

ENV200: The Environmental Nexus Lecture Syllabus, Fall 2019

Professors: Steve Pacala, Rob Nixon, Kian Mintz-Woo, and Marc Fleurbaey

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Class: Mondays, Wednesdays, Fridays 11:00-11:50 am, McCosh Hall, Room 10

Office Hours: Pacala and Fleurbaey: by appointment; Nixon: Mon. 1:30-3:30 (McCosh 14); Mintz-Woo: Mon. 2-3:30 and by appointment

ENV 200 offers an introduction to the scientific, technological, political, ethical and humanistic dimensions of the nexus of environmental problems that pose an unprecedented risk at mid-century: climate change, biodiversity loss, and food and water for 9 billion people. All sections of ENV 200 will meet together for lecture each week, but students will enroll in one of six possible precepts that will meet separately and pursue a particular disciplinary focus and earn credit for the corresponding distribution area.

Five guest lecturers: Paula Kahumbu, Bob Keohane, Catherine Keyser, Bob Kopp and Catherine Riihimaki

Precepts: ENV 200A fills the Social Analysis distribution requirement, 200B the Science and Technology with a Laboratory (STL) requirement, 200C the Ethical Thought and Moral Values (EM) requirement, 200D the Quantitative Reasoning (QR) requirement, 200E the Literature and Arts (LA) requirement, and 200F the Science and Technology without a laboratory (STN) requirement.

Readings: Lecture readings and films are posted on the FALL 2019 ENV200 (lecture) Blackboard site under E-Reserves and Video Reserves. Students are responsible for reading the assignments or watching the films *before* the lecture.

Grading: Midterm Exam – 20%, Final Exam – 30%, Lecture participation (via clickers) – 5%, precept grade – 45% (see precept syllabus on course section Blackboard for precept grading).

Exams: Each section (ENV 200A-F) will have its own midterm and final, but 2/3-3/4 of the questions will be common to all six sections. These questions will test material covered in the M-W-F class meetings and associated readings. The remaining 1/4 - 1/3 of the questions will be specific to your section.

Precept readings: see Blackboard for your section

Precept grading:

ENV200A: Papers - 20%, Precept Participation - 10%, Problem sets - 15%

ENV200B: Lab Reports - 45%

ENV200C: Papers - 35%, Precept Participation - 10%

ENV200D: Problem sets - 45%

ENV200E: First essay - 15%, final essay – 15%, Precept Participation - 15%

ENV200F: Presentations - 20%, Precept Participation - 10%, Problem set(s) - 15%

Lecture	Date	Lecture	Reading/Film	Lecturer
				Guest Lecturer
Week 1				
1	9/11	Intro to the Course		Pacala, Mintz-Woo, Fleurbaey, Nixon
2	9/13	Intro to Science and Technology		Steve Pacala
Week 2/Precept 1				
3	9/16	Intro to Literature and the Arts	Nixon, R. The swiftness of glaciers: language in a time of climate change.	Rob Nixon
4	9/18	Intro to Ethics	Routley, R. Is there a need for a new, an environmental, ethic?	Kian Mintz-Woo
5	9/20	Intro to Social Analysis		Marc Fleurbaey
Week 3/Precept 2				
6	9/23	The Greenhouse Effect and Climate		Pacala
7	9/25	Link Between Fossil Emissions and Damaging Impacts		Pacala
8	9/27	Extreme Weather		Pacala
Week 4/Precept 3				
9	9/30	Emissions and Responsibility: Who Caused the Climate Problem?	Chakravarty, S. et al (2009). Sharing global CO2 emission reductions among one billion high emitters.	Pacala
10	10/2	Socio-Economic Evaluation Tools for Environmental Policies		Fleurbaey
11	10/4	Film: <u>Anthropocene</u>		Nixon
Week 5/Precept 4				
12	10/7	Climate Impacts and Discounted Utilitarianism		Pacala
13	10/9	Sixth Mass Extinction		Pacala
14	10/11	The Value of Nature	Jamieson, D. (2008). Values in Nature.	Mintz-Woo

Lecture	Date	Lecture	Reading/Film	Lecturer
Week 6/Precept 5				
15	10/14	Food Consumption and Production	Foley et al (2011). Solutions for a cultivated planet.	Pacala
16	10/16	Seeds of Change: Food, Biodiversity, and the Arts	Bacigalupi, P. (2005) The Calorie Man.	Catherine Keyser
17	10/18	Fresh Water in a Changing Climate	Smil, V. (2008). Water news: bad, good, and virtual.	Catherine Riihimaki
MIDTERM WEEK – DATE TBD				
Week 7/Precept 6				
18	10/21	Environmental Nexus in Kenya		Paula Kahumbu
19	10/23	Global Responsibility for Saving African Wildlife		Kahumbu
20	10/25	Optimal Policies to Address the Environmental Nexus		Fleurbaeay
FALL RECESS				
Week 8/Precept 7				
21	11/4	Kenyan Environmental Nexus: Reimagining Environmental Alliances	Nixon, R. (2011). “Slow Violence, Gender, and the Environmentalism of the Poor”	Nixon
22	11/6	Environmental Nexus in the USA - The Climate Contrarian Phenomenon		Pacala
23	11/8	Environmental Nexus in the USA – Political Stalemate, the Green New Deal, and Tremors on the Right		Pacala
Week 9/Precept 8				
24	11/11	Moral Corruption	Gardiner, S. (2006). A Perfect Moral Storm.	Mintz-Woo
25	11/13	Human Conflict and the Environmental Nexus	Carleton, T.A. & S.M. Hsiang (2016). Social and economic impacts of climate.	Pacala
26	11/15	Technological Solutions to the Food, Water, & Biodiversity Problems		Pacala
Week 10/Precept 9				
27	11/18	Empirically-Derived Social Cost of Carbon		Bob Kopp
28	11/20	Water Sovereignty and Colonial Imaginings	Film: <i>Even the Rain</i> , Iciar Bollain	Nixon

29	11/22	Ethics, Economics and Aesthetics of the Food and Biodiversity Problems		Pacala
Lecture	Date	Lecture	Reading/Film	Lecturer
Week 11/Precept 10				
30	11/25	Oceanic Art and Environmental Futures	Film: <i>Angel Azul</i> , Marcy Cravat	Nixon
THANKSGIVING RECESS				
Week 12/Precept 11				
31	12/2	Ethics and Distributive Justice	Shue, H. (1993). Subsistence Emissions and Luxury Emissions.	Mintz-Woo
32	12/4	Technological Solutions to the Climate Problem		Pacala
33	12/6	How to Build a Non-emitting Economy in the US		Pacala
Week 13/Precept 12				
34	12/9	Political Issues of Managing the Commons		Bob Keohane
35	12/11	Technologies that Remove CO ₂ from the Atmosphere: a Backstop for Current Inaction		Pacala
36	12/13	Synthesis and Review		Pacala, Mintz-Woo, Nixon
FINAL EXAM DATE TBD				

Reading/Film List

- Bacigalupi, Paolo (2008). "The Calorie Man." *Pump Six and Other Stories*. Night Shade Books: 93-121.
- Bollaín, I. (Director). (2010). *Even the Rain* [Motion picture]. Spain: Vitagraph Films.
- Carleton, T.A. & S.M. Hsiang (2016). Social and economic impacts of climate. *Science* 353 (6304).
- Chakravarty, S., A. Chikkatur, H. de Coninck, S.W. Pacala, R. Socolow, & M. Tavoni (2009). Sharing global CO2 emission reductions among one billion high emitters. *Proceedings of the National Academy of Sciences*, 106(29): 11884-11888.
- Cravat, M. (Director). (2014). *Angel Azul* [Motion picture]. USA: Gravitas Film Ventures.
- Foley et al (2011). Solutions for a cultivated planet. *Nature*, 478: 337-342.
- Gardiner, S. M. (2006). A perfect moral storm: Climate change, intergenerational ethics and the problem of moral corruption. *Environmental Values* 15: 397–413. Available at: <https://www.ingentaconnect.com/content/whp/ev/2006/00000015/00000003/art00013>.
- Jamieson, D. (2008). Values in Nature, in: *Ethics and the Environment: An Introduction*. Cambridge: Cambridge University Press, ch. 6, pp. 145–168. Available at: <https://www.cambridge.org/core/books/ethics-and-the-environment/F0460CB49E38A26348E8D76FC05915A2>
- Nixon, R. The swiftness of glaciers: language in a time of climate change. *Aeon*. <https://aeon.co/ideas/the-swiftness-of-glaciers-language-in-a-time-of-climate-change>.
- Nixon, R. (2011). Slow violence, gender, and the environmentalism of the poor. In *Slow Violence and the Environmentalism of the Poor*, Harvard Univ. Press: 128-149.
- Routley, Richard (1973). Is there a need for a new, an environmental ethic? *Proceedings of the XVth World Congress of Philosophy 17th to 22nd September 1973, Varna, Bulgaria*, Sofia Press: 205-210.
- Shue, H. (1993). Subsistence Emissions and Luxury Emissions. *Law & Policy*, 15(1), pp. 39–60. Available at: <https://doi.org/10.1111/j.1467-9930.1993.tb00093.x>.
- Smil, V. (2008). Water news: bad, good, and virtual. *American Scientist* 96(5): 399-407.