**SYLLABUS: Ecological and Social Sustainability**

Winter 2016

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**Class times:** Tues. & Thurs., 6–10 PM

**Class location:** Lecture: SEM 2 C1105; Seminar: SEM 2 C2105, C2109, C3107

**Credits:** 8

*Office Hours*

We are happy to meet with you as needed. Please email us to schedule an appointment.

*Program Objectives*

This second core course in the MES Program has the following major objectives:

* To develop an understanding of sustainability and sustainable development in human and ecological systems;
* To understand the interplay between ecological, political economic, and social factors in environmental problem solving;
* To understand how human activity has affected how the earth’s climate system operates and its implications for policy;
* To understand and use interdisciplinary approaches to environmental studies that combine natural and social science; and
* To develop students’ ability to design and execute a scholarly research paper in order to advance to candidacy.

*Program Description*

This program addresses the theoretical, practical, and ethical challenges involved in resolving environmental issues related to sustainability and sustainable development. We will examine how these concepts are understood from multiple perspectives, emphasizing how systems-thinking, complexity, political economy and political ecology contribute to a nuanced understanding of the prospects and challenges of fostering sustainability and sustainable development. Because climate change is arguably the largest environmental threat humankind is facing today, we will use it as a case study to explore how interdisciplinary approaches are required to address this urgent and multifaceted problem. We will continue to build upon our understanding of ecosystem functioning and earth system science by assessing how climate change is impacting both ecosystems and biogeochemical processes. To that end, we will examine how the carbon cycle and climate interact over multiple timescales, and assess how anthropogenic forcing is altering these dynamics. We will also examine how climate change intersects with domestic and global inequality, and how this affects responses to the problems of mitigating and adapting to climate impacts.

*Format*

Students will participate in seminars, lectures, and workshops that focus on developing critical thinking, discussion, and presentation skills. Students will also demonstrate their comprehension of material through one 3-page essay and two exams.

By the end of the quarter, each student will produce a professional quality, 12-15 page research paper (candidacy paper) and a 10-minute professional presentation of their findings. A series of workshops and discussions throughout the quarter will support the various stages of research and writing involved in such a project, including choice of a manageable topic, efficient literature searches, composing organized drafts, and presentation of research. This work is intended to deepen knowledge not only of the chosen topic, but also of the meaning and nature of professional work in environmental studies. Part of your advancement to candidacy is based upon your ability to design and execute a scholarly research paper.

*Seminar: Facilitators*

The ESS seminar will provide opportunities to analyze materials through writing and group discussion, as well as to develop oral communication and facilitation skills. Toward these ends, we are asking students to write essays about specific seminar readings and organize and facilitate the seminar discussions.

FACILITATORS (2 per seminar session, sign-up sheet at first seminar):

• Meet with each other before class to identify major themes/questions and decide how you are going to facilitate the seminar. There is no formal writing assignment for facilitators, but you should be prepared by bringing an outline of your themes, questions, and strategies for promoting discussion. Your seminar leader may require facilitators to meet with him/her ahead of time to discuss their strategy.

• Poll the class at the beginning of seminar to identify other themes/questions, especially from those that wrote essays on the assigned reading.

• Lead or manage the discussion: prioritize themes and questions, coordinate discussion (small group or all class discussion or debate), ensure widespread participation, and manage time to ensure that important themes are covered.

ESSAYISTS (1 essay due this quarter, sign-up sheet at first seminar):

• Although all students are required to read the assigned material carefully, essayists will contribute a more in-depth analysis of some aspects of the reading and will submit a formal essay.

• Each essayist identifies his or her own essay theme or question. The writing should not be descriptive (summarizing the reading) but analytical (defending a hypothesis or framing a question pertinent to the assigned texts). It is important that this essay address a central argument in the readings, not a secondary, supportive point, although connections to other program texts or current issues are encouraged. However, essays should not merely repeat an argument made in the readings, but should offer new insights intended to stimulate deeper consideration of them. Write these essays in the same format as you did for gCORE; however the final page count should should be 3 pages (of text) double-spaced.

* Your first version of the essay is due two days before you seminar about the material that you wrote your essay about. Submit it electronically to your seminar faculty (email it) so it can be posted on the Canvas site and made available to the rest of your group in advance of seminar. Although this is a “preliminary draft”, it should go through careful proofreading and editing to become as polished and effective as possible. After you get feedback informally and in seminar, you most likely will choose to prepare a revised draft as your submission of record; this will be due one week after your seminar.

*Candidacy Paper*

You will be receiving separate instructions about the requirements for producing your 12-15 page candidacy paper and providing an oral presentation of your findings. However, important due dates are listed in the Program Schedule, found on the next page.

*Credit and Evaluation*

Partial credit is not awarded in the MES Program. Full credit will be awarded based upon attendance, punctuality, participation, and submission of all assignments on time. To be excused due to illness, etc., contact your seminar instructor as soon as you know that you will have a problem meeting these expectations. Depending upon the reason, you may or may not be excused. Credit will be jeopardized if there are unexcused absences, a pattern of tardiness, lack of participation on a regular basis, and failure to submit all assignments on time.

As described previously, part of your advancement to candidacy is based upon your ability to design and execute a scholarly research paper. Please bring a physical copy of your final portfolio from gCORE to your seminar instructor. He/she will provide instructions regarding whether students submit a portfolio for ESS, and the mode of submission (electronic or physical).

All students are required to participate in an evaluation conference with their seminar instructor during the 11th week, bringing with them a draft self-evaluation and an evaluation of each faculty member in ESS. The evaluation of each faculty member should be delivered to the faculty member, but you may choose to post it after your evaluation has been finalized.

