

## Case Studies and Thesis Research Syllabus

Fall 2016

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**Class times:** Tues. & Thurs., 6–10 PM in Sem 2—lectures B-1105; seminars E-3107 & E-3109

### Office Hours

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

### Program Objectives

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

- to develop a broad understanding of research design and the research process as students make choices about their own research plans;
- to understand how a student's thesis research builds upon and fills gaps identified in previous research;
- to complete a literature review to guide each student's research framework and study design;
- to develop skills required to write a thesis/academic paper using examples from the published literature and previous MES theses;
- to help students prepare a prospectus to guide their thesis research with a selected reader; and
- to improve communication of academic research to a broad audience via posters and oral presentations.

### Format

The first half of the program will focus on building skills needed for completing a draft prospectus (due to the faculty Thursday of week 4). We will use textbooks, published research, and class workshops to assist students in developing their research questions, finding key source materials, identifying a research methodology that can be used to help answer their research question, and beginning work on the literature review for their theses.

The second half of the class broadens the scope somewhat, covering topics pertinent to thesis research in general: handling data, composing the results and discussions sections of a paper, writing an abstract, and presenting work in a concise but understandable fashion to a broad audience. We will examine effective techniques used in scientific writing. As in the first half of the class, discussions of examples chosen from the published literature and from past MES theses, along with guest speaker presentations, will help students master the skills needed to move from the proposal stage to doing research and writing about this process.

In week 10, students will present their prospectus material, in the form of a poster, to the entire class.

### Cases

Peer-reviewed journal articles typically present research as a neatly packaged story that unfolds in a linear manner. However, most of the time, this is far from the truth! Even the execution of well-thought-through research projects can be a messy, iterative process, often taking unexpected twists and turns, to which the researcher then has to adapt. The faculty team wishes to expose Case Studies students to the behind-the-scenes view of doing research, to better equip students to do research.

As a consequence, Case Studies will feature several guest speakers from a variety of disciplines who will be demonstrating different research approaches in the environmental sciences. Each speaker will present a short case study of an environmental problem that they have worked on. Although they will make a case for why this is a significant problem that needs to be addressed, the bulk of their presentation should focus on describing their methodological approach, including this behind-the-scenes perspective. Speakers will highlight how they made decisions about the methodology they chose, including the strengths and limitations of the approach, and any positive and negative consequences of these methodological decisions (if applicable). Speakers will also describe obstacles they encountered as they planned/conducted their research, and how they overcame these obstacles or modified their research plans. Although speakers are encouraged to share a few key results from their research with the class, the bulk of the presentations will be on what it is like to do research in their field. Speakers will include core MES faculty members and candidates interviewing for the new MES hire in Environmental Social Science.

### Key Thesis Assignments

(Also see “Timeline of Important Dates in Case Studies” on the final page of this syllabus.)

Thesis Prospectus – Students will be working throughout the quarter on developing their thesis prospectus. Students are encouraged to consult with MES faculty throughout the process, particularly those with whom they share research interests or methodological similarities and, later, their assigned thesis reader. The first draft thesis prospectus is due to the Case Studies faculty on Thursday of week 4; however, there are several supporting assignments that are due before this date. The final version of the prospectus will be due to the faculty and to the students’ readers Thursday, Dec. 1 (week 9). Tuesday of week 10, each student will be required to present their ideas to the class in the form of a poster and brief discussion of their proposed work. This will be preceded by a short oral presentation of the significance of their research question during Week 6.

Preliminary literature review – Students will be required to write a preliminary literature review that will provide material for part of their MES thesis. An outline of the literature review will be due in class during week 3. A final draft of the literature review will be due in class on Tuesday, Nov. 15 (week 8).

Portfolio: Portfolios will be submitted on December 8 – either in class or electronically, depending upon the preference of your seminar faculty member. These should be carefully organized, professional-quality portfolios representing all of your work for the quarter. Each student’s portfolio should be divided into sections and labeled to indicate contents (e.g., class

notes, notes on assigned readings, research notes, assignments with instructor's written comments, self-assessment of prospectus presentation, etc.). Also include your draft self-evaluation. Don't forget to put your name on the outside cover.

