

GENERAL EDUCATION COURSE ENHANCEMENT GRANT COMPETITION

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3. Is this a new course or a currently existing course? NEW

4. Proposed title and number: PHIL 3xxx. **Philosophical Issues in Global Climate Change.**

5. Project description, work to be undertaken during grant period, learning objectives

The aim is to develop a comprehensive introduction to philosophical issues raised by global climate change, integrating philosophy of science, ethics, and policy. While such a course could be taught at many levels, the course described here would be aimed primarily at juniors and seniors, allowing it to serve (at least) three curricular roles: (1) as a general education course satisfying the Environmental Literacy requirement, (2) as a Humanities Core course for the Environmental Studies major, and (3) as an elective for the Philosophy major. It would also advance the shift, in the field of philosophy as well as UConn's Philosophy Department, toward more socially-relevant philosophical inquiry.

The PI's vision for the course divides it into three units, as follows.

- The first unit, on philosophy of climate science, will introduce the science and examine philosophical questions arising within it. These questions include conceptual and epistemological questions about science in general (Must scientific hypotheses be falsifiable? Is data inevitably theory-laden? Is science objective?) as well as questions about climate science in particular (e.g., How are climate models tested? What are the sources of uncertainty in climate projections? Can the uncertainty be quantified?).
- The second unit will explore philosophical issues at the interface of science and policy, focusing on decision-making under uncertainty. After an introduction to expected utility theory, students will explore whether and how it can be applied to decisions about mitigation and adaptation. (Can we apply EU without precise probabilities? What are the alternatives to EU? How should we value species and human lives lost? Should future costs and benefits be discounted?)
- The third unit will focus on climate ethics and environmental justice. The questions here are both intergenerational (What obligations do we have to future people?), international (How should emissions rights be distributed? Who should pay for mitigation and adaptation?), and individual (Is it wrong to drive a gas-guzzler?). Students will examine global inequities and the role of colonialism and capitalism, the ethical implications of geoengineering, and the problem of science denial.

Learning objectives relate directly to the course goals and structure above. Specifically, we aim is for students to develop (a) an understanding of how scientific knowledge in general and scientific knowledge of climate change in particular is developed; (b) an understanding of the nature and source of uncertainty in climate science, and of the ethical and policy challenges uncertainty poses; (c) an appreciation for the moral questions we must answer in order to meet those challenges in an ethical manner; (d) the ability to think and write critically.

During the grant period, the PI will work both to extend his own knowledge of technical aspects of climate modeling, research best practices for teaching interdisciplinary material, and select appropriate readings for each week of the semester. To facilitate this work, the PI intends during the summer of 2020 to run a reading/discussion group (for interested faculty members and graduate students) on philosophical issues in climate change, in order to delve more deeply into

the issues and gain relevant perspective. The PI will also work on the design of writing assignments and other instructional materials (e.g., lecture notes and slides, handouts, quizzes) to be used in teaching the course for the first time. Finally, the PI will be collaborating with Prof Mitch Green, who has submitted a linked proposal for an introductory course on “Philosophy and the Environment”. Together, we wish to support a GA to assist with the collection of materials, the preparation of lecture materials, and so on.

6. Learning outcomes and assessment tools

Upon completion, students should be able to (1) knowledgeably discuss climate science and policy and philosophical questions they raise; (2) articulate answers to those questions; (3) construct, analyze, and critique philosophical arguments for and against such answers, and (4) write an argumentative essay on topics such as those above. Assessments will include:

- Weekly short reaction papers, or contributions to a discussion board;
- Two essay exams, both based on essay prompts given to the students in advance;
- A final term paper on due at the conclusion of the course;
- Participation in discussions, both in-class and online.

7. Describe how the course will fit into UConn’s General Education curriculum

The course will contribute to most of the goals of general education. Here we discuss four.

- The goal of intellectual breadth and versatility is served by the course’s interdisciplinary focus on science, policy, and ethics. Students from a science background will be exposed to systematic ideas about ethics and policy, while students from a humanities or social sciences background will learn about climate science. And everyone, including the instructor, will grapple with how these intellectual projects fit together.
- Critical judgment is exercised and enhanced by engaging skeptically with philosophical positions and arguments. Students are asked to defend their positions, both in discussion and in written assignments. They are asked to examine not just what they believe, but also why they believe it and whether they should believe it.
- Moral sensitivity is cultivated throughout, by examining how our actions impact both the natural world and the people who depend on it.
- With its focus on scientific evidence, inference, and modeling, the course cultivates working understanding of the processes by which [we] can continue to acquire and use knowledge.

8. General education content areas, competencies, or literacies.

The course will be proposed as an Environmental Literacy course, meeting four of the five criteria. Specifically, it meets (1) by focusing throughout on climate science, including the underlying theory, data, and development and application of climate models. It satisfies (2) by examining expected utility theory and other tools for making rational decisions based on the effect of climate change on human (and potentially also nonhuman) wellbeing. It provides (3) by examining the choice among mitigation, adaptation, and geoengineering policies. Most of all, however, the course will fulfill (4). Stephen Gardner famously describes climate change as a “perfect moral storm” – a convergence of intergenerational, international, public, and private moral problems so disorienting as to make it difficult for human beings and their governments to make ethical choices, leaving us vulnerable to corruption, despondence, and dismay. The ultimate goal of the course is to better prepare our students to venture forth into this moral maelstrom and (one hopes) bring our civilization safely to the other side.

9. How will the course add to and/or enhance existing course offerings?

The course will add to existing course offerings in several respects. (1) It will help address the need for additional EL courses (one of this year's priorities). (2) It will provide EVST majors with an additional Humanities Core option. (3) It will provide an additional elective for Philosophy majors and support the Philosophy Department's goal of doing more socially-relevant philosophy. (4) The course will complement existing offerings in Philosophy. Currently, the only PHIL course on the environment is PHIL 3216 Environmental Ethics (which the PI often teaches). While 3216 usually devotes a couple of weeks to climate change, the proposed course engage the subject in greater depth and with more rigor. PHIL 3216 will continue to be offered, focusing on themes of nonanthropocentric moral theory (which is not a topic of the course proposed here) and the philosophical foundations of environmentalism.

10. Will your course serve as a model to assist others in their efforts to improve the general education curriculum? If so, how?

To what extent the course can serve as a model will be further explored as development proceeds. However, the PI hopes that the successful development of the current course would catalyze the development of further courses integrating serious scientific content with the traditional pursuits of the humanities. As a philosopher of science, the PI has experience teaching the logic of scientific inference and would be able to use some of the material developed here to enhance PHIL 2212 Philosophy of Science (which currently is not a gen ed course but could be developed as such).

The PI also has experience developing and teaching COGS 2201, Foundations of Cognitive Science, which is an interdisciplinary CA3 course developed collaboratively with Prof Whitney Tabor (Psychological Sciences) and other cognitive scientists more than a decade ago. That course has been a resounding success, helping to sustain and grow the Cognitive Science major.

Finally, the PI regularly teaches PHIL 1104 (CA1) and anticipates redesigning that course and perhaps developing one or more new introductory PHIL gen ed courses in light of the Δ GenEd implementation plan, once it materializes. The current proposal could serve as a model for those efforts.

11. Is your proposal linked to any others being submitted in this competition? Yes, the proposal is linked Prof Mitch Green proposal for **PHIL 110x, Philosophy and the Environment**". The course proposed here would provide greater depth on climate science and ethics than the introductory course, which would cover other topics (e.g., animal ethics). These courses could be taken in sequence, but neither would be a prerequisite for the other. (The prerequisite for PHIL 3xxx would most likely be one 1000-level course in Philosophy.)

12. Has this course even been submitted for this grant in the past? No.

13. Has this course been funded by this grant in the past? No.

14. Has or will this course be funded by any other non-departmental source? No.

15. n/a

16. Complete the Budget Form. Please see attached.

17. Statement of support from department head? Please see email from Prof Don Baxter.

18. Draft syllabus. Please see attached.

PHIL 3xxx. Philosophical Issues in Global Climate Change

DRAFT SYLLABUS

Course description

Climate change promises to be the defining challenge of the 21st century. This course aims to provide a comprehensive philosophical introduction to the science, policy, and ethics of climate change. The first part of the course looks into philosophical questions about climate science itself: how does the science work? Is it genuine science, or pseudoscience as some charge? We will investigate the nature of science in general, the logic of scientific inference, and objectivity of scientific inquiry. We will also investigate the data which confirms that climate change is occurring, the models which represent the causes of climate change, the projections which are generated with those models, and the sources of uncertainty in those projections.

The second part of the course focuses on decision-making in the face of uncertainty and risk. We will examine expected utility theory and investigate its application to climate policy in particular, focusing on difficulties in assigning values to the costs and benefits involved.

The third and longest part of the course focuses on climate ethics. We shall examine intergenerational justice, international distributive justice, global inequality, human rights, and the question of individual responsibility for climate change. We shall conclude with a close look at the ethics of geoengineering, activism, and climate denial.

Learning objectives...

Course requirements and assessments...

Policies...

Weekly schedule of topics (readings TBD)

1. Introduction to climate science, ethics, policy; the IPCC; climate denial
2. Philosophy of science: theories, hypothesis testing, falsificationism, objectivity, the theory-ladenness of observation
3. Detection and attribution of climate change: the evidence, and introduction to climate models
4. Uncertainty: intro to probability theory, types of probability, sources of uncertainty in climate projections
5. Dealing with risk and uncertainty: expected utility theory, imprecise probabilities, precautionary principles
6. Valuation: integrating economic and noneconomic costs/benefits, discounting the future
7. Climate change as the perfect moral storm: the tragedy of the commons, the intergenerational and intragenerational tragedies of climate change, the motivation problem
8. Intergenerational justice. What do we owe future generations? The non-identity problem
9. Collective harm, individual vs collective responsibility for climate change: Is it wrong to drive a gas-guzzler, or fly? Should I install solar panels, or purchase offsets?
10. Distributive justice and emissions rights
11. Global inequality and inequity, climate adaptation, compensation
12. Climate refugees, indigenous perspectives
13. Geoengineering the future, science denial
14. Conclusions