*Required Texts*

Booth et. al., *The Craft of Research.* (This is the same text from gCORE)

Chapin et. al., *Principles of Terrestrial Ecosystems Ecology.* (This is the same text from gCORE)

Kump, Kasting, and Crane. *The Earth System*. 3rd edition (2010). ISBN:  978-0321597793

Klein, Naomi. *This Changes Everything: Capitalism vs the Climate.* (2014). ISBN: 9781451697384

Grossman and Parker. *Asserting Native Resilience: Pacific Rim Indigenous Nations Face the Climate Crisis*. ISBN: 978-0870716638

***SCHEDULE***

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|  | **Date** | **Lectures, Workshops, Seminars** | **Reading** | **Other Assignments** |
| 1 | Jan. 5 | Introduction to the program; Lecture/Workshop: Sustainability-- natural sciences perspective (Erin)Seminar: Seminar Expectations | Lecture: Chapin Ch. 15, pp. 425-439; Review Chapin Ch. 12, pp. 340-351.Steffen et al. (2015) (*Canvas)*; Kump Ch. 2, pp. 21-33. |  |
| Jan. 7 | Lecture: Economic debates on sustainability (Peter)Candidacy Paper Workshop: Examining Scope and re-evaluating your own research question | *Canvas:*Lecture: Neumayer (2011)Heal (2011) | Candidacy paper prep assignment (bring to class, but not due to faculty) |
| 2 | Jan. 12 | Lecture: Social dimensions of sustainability (Shangrila)Seminar: Unpacking sustainable development | *Canvas:*Seminar: Lele (1991); Sheppard et al. (2009), pp.148-168. | Due: Revised candidacy prep assignment |
| Jan. 14 | MES Candidate 1: Teaching DemonstrationWorkshop: Searching, reading and note-taking for literature reviewSeminar Discussion: Complexity and Adaptive management | *Canvas:* Seminar: NAS/NRC (2002) |  |
| 3 | Jan. 19 | Lecture: Earth as a system: exploring climate dynamics (Erin)Workshop 1 : Energy inputs and outputsWorkshop 2: How to make an argument | Chapin Ch. 2, entire; Kump Ch. 3, pp. 48-55 (the rest of the chapter is optional). |  |
| Jan. 21 | Lecture: Political Economy Perspectives on Sustainability (Peter)Seminar: Seminar on political economy | *Canvas:*Gilens and Page, others TBA |  |
| 4 | Jan. 26 | MES Candidate 2: Teaching DemonstrationLecture and Workshop: The Global Carbon Cycle (Erin) | Kump Ch. 8, TBA | Due: Candidacy Paper1st paragraph, outline, & bibliography with top 5 sources annotated |
|  | Jan. 28 | MES Candidate 3: Teaching DemonstrationLecture: Perspectives on Just Sustainability (Shangrila)Seminar: Unpacking ‘just sustainability’.  | *Canvas:*Hopwood et al. (2010); TBA | Hand out Take Home exam. |
| 5 | Feb. 2 | Lecture/workshop: Long term controls on climate (Erin)Seminar: C cycling over geological timescales | Kump Ch. 12 and 14, TBA | Take Home Exam due |
| Feb. 4 | Lecture: International Climate Negotiations (Shangrila)Seminar: Unpacking climate politics from a ‘just sustainability’ perspective | *Canvas*:Joshi (2014); Seminar: Klein (2014) Part one and Part two  |  |
| 6 | Feb. 9 | Short term controls on climate (Erin)Workshop: Ocean AcidificationCandidacy paper meeting between writers and reviewers  | Reading: Kump Ch. 15 (entire), Ch. 16, pp. 321-326, 332-333; Selections from IPCC; TBA | Due: Candidacy Paper – First complete draft due for peer review, email to partner |
| Feb. 11 | Lecture: Climate Policy Instruments I (Peter)Workshop: Data lab on Carbon budgets Candidacy paper meeting between writers and reviewers | *Canvas*Anderson and Bows, TBA. | Due: Feedback on candidacy paper from peer reviewer |
| 7 | Feb. 16 | Lecture: Human Dimensions of Climate Mitigation (Shangrila)Seminar: Sustainable development and climate mitigation in a neoliberal world | *Canvas:*Seminar*:* Finley-Brook and Thomas (2011);Klein (2014) Part three | Due: Candidacy Paper – First complete draft due to faculty |
| Feb. 18 | Tentative: Ocean Acidification Field Trip to Taylor Shellfish—all day! AND/OR Day Trip to Nisqually Tribal Center |  |  |
| 8 | Feb. 23 | Lecture: Climate Policy Instruments II (Peter)Workshop: Crafting Presentations | *Canvas*:Reading TBA |  |
| Feb.24 | Lecture: Human Dimensions of Climate Adaptation (Shangrila)Seminar: Vulnerability and Resilience in climate adaptation | *Canvas:*Reading TBA;Seminar: Grossman and Parker (2012) |  |
| 9 | Mar. 1 | Lecture: The Political Economy of Climate Policy (Peter)Seminar: what are the obstacles to climate policy? | *Canvas:*Skocpol et al. |  |
|  | Mar. 3 | In class final examDebriefing the Climate Case Study (Peter, Erin, Shangrila) |  | Final exam |
| 10 | Mar. 8 | Candidacy paper presentations |  | Due: Candidacy Paper  |
| Mar. 10 | Candidacy paper presentations |  | Due: Portfolio |