Thesis Journal: Students are required to maintain a thesis journal, using a three-ring binder to keep research papers and notes related to the different sections of the thesis. For example, in this program, we will be discussing how to write key components of the thesis (literature review, introduction, methods, results, discussion). Students should make dividers for each of these sections so that the lessons they've learned from Case Studies are easily retrievable later on, during thesis writing. Students should also jot down any inspirational thoughts or ideas for the thesis that arise throughout the quarter. It is expected that you will continue to build and use this journal in coming quarters, until your thesis is completed.

#### Required Texts

*The Literature Review: A step-by-step guide for students*, **Second Edition**. Diana Ridley, Sage Publications, 2012. ISBN: 978-1446201435.

*Writing Science: How to write papers that get cited and proposals that get funded*. Joshua Schimel. Oxford University Press, 2012. ISBN: 978-0-19-976024-4.

Note: We did not order copies of this text; the library has an electronic version. Others can be found on line.

*Research Design: Qualitative, quantitative, and mixed methods approaches*, **Fourth Edition**. John W. Creswell. Sage Publications, 2013. ISBN: 978-1452226101.

*The Craft of Research*, 3<sup>rd</sup> Edition. Wayne C. Booth, Gregory G. Colomb, and Joseph M. Williams. University of Chicago Press, 2008. ISBN: 978-0226065663

#### Recommended Text

*The Elements of Style*, 4<sup>th</sup> Edition. William Strunk, Jr., E. B. White. Longman, 1999. ISBN: 978-0205309023.

*All readings other than the required textbooks will be posted as PDF documents on Canvas.*

#### Credit and Evaluation

Partial credit is not awarded in the MES Program. No incompletes can be awarded for core classes like Case Studies. 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. 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. A faculty evaluation, submitted via my.evergreen, is required but does not have to be shared with the faculty until after credits are posted.

**DETAILED WEEKLY SCHEDULE***(September 26, 2016 version; subject to revisions, to be posted on Canvas)*

<b>Week</b>	<b>Date</b>	<b>Activities</b>	<b>Readings</b>
1	Tue-27 Sep	<b>Introductions</b> to Case Studies, faculty, & students <b>Workshop I:</b> Asking a good research question <b>Workshop II:</b> How to contact organizations in pursuit of thesis research.  <b>Due:</b> Preliminary Thesis Question	Creswell, Ch. 7  Booth, Ch. 3 & 4
	Thu-29 Sep	<b>Workshop Ia (6–7:20):</b> Diagramming sources for research question (Kathleen’s students, E-3107) <b>(Due in Workshop:</b> List of 5 sources) <b>Workshop Ib (6–7:20):</b> Library databases & Zotero (Ted’s students, Computer Center, Library 2617)  <b>Workshop IIa (7:30–8:40):</b> Diagramming sources for research question (Ted’s students, E-3107) <b>(Due in Workshop:</b> List of 5 sources) <b>Workshop IIb (7:30–8:40):</b> Library databases & Zotero (Kathleen’s students, Computer Center, Library 2617)  <b>Workshop III (8:50–10:00):</b> Understanding the <i>Thesis Prospectus &amp; Thesis Handbook</i> (B-1105)	Ridley, Ch. 3 & 5  Creswell, “A Literature Map of the Research,” in Ch. 2  Booth, Ch. 5 & 6  MES Thesis Handbook
2	Tue-4 Oct	<b>Guest Speaker:</b> John McLain on Human Subjects Review <b>Potential Thesis Reader:</b> Kathleen Saul <b>Peer review:</b> Finalizing research questions <b>Seminar:</b> “Graduate students navigating social-ecological research”	Creswell, Ch. 4  seminar article posted on Canvas
	Thu-6 Oct	<b>Alumni Panel:</b> Advice for getting started on your thesis research <b>Potential Thesis Reader:</b> Ted Whitesell <b>Lecture/Workshop:</b> Literature Review  <b>Due:</b> Revised research question + 5 sources related to research question	Ridley, Ch. 4, 6, & 8  reading on Canvas (12-step)
3	Tue-11 Oct	<b>Potential Thesis Reader:</b> Miranda Mellis <b>Lecture:</b> Social science methods in environmental studies (Ted) <b>Seminar:</b> Langenfeld thesis  <b>Due:</b> Response to Questions 2, 3, and 5 from prospectus	readings posted on Canvas  Langenfeld thesis (on Canvas)

