

Case Studies and Thesis Research – Syllabus  
Fall 2014

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**Class times:** Tues. & Thurs., 6 – 10 PM; Sem 2 D1105; Seminar rooms (D2105, D2107)

Objectives

This final, core course in the MES Program has five major objectives:

- To develop a broad understanding of research design and the research process as students make choices about their own research plans;
- To develop an understanding of a variety of research methods used by professionals across environmental science and studies fields and in further graduate training;
- To appreciate how knowledge in a field evolves by building upon previous research;
- To complete a literature review to guide their own research framework and study design; and
- To prepare a prospectus to guide thesis research with faculty and finalize with a thesis reader.

Format

The first few weeks of the program will focus on skill building. Using one primary textbook and selected readings from other books, articles and media, we will focus on those skills necessary for reading, understanding, and designing research. Workshops will be offered to develop a variety of student skills related to the design and conduct of research. We will also review the MES Thesis Prospectus and help students being to identify a thesis topic or develop on what they might already be working to address.

In weeks three through eight, we will examine different research cases in depth (major themes include Climate/Energy/Forest Management), which will be drawn from refereed journals, news outlets, and reports. For case studies one and two, will read a central research paper and several relevant auxiliary papers and published articles. For the final cases, we will read recent MES theses and review the breadth and scope of previous research related to climate, forest and energy topics. For all cases, students will work through structured assignments designed to critically evaluate the research. This will involve coming to grips with the authors' formulation of the research question; identifying independent and dependent variables; structuring research methods (the selection of analytical tools); placing the research in its intellectual, disciplinary, environmental, and political economic context; selecting data and evidence; framing the presentation; and developing text and graphics to communicate the findings. We will link the discussions to the issues embedded in the thesis prospectus. As we move through the cases, we will provide progressively less faculty guidance on how to complete the analysis; in this way students will gain the independent capacity to think like a researcher. Week nine will be entirely devoted to helping each student finalize the thesis prospectus. In week ten, students will each defend their individual prospectus in front of the class.

### Assignments

Seminar Facilitation – During the first seminar students will sign up to co-facilitate one seminar during the quarter. Facilitation requires preparation of opening remarks to set the assigned readings into a wider context and to lead into a productive discussion. It also requires monitoring the discussion to make sure that it is on track, incisive, and educational, and that there is an equitable balance of participation by all students.

Case study analysis forms – During selected seminars and at the South Sound Science Symposium, students are required to submit completed “12-step” worksheets for every research article or thesis or presentation (Symposium) assigned that week. **Please adhere strictly to the instructions** in Locke “*Reading and Understanding Research*”, which will be available on Moodle.

Applications of readings to prospectus – There will be periodic writing assignments drawn from the text, *Research Design*, which will allow you to apply text material to your particular prospectus.

Literature review – In order to get a head start on the thesis, students will be required to write a literature review that will form the basis of an early chapter in their thesis. This will be due in class on **November 13**. We will provide feedback, but beyond this date, you will work with your assigned thesis reader to complete the final Literature Review as a chapter of your thesis.

Thesis Prospectus – On Tues, **December 9**, students will submit their Thesis Prospectus as the final writing assignment. (**Students will have been working on their prospectus during the entire quarter, in consultation with Case Studies faculty and in the final drafts with an assigned thesis reader**). In week 10, each student will be required to present the prospectus in class, to demonstrate preparedness to begin thesis research.

### Cases

The cases developed in weeks three through seven will illustrate important research topics and methods in environmental issues, focusing on the following topics:

- Interdisciplinary connections between Climate/Energy/Forest Ecology and Management
- Energy Infrastructure: the Human Costs
- Analysis of several recent MES thesis projects (depending on student interest but focused on the themes of the program)

### Texts

*Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, Fourth Edition.  
John W. Creswell. Sage Publications, 2013. ISBN: 1452226105.

*All readings other than the textbook will be posted as pdf documents on Moodle. Each research article will be accompanied by associated articles that will be required reading for each case.*

### 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, completed by you with original ideas and writing 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, or evidence of plagiarism.
- All students are required to participate in an evaluation conference with their seminar instructor during the 11<sup>th</sup> week, bringing with them a draft self-evaluation and a faculty evaluation or entering these online prior to the evaluation so that faculty can see they are completed.
- Alternatively, the faculty evaluation may be submitted to Program Secretary Pam Udovich (Lab I 1020), for her to keep until after the faculty member has filed the student evaluation. You are only required to write a faculty evaluation for your seminar instructor but evaluations of the other Case Studies faculty members would be appreciated. These should be delivered to those other faculty members.

### Detailed Weekly Schedule

Week	Date	Activity	Reading
1	Tue-30-Sep	<b>Introductions:</b> to Case Studies, Faculty, & Students <b>Lectures:</b> Dina Roberts and Kathleen Saul Introduction and Overview of Course Themes <b>Seminar:</b> Seminar expectations and Discussion of Readings	IPCC WG3 SMP, Davis 2010, Matthews 2013, Sardar Sarovar Project Readings
	Thu-2 Oct	<b>Workshop:</b> Understanding the <i>Thesis Prospectus</i> and thesis topic brainstorm. <b>Lecture:</b> Peter Dorman, MES Core Faculty <b>Seminar:</b> Seminar on Creswell	Creswell Ch.1, Dorman - Evolving Knowledge
2	Tue-7-Oct	<b>Library work:</b> (1) library research workshop; (2) Zotero (Advanced) citation management workshop in Lib Rm 2619; conduct your literature search in-class assignment <b>Lectures:</b> Shangrila Wynn, MES Core Faculty <b>Seminar:</b> Creswell Ch. 2 & 3	Creswell Ch. 2 & 3, Wynn
	Thu-9-Oct	<b>Lecture:</b> Ethical considerations and procedures in research – John McLean, Human Subjects Review <b>Guest thesis reader:</b> Erin and Kevin <b>Workshop:</b> Thesis Brainstorming	Creswell Ch. 4, Ethics in Research and HSR handouts, Locke – Selected Readings
3	Tue-14-Oct	<b>Lecture:</b> Kathleen – Energy Infrastructure: the Human Cost <b>Seminar:</b> Case Study Reading	Case Study 1 reading packet on Moodle

3	Thu-16 Oct	<b>Lecture:</b> Kathleen <b>Seminar:</b> Case Study – Energy Infrastructure <b>Due: Thesis Prospectus Assignment #1</b>	Case Study 1 reading packet on Moodle
4	Tue-21 Oct	<b>Lecture:</b> Dina <b>Seminar:</b> <i>Case 2</i> - Forests and Climate, plus analysis of central research	Case Study 2 reading packet on Moodle
	Thu-23 Oct	South Sound Science Symposium (daytime) – all students expected to attend en lieu of class	<i>No class</i>
5	Tue-28 Oct	<b>Lecture:</b> Dina –Conducting Interdisciplinary Science <b>Seminar:</b> Forests and Climate Debates <b>Due: Literature Review Outline or “Map”</b>	Case Study 2 Finish reading on Moodle
	Thu-30 Oct	Case Study 3: PNW Carbon Accounting Debates: Pros and Cons of Fossil Fuel Shipments through PNW, watch Momenta Documentary	Sightline Documents,
6	Tue-4 Nov	Peer Review of Literature Review Draft – Assign Reviewers based on topics Survey Students about Reader Preferences	MES Theses Readings TBD
	Thu-6 Nov	<b>Due: Thesis Prospectus Assignment #2</b> Dina Lead: Critiques and Discussion of Cases Check-ins on Peer Comments <b>Due Monday 10th</b>	Peer Review of Literature Review
7	Tue-11 Nov	<b>Veteran’s Day – NO CLASS</b>	Nov. 12 Assign Readers
	Thu-13 Nov	<b>Report Reader Assignments</b> <b>Seminar:</b> Finalizing thesis prospectus (in topical groups, not seminar groups) <b>Due: Preliminary literature review</b>	Announce Reader /Student Pairings
8	Tue-18 Nov	<b>Workshop:</b> Strategies for writing, formatting, and publishing thesis research, Rudi’s words of wisdom Data Presentation and Graphing	
	Thu-20 Nov	<b>Lecture:</b> Guest Lecture Rhys Roth <b>Workshop:</b> Data organization & management in collaborative research <b>Due: Prospectus Assignment #3</b>	
	24-29 Nov	Thanksgiving Week—No classes	
9	Tue-2 Dec	Guest Lecture – Julio Appling from Lewis and Clark College, Communicating Science in the 21 <sup>st</sup> Century	
	Thu-4 Dec	Class format TBD based on student input – One on One Practice sessions for Thesis Presentations with Faculty	
10	Tue-9 Dec	<b>Due: Final Thesis Prospectus</b> Thesis Prospectus Defense	
	Thu-11 Dec	Thesis Prospectus Defense	
	15-19 Dec	Evaluation Week	