

## OCN 102/SUST 112: Introduction to the Environment and Sustainability Sample Syllabus

**Instructor:** Dr. Michael Cooney (956 7337; [mcooney@hawaii.edu](mailto:mcooney@hawaii.edu)). Office hours @ POST 104B MW, 2:30 – 3:30, F 2:30-3:00, and by text confirmed drop in.

**Course Schedule:** Lectures (M, W, Bilger 335), Sustainability Active Learning Unit Training (SALUT) discussion sections (F, Webster 101). 1:30 – 2:20.

**Course Objective.** The environment is interdisciplinary; it embraces a wide variety of topics taken from a number of disciplines. Yet there are several major unifying constructs, or themes, that cut across the many topics included in the study of the environment. In particular, the application of sustainability. The goal of this course is to provide students with a basic foundation in scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. More, this course is also designed to educate “*sustainability – minded*” students on how they can apply this knowledge to help the environment across all degree and career choices.

**Course Description.** This course will introduce students to the core elements of the environment and its dependence upon sustainability on a global scale. The integrated natures of ocean, terrestrial and atmospheric systems will be introduced by first presenting the Earth’s major ecosystems and biomes and then discussing their coupled contribution to global regulation of climate and atmosphere composition. The course will also cover causes of ecosystem and biome degradation including pollution, land use, coast degradation as well as means to mitigate these causes such as environmental law, environmental economics, and renewable energy. The course will integrate emerging concepts in the social science such as social and environmental justice as well as environmental law and economics. The concepts of sustainability will be infused throughout the course with particular emphasis on how students can use this knowledge to pursue their vision of sustainability in degree disciplines of their preference. Overall, this course will address the impact that 8 billion or more people are imposing upon the Earth’s environment and how students can pursue environmental sustainability in any number of degree disciplines and careers.

**Course materials.** A textbook is ***not*** required for this course. Rather, course notes, reading and lecture material will be posted via LauLima. An iClicker remote ***is*** required for this course.

iClicker remotes can be purchased in the UHM bookstore. You may also have the option to rent an iClicker remote. Visit the Macmillan Learning Student Store to view iClicker rental information, and to see if there is an option to purchase access to the iClicker Reef mobile app at a discounted rate.

I will be using iClicker this term to conduct in class quizzes. The quiz questions will test whether students have read the assigned chapter reading material, attended class, and responded to the quiz questions. They will also provide me feedback on how well students are comprehending key lecture concepts.

**Students MUST bring a #2 pencil to each Midterm and Final as well as a registered (to their name) iClicker remote to all M. W. classes.**

**Registration of iClicker remotes.** It is your responsibility to properly register your iClicker remote prior to the start of the first class. A pdf file has been posted on your OCN 102/SUST 112. LauLima site that details directions for doing so. Specifically, you will need to register your iClicker through an iClicker link that has been set up on the OCN 102/SUST 112 LauLima site.

**Alignment with Manoa ILO’s.** This course is strongly aligned with ILO 3c: Stewardship of the national environment (respect for natural resources and sustainability). Also, ILO 3a: Continuous learning and

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personal growth (life-long learning, ethical behaviors and judgements). Also ILO 2a: Think critically and creatively (applying questioning and reasoning, generating and exploring new questions, being information literate).

**Structure.** Two 1-hour lectures and one 1-hour active learning discussion per week. Quizzes (two to four questions) will be given in each M. W. classes through iClicker format and cover assigned reading (for that class) and lecture material (discussed in that class). Each class quiz points will be awarded as follows: 1 point awarded if all questions answered, 1 awarded point for each correct answer, 1 point awarded for each question answered (whether correctly or incorrectly). Example: if all three questions are given and each is answered correctly the total points awarded for that class quiz would be 7 (i.e.  $1 + 2 + 2 + 2 = 7$ ). If all 3 questions are given but only two are answered correctly the total points awarded would be 6 ( $1 + 2 + 2 + 1 = 6$ ). Homework will be assigned each Friday after the SALUT discussion section and due the following Sunday evening by 11:00 PM. The homework will be turned in on-line, through the student's Laulima site, and comprise a one paragraph (one competent and complete paragraph) response to the class discussion. Competent means complete sentences, proper punctuation, and a coherent thread of thought. Students will find the assignment on their Laulima site and will each will be graded on a pass (= 1 point) or fail (= 0 point) basis.

**Grading.** Letter, assigned on aggregate scoring of two midterms, one final, one cumulative in class quiz (given in class during the M. W. lectures), and weekly homework writing assignment. The weighting of grades will be assigned along the following scale:

Midterm 1	15%
Midterm 2	15%
Cumulative in class quizzes	30%
Homework	20%
Final	15%
eCafe survey (>95% response)	5%
Total	100%

Grading will be assigned using a curve with the following potential exception. Any total aggregate score above 90 will be given at least an A-, any total aggregate score above 80 will be given at least a B-, any aggregate score above 70 will be given at least a C-, and any aggregate score above 60 will be given at least a D-. In other words, students will not be penalized if the class curve is high.

Exam makeups will **not** be granted except when medically excused or *legitimate* disruption to the student's schedule (i.e. a documented transportation failure or delay) is demonstrated. **Documentation requirements will be absolute.** The final exam is scheduled by the university and will not be changed. Travel plans will not qualify as an exemption. Students are advised to make travel arrangements that accommodate the final schedule. Final exams cannot be rescheduled because of a booked travel ticket.

**Academic Integrity.** The honor system is employed in this course. Exams are given in class without notes, books, smart phones, or other reference material. Students are expected to answer their own questions without giving or receiving aid from their classmates. iClicker activities also fall under these expectations. This includes but is not limited to answering quiz questions while in class – do not look at other students' devices while answering live questions, or use any iClicker remote that is not registered in your name. **Any student found to be in violation of these rules risk losing the points of that quiz or exam.**

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**Syllabus**

1/7, M. 1/9, W. 1/11, F.	Chapter 1: Science of the Environment Chapter 2: Ecosystem Productivity (mass and energy flows) <b>Sustainability Active Learning Unit Training (SALUT) 1: Sustainability</b>
1/14, M. 1/16, W. 1/18, F.	Chapter 3: Human Population Growth: The key catalyst for sustainability Chapter 4: Natural Resources <b>SALUT 2: Biological Population Growth and Sustainability</b>
1/21, M. 1/23, W. 1/25, F.	MLK holiday Chapter 5: Principles of Ecology <b>SALUT 3: Ecological Succession, Extinction and Sustainability</b>
1/28, M. 1/30, W. 2/1, F.	Chapter 6: The Atmosphere Chapter 7: The Atmosphere <b>SALUT 4: Global Warming and Sustainability</b>
2/4, M. 2/6, W., 2/8, F.	Chapter 8: The Oceans Chapter 9: The Oceans <b>SALUT 5: Ocean Pollution and Sustainability</b>
2/11, M. 2/13, W. 2/15, F.	Chapter 10: Natural Biogeochemical Cycles Chapter 11: Natural Biogeochemical Cycles <b>SALUT 6: Resource Recycling and Sustainability</b>
2/18, M. 2/20, W. 2/22, F.	President's Day Chapter 21: Land Use & Degradation <b>SALUT 13: Coastal Development &amp; Sustainability</b>
2/25, M. 2/27, W. 3/1, F.	Chapter 12: Ecosystems Chapter 13: Ecosystems <b>SALUT 7: Urban Ecosystems and Sustainability</b>
3/4, M. 3/6, W. 3/8, F.	Chapter 15: Biomes Chapter 14: Ecosystem Services <b>SALUT 9: Sustainable Cities</b>
3/11, M. 3/13, W. 3/15, F.	Exam I Chapter 22: Pollution <b>SALUT 8: War on the EPA</b>
3/18, M. 3/20, W. 3/22, F.	Spring Recess Spring Recess Spring Recess
3/25, M. 3/27, W. 3/29, F.	Chapter 16: Biodiversity Chapter 17: The Biodiversity Crisis <b>SALUT 10: Carrying Capacity</b>
4/1, M. 4/3, W. 4/5, F.	Chapter 18: Energy Chapter 19: Energy Use <b>SALUT 11: Energy &amp; Sustainability</b>
4/8, M. 4/10, W. 4/12, F.	Chapter 20: Earth Systems Chapter 20: Earth Systems <b>SALUT 12: The Biosphere and Sustainability</b>
4/15, M. 4/17, W. 4/19, F.	Exam II <b>SALUT 13: Addressing Climate Change</b> Good Friday
4/22, M. 4/24, W. 4/26, F.	Chapter 23: Environmental Economics Chapter 24: Environmental Laws and Regulations <b>Water Footprint</b>
4/29, M. 5/1, W. 5/10, F.	Review <b>SALUT 15: The Anthropocene Era</b> Final Exam. 2:15 – 4:15 PM: Webster 101