	Thu-13 Oct	<b>Potential Thesis Readers:</b> Kevin Francis & Erin Martin <b>Workshop:</b> Critiquing methods <b>Workshop:</b> Evaluate feasibility of methods (time, cost, practicality, skills/preparation, equipment, etc.).  <b>Due:</b> <u>Point-based</u> outline for literature review (see pp. 175-6, Booth)	
4	Tue-18 Oct	<b>4–5:30:</b> MES potluck, Randall Preserve <b>Guest Speaker:</b> John Kirkpatrick on research design <b>Potential Thesis Reader:</b> John Withey  <b>Due:</b> Prospectus Questions 6 and 7 (draft of methods for in-class discussion/peer review)	readings posted on Canvas
	Thu-20 Oct	<b>Workshop Ia (6–7:00):</b> Citations and plagiarism issues (Kathleen’s students, E-3107) <b>Workshop Ib (6–7:30):</b> How to make a poster (Ted’s students, Computer Center, Library 2617)  <b>Workshop IIa (8:00–9:00):</b> Citations and plagiarism issues (Ted’s students, E-3107) <b>Workshop IIb (7:30–9:00):</b> How to make a poster (Kathleen’s students, Computer Center, Library 2617)  <b>Due:</b> <u>Complete</u> draft of prospectus <i>Survey of students about reader preferences</i>	readings posted on Canvas
5	Tue-25 Oct	<b>Guest Lecture:</b> John Kirkpatrick on data collection and management <b>Workshop:</b> Scientific Writing: Telling a story with data	readings posted on Canvas  <i>Schimmel, Ch.2–5</i>
	Thu-27 Oct	<b>Workshop:</b> Sharing/reviewing thesis journals <b>Seminar:</b> Krock thesis	Krock thesis (on Canvas)
6	Tue-1 Nov	<b>**MES Faculty Candidate Visit 1***</b>  <b>Workshop:</b> Results <b>Lecture:</b> How to write a “discussion” and “conclusion” <i>Thesis Readers Assigned</i>	<i>Schimmel, Ch.6–8</i>
	Thu-3 Nov	<b>4–6:00:</b> Thesis Idea Fair (location TBA) <b>**MES Faculty Candidate Visit 2***</b> <b>Workshop:</b> Deconstructing discussion section  <b>Due:</b> Prospectus Draft 2 (to thesis reader)	<i>Schimmel, Ch. 9 &amp; 10</i>  Ridley, Ch. 10

7	Tue-8 Nov	<b>Student Presentations:</b> Research Question & Significance	
	Thu-10 Nov	<b>Workshop:</b> Brainstorming solutions to thesis problems  <b>Seminar:</b> Ely thesis	Ely thesis (on Canvas)
8	Tue-15 Nov	<b>Lecture and Workshop:</b> Writing abstracts <b>Thesis groups:</b> Bring in abstracts! <b>Workshop:</b> Figures, tables, captions, appendices, annexes  <b>Due:</b> Literature Review (to CS faculty/ reader)	readings on Canvas
	Thu-17 Nov	<b>**MES Faculty Candidate Visit 3**</b>  <b>Lecture:</b> Authorship and publication <b>Alumni Panel:</b> Published theses	Review published thesis work on Canvas; bring questions for panelists.
9	Tue-29 Nov	<b>Guest Lecture/Workshop:</b> Jean MacGregor on how to make a great presentation <b>Workshop:</b> Class discussion of presentation styles	
	Thu- 1 Dec	<b>Buffer Day</b>  <b>Due:</b> Final Prospectus (to Case Studies faculty and to reader) <b>Due:</b> Final poster, uploaded to fileshare folder called "Posters to be Printed"	
10	Tue-6 Dec	Thesis Prospectus Presentations	
	Thu-8 Dec	<b>Potluck and discussion:</b> looking ahead to remaining thesis work and how to succeed  <b>Due:</b> Portfolio due to seminar leader  <b>Due:</b> Signed Prospectus due MES Director	
	12-16 Dec	Evaluation Week <b>DO NOT MAKE TRAVEL ARRANGEMENTS THAT WILL CONFLICT WITH EVALUATION CONFERENCES.</b>	

### Timeline of Important