

The Ohio State University
Freshman Seminar Program – Arts & Sciences 1137. __ (Proposal)
Spring 2017 Room 104 Aronoff Laboratory

Title: Global Climate Change: What's All The Fuss? 1 cr., S/U, TR 11:50 – 12:45

Description: An examination of global climate change through an interdisciplinary lens combining the natural sciences, history, film, decision science, and contemporary political discourse. We attempt to connect the dots linking our knowledge of the natural world with the actions, or lack thereof, being taken in response to this purportedly existential threat.

Professor: Dr. Peter S. Curtis, Professor, Department of Evolution, Ecology, and Organismal Biology, College of Arts and Sciences.

Course goals:

1. Gain a working knowledge of the scientific basis for anthropogenic global climate change, its impact, and possible mitigation strategies.
 - a. Develop presentation and public speaking skills in a low-stakes environment.
2. Understand the key role of social and political networks in shaping public opinion and government policy regarding global climate change.
 - a. Have the opportunity to assimilate and synthesize information from seemingly unrelated fields, such as climatology, history, decision science, and economics.
 - b. Relate the abstract concept of climate change to personal behavior through the use of carbon footprint calculations.
3. Experience the wide range of interdisciplinary expertise at Ohio State relevant to the study of global climate change.
 - a. Engage in conversations with established scholars on campus and with student peers both within and beyond the seminar.
 - b. Appreciate the variable perspectives each of us brings to this complex topic.

Meeting times: Tuesday and Thursdays, 11:50 – 12:45 (or best alternate time in am), Spring Semester, for 7 weeks.

Weekly topical outline:

(First day of classes, M 1/9)

Week 1

1/10: Overview, course goals, Pre-Knowledge Survey. Assign first reading and organize presentation groups. Short video of Naomi Oreskes interview.

1/12: Discussion of Oreskes & Conway, *Daedalus* 2013.

Week 2

1/17: IPCC reading and discussion 1 [IPCC, 2013: Summary for Policymakers. The Physical Science Basis]. (student presentations, Q/A)

1/19: IPCC reading and discussion 2 [IPCC, 2013: Summary for Policymakers. The Physical Science Basis]. (student presentations, Q/A)

Week 3

1/24: IPCC reading and discussion 3. [IPCC, 2014: Summary for policymakers. Impacts, Adaptation, and Vulnerability]. (student presentations, Q/A)

1/26: IPCC reading and discussion 4. [IPCC, 2014: Summary for policymakers. Impacts, Adaptation, and Vulnerability]. (student presentations, Q/A)

Week 4

1/31: IPCC reading and discussion 5. [IPCC, 2014: Summary for Policymakers. Mitigation of Climate Change]. (student presentations, Q/A)

2/2: Calculating our individual carbon footprints.

Week 5

2/7: Film: *Merchants of Doubt* part1. Viewing and discussion.

2/9: Film: *Merchants of Doubt* part2. Viewing and discussion.

Week 6

2/14: Climate change denial: the findings of decision science (Kahan et al. 2012.)

2/16: Decision science: guest speaker from OSU Decision Sciences Collaborative (possibly Dr. Ellen Peters, OSU Dept. Psychology). Q&A.

Week 7

2/21: Climate change and politics. Free Market Failure? Possible guest speaker Dr. Joel Wainright (OSU Dept. Geography). Q&A.

2/23: Climate change solutions: presenting your 'elevator speech'.

Required Materials (Posted on Carmen):

1. Carbon Footprint Calculator & Climate Change Impact Assessment (Pre-class and in-class exercise).

2. Readings:

IPCC, 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA

IPCC, 2014: Summary for policymakers. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA

IPCC, 2014: Summary for Policymakers. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Kahan, D.M., E. Peters, M. Wittlin, P. Slovic, L. Larrimore Ouellette, D. Braman, and G. Mandel. 2012. The polarizing impact of science literacy and numeracy on perceived climate change risks. *Nature Climate Change* 2: 732-735

Oreskes, N., and E.M. Conway. 2013. The collapse of western civilization: A view from the future. *Daedalus* 142: 40-58

3. Film viewing (viewed from copy owned by P. Curtis):

Merchants of Doubt. 2014. A Sony Pictures Classics Release by Robert Kenner. 93 min. From the book by Naomi Oreskes and Eric Conway.

Assignments:

Class participation	30%
IPCC presentation	30%
Carbon Footprint Analysis	30%
Elevator speech	10%
TOTAL	100%

ACADEMIC MISCONDUCT is defined as "any activity which tends to compromise the academic integrity of the university or subvert the educational process. Plagiarism is the act of stealing the ideas and/or the expression of ideas of another and representing them as your own. It is a form of cheating and a kind of academic misconduct that can result in severe penalties. The most obvious form of plagiarism is word-for-word copying of someone else's work, in whole or in part, without acknowledgment, whether that work is a magazine article, a portion of a book, a

newspaper piece, another student's essay, or any other composition not your own. Any such verbatim use of another's work must be credited to the source and acknowledged by use of QUOTATION MARKS" (OSU Student Handbook, 1996-97, pp. 10-11).

Honesty requires that any ideas or materials taken from another source for either written or oral use must be fully acknowledged. Offering the work of someone else as one's own is plagiarism. The language or ideas thus taken from another may range from isolated formulas, sentences, or paragraphs to entire articles copied from books, periodicals, speeches, or the writings of other students. The offering of materials assembled or collected by others in the form of projects or collections without acknowledgment also is considered plagiarism. ANY STUDENT WHO FAILS TO GIVE CREDIT FOR IDEAS OR MATERIALS TAKEN FROM ANOTHER SOURCE IS GUILTY OF PLAGIARISM.

DISABILITY SERVICES. Anyone who feels the need for an accommodation based on the impact of a disability should contact me for an appointment, **no later than the second week of class.** At the appointment, we can discuss the course format, anticipate your needs, and explore potential accommodations. We rely on the Office for Disability Services for assistance in verifying the need for accommodations and developing such strategies. If you have not previously contacted the Office for Disability Services, I encourage you to do so. **Note:** It is your responsibility to make your accommodation needs known to faculty. If a student with a disability does not request accommodations, instructors are under no obligation to provide accommodations.

Brief Biographical Paragraph for Dr. Curtis:

Dr. Peter Curtis is a Professor in the Department of Evolution, Ecology, and Organismal Biology. His research interests revolve around ecological responses to climate change and the terrestrial carbon cycle. He teaches both undergraduate and graduate students, is a faculty mentor in the STEP program for OSU sophomores, and is an undergraduate research advisor. He currently teaches both General Ecology and Climate Change Biology for Biology and affiliated majors and Physiological Ecology for upper-level and graduate students. He has studied the effects of rising atmospheric carbon dioxide on plants and ecosystems for over 25 years and leads a team of scientists investigating how forests of the Great Lakes region can help mitigate the effects of fossil fuel use. Dr. Curtis has published widely in the area of climate change biology, is a Fellow of the American Association for the Advancement of Science, and a recipient of the OSU College of Arts and Sciences Honors Faculty Service Award.