and Grading

Class Participation (15%)

Students are expected to read all the assigned materials prior to attending classes and to participate in all discussions. As Yale-NUS students, they are expected to be not just passive consumers of information. Instead, they are expected to *actively engage* with the readings and discussions. Class participation grade will be based on the contribution students make (i.e. the questions, comments, answers, and feedback given) towards the learning experience of their classmates. Short activities and writing exercises will be done from time to time and these will all contribute to the class participation grade as well. Such exercises include writing of blogs, short in-class commentaries, and assignments.

Kickoff Essay (5%)

The kickoff essay will help the instructor understand the student's style of writing. It also allows the student to assess the instructor's expectations of writing. The kickoff essay will be no longer than 500 words.

Ecological Footprint Exercise (5%)

Students will be given the opportunity to calculate and reflect upon their ecological footprint and submit a two-page summary of their work.

Case Studies (15%)

The class will explore three case studies during the semester. The case studies will ask students to critically examine controversial environmental issues from alternative perspectives and offer a set of recommendations. Discussion of these cases will be initiated during class, but further conversations within groups would have to be continued outside class. A different member of each group will be responsible for writing a summary recommendation for each case (each student in this class writes up ONE case). The name of this primary author should appear first at the top of the page in each report. Case briefs should draw on class discussion, relevant lectures, and readings. There is a maximum word limit of 1200 words. At the end of the semester students will evaluate one another (through a confidential message to the instructor) on the level of commitment to the case-study exercise.

Exams (45%)

There will be two exams (at the middle and end of the term), each constituting 20% of the final grade. One will be a closed-book/closed-note in-class exam, while the other will be take-home. To familiarize students with the structure and difficulty of these exams, a mini "trial run" exam (5% of final grade) will be given at the end of the fourth week of class.

Final “Environmental Action in Singapore” Report (15%)

Students will work in small groups (perhaps the same case study group—this is to be determined) to identify and profile an activity, group, individual, or effort in Singapore that addresses an environmental problem. Each group will write a final report of 1500 words suitable for posting on the EStudies website and, time permitting, make a brief presentation to the class at the end of the semester.

Grading Breakdown

Class Participation	15%
Kickoff Essay	5%
Ecological Footprint Exercise	5%
Exams <ul style="list-style-type: none"> • Trial run (5%) • Two exams (20% each) 	45%
Case Studies	15%
Final “Environmental Action in Singapore” Report	15%
TOTAL	100%

Course Policies

The teaching methods used in the course require full participation of students. Attendance is required and everyone is expected to participate fully during each class meeting. Therefore, students are expected to have done a generous reading of the course material ahead of time. They should also be prepared to engage in meaningful debates and conversations with their classmates and instructor.

All writing requirements (except for the in-class exam) should be submitted electronically as an MS Word document via Canvas on the day they are due. Late assignments lose one grade step for each day. Meaning, an assignment graded ‘A’ at the outset will be marked down to ‘B+’ if submitted two days after the deadline.

Other class policies will be negotiated on the first day of class.

Accommodations for Students with Disabilities

Students with specific physical, psychiatric, or other learning disabilities that require special accommodations should let the instructor know early in the semester, so that learning needs may be appropriately met.

Academic Dishonesty

Academic honesty is essential in upholding the integrity of knowledge production. Just as their instructors and academic mentors, students are expected to uphold the highest standards of academic honesty. Students should note that anything submitted for this class is expected to represent *original* work. Moreover, a work submitted for another class (either in part or whole) will not be accepted. If a student wishes to build on from previous work, he/she should make an arrangement to discuss the matter with the instructor. Proper citation and referencing are expected. For this modules, students are required to use the APA format (see <https://owl.english.purdue.edu/owl/resource/560/01/> for reference).

A student may confer with others as they brainstorm and study, but his/her work must be his/her own. While the discussion of a case study is obviously a group effort, the member who takes responsibility for writing up each brief will receive the grade for that brief. Since students will evaluate each other's overall contribution to your group, there is a strong incentive for all members to participate actively and constructively in thinking through and contributing to these cases. Though not required, it is encouraged that the author of each brief should solicit editorial suggestions from fellow group members.

It is the responsibility of the student to refer to the Yale-NUS College Handbook of Academic Integrity and the websites below if they are unclear of what constitutes academic dishonesty and plagiarism.

College policies on academic integrity:

<https://studentlife.yale-nus.edu.sg/policies/academic-integrity/>

Yale-NUS library information on plagiarism:

<http://library.yale-nus.edu.sg/plagiarism/>

The policies of the college require instructors to refer any suspected instances of academic dishonesty to the Academic Integrity Committee for assessment and adjudication. Any form of cheating or plagiarism will lead to a course grade of F and other disciplinary actions.

Schedule

Date	Topic/Assignment
Week 1	
Jan 10 (Tues)	<p>Course Overview and Introduction</p> <ul style="list-style-type: none"> • Introductions/ice-breaker • Discussion (negotiations) on syllabus • Why do we have environmental studies? <p><u>Required Readings:</u> De Steiguer, J. (2006). The origins of modern environmental thought. University of Arizona Press. Chapter 1. Macat's Introduction to Rachel Carson's Silent Spring: https://www.youtube.com/watch?v=uhiCORNRgzA</p>
Jan 13 (Fri)	<p>So what's wrong?</p> <ul style="list-style-type: none"> • The great acceleration and the anthropocene • The impossible hamster <p><u>Required Readings:</u> Steffen, W., et al. (2015). The trajectory of the anthropocene: The great acceleration. The Anthropocene Review, 2(1), 81-98. Speth, J.G. (2009). The bridge at the edge of the world: Capitalism, the environment, and crossing from crisis to sustainability. Yale University Press. Part One.</p>
Part 1: Different 'camps' in addressing the question, 'What's wrong'	
Week 2	
Jan 17 (Tues)	<p>Camp 1: Population is the root cause!</p> <ul style="list-style-type: none"> • (Neo)malthusian perspectives • Complexities of population-environment relations <p>Due at 11:59 pm: Kickoff essay</p> <p><u>Required Readings:</u> Ehrlich, P. (1975). The population bomb. Rivercity Press, NY. Chapter 1. Pearce, F. (2009). The population bomb: Has it been diffused? Yale Environment 360. Population Reference Bureau. (2004). Transitions in world population. Population Bulletin, 9, 1.</p>
Jan 20 (Fri)	<p>More on population!</p> <ul style="list-style-type: none"> • Affluence, impact, and footprint <p>Due at 11:59 pm: Blog assignment on exponential growth</p>

	<p>Guidelines on the Ecological Footprint Exercise to be given out</p> <p><u>Required Readings:</u> Ehrlich, P., and Ehrlich, A. (2008). Too many people, too much consumption. Yale Environment 360. Wackernagel, M., and Rees, W.E. (1998). Our ecological footprint: reducing human impact on the Earth. New society publishers.</p>
Week 3	
Jan 24 (Tues)	<p>Camp 2: It's all about the market!</p> <ul style="list-style-type: none"> • The market response model • Market-based approaches • 'Environmental extremists' and 'Ecosocialists' • Overthrowing vs recreating capitalism <p><u>Required Readings:</u> Angus, I. (2011). How to make an eco-socialist revolution. Speth, J.G. (2009). The bridge at the edge of the world: Capitalism, the environment, and crossing from crisis to sustainability. Yale University Press. Chapter 4.</p>
Jan 27 (Fri)	<p>Camp 3: Technology saves the world!</p> <ul style="list-style-type: none"> • Ecomodernism and the role of technology <p><u>Required Readings:</u> Pearce, F. (2013). New green vision: Technology as our planet's last best hope. The ecomodernist manifesto. Kemp, R. (2015). World environment day: Can technology save us?</p>
Week 4	
Jan 31 (Tues)	<p>Camp 4: Degrowth</p> <ul style="list-style-type: none"> • Overconsumption and degrowth of overdeveloped countries <p>Due at 11:59 pm: Ecological footprint exercise</p> <p><u>Required Readings:</u> Assadourian, E. (2012). The path to degrowth in overdeveloped countries. In State of the World 2012: Moving toward sustainable prosperity.</p>

Part 2: Key concepts that pre-occupy the different ‘camps’	
Feb 3 (Fri)	<p>Key Concept 1: Systems</p> <ul style="list-style-type: none"> • Feedback loops • Emergence and surprises <p>Trial exam</p> <p><u>Required Readings:</u> Meadows, D. (2002). Dancing with systems. Systems Thinker, 13, 2-6. Bright, Chris, Johnson, D. Environmental surprises: planning for the unexpected. The Futurist, 34, 41.</p>
Week 5	
Feb 7 (Tues)	<p>Key Concept 2: Limits (Part 1)</p> <ul style="list-style-type: none"> • Energy and laws of thermodynamics • Entropic limits <p><u>Required Readings:</u> Friedland, A. Essentials of environmental science. Selected chapters.</p>
Feb 10 (Fri)	<p>Limits continued</p> <ul style="list-style-type: none"> • Planetary boundaries • Ecological footprint <p><u>Required Readings:</u> Rockström, J. et. al. (2009). A Safe Operating Space for Humanity. Nature, 461, 473-475. Steffen, et al. (2015). Planetary boundaries: Guiding human development on a changing planet. Science express.</p>
Week 6	
Feb 14 (Tues)	<p>Key Concept 3: Resistance and Resilience</p> <ul style="list-style-type: none"> • Introduction to resilience thinking <p><u>Required Readings:</u> Friedland, A. Essentials of environmental science. Selected chapters.</p>
Feb 17 (Fri)	First in-class exam (to be administered by a representative)
Week 7	
Recess Week! Feb 18-26	

Week 8	
Feb 28 (Tues)	<p>Key Concept 4: Ecosystem Services</p> <ul style="list-style-type: none"> • Natural capital and ecosystem services • Valuation of ecosystem services <p>Guidelines on Final ‘Environmental Action in Singapore’ report to be given out</p> <p><u>Required Readings:</u> Gretchen Daily, 1997. “Introduction” in Nature’s Services: Societal Dependence on Ecosystem Services, Washington D.C.: Island Press Costanza, R. et al. (1997). The value of the world’s ecosystem services and natural capital. Nature, 387, 253-260. Marris, E. (2009). Biodiversity: putting a price on nature. Nature, 462, 7271.</p>
Mar 3 (Fri)	<p>Key Concept 5: Sustainability</p> <ul style="list-style-type: none"> • Transdisciplinary endeavors and how it differs from interdisciplinarity • The democratic principle in knowledge production <p><u>Required Readings:</u> Engelman, R. (2013). Beyond sustainababble. In State of the World 2013 (pp. 3-16). Island Press/Center for Resoure Economics United Nations World Commission on Environment and Development (WCED). Our common future.</p>
Week 9	
Mar 7 (Tues)	<p>Key Concept 6: Risk and uncertainty</p> <ul style="list-style-type: none"> • Environmental risks versus uncertainty • Science-based risk management vs precautionary principle <p><u>Readings:</u> Whiteside, K.H. (2006). Precautionary politics: Principles and practices in confronting environmental risk. MIT Press: Cambridge, MA. Chapters 1 and 2.</p>
Mar 10 (Fri)	<p>Key Concept 7: Power</p> <p><u>Required Readings:</u> Hardin, G. The tragedy of the commons. Buck, S. No tragedy on the commons.</p>
Week 10	
Mar 14 (Tues)	<p>Key Concept 8: Ethics</p> <ul style="list-style-type: none"> • The spectrum between anthropocentrism and ecocentrism • The land ethic

	<p>Guidelines on case study reports to be given out</p> <p><u>Required Readings:</u> Simon, J.P. (2015). Environmental philosophy: An introduction. Polity Press. Selected chapters.</p>
Mar 17 (Fri)	<p>Key Concept 9: History</p> <ul style="list-style-type: none"> • The importance of historicizing environmental concepts • Challenging entrenched environmental concepts <p>Second exam to be given out</p> <p><u>Required Readings:</u> Cronon, W. (1995). The trouble with Wilderness. In: Uncommon ground: Rethinking the human place in nature. W.W. Norton, New York, pp. 69-90. Barnard, T. (2016). Nature's colony: Empire, nation, and environment in the Singapore Botanic Gardens. NUS Press, Singapore. Chapter 3.</p>
Part 3: Analyzing cases with different lenses	
Week 11	
Mar 21 (Tues)	<p>Case Study 1: Organic Agriculture</p> <p>Second exam submission before 2:30 pm on March 21</p>
Mar 24 (Fri)	<p><u>Required Readings:</u> Resource materials will be available on Canvas</p>
Week 12	
Mar 28 (Tues)	<p>Case Study 2: Technology</p> <p>Due on March 31 at 11:59 pm: Case Study 1 report</p>
Mar 31 (Fri)	<p><u>Required Readings:</u> Resource materials will be available on Canvas</p>
Week 13	
Apr 4 (Tues)	<p>Case Study 3: Biophilia in an eco-modern world</p> <p>Due on April 7 at 11:59 pm: Case Study 2 report</p>
Apr 7 (Fri)	<p><u>Required Readings:</u> Resource materials will be available on Canvas</p>

Week 14	
Apr 11 (Tues)	What have we learned? <ul style="list-style-type: none">• Synthesis class Due on April 14 at 11:59 pm: Case Study 3 report <u>Readings:</u> TBA
Week 15	Reading Week April 15-21
Week 16	Exam Week April 22-May 6 Final report due April 28 (Friday) at 11:59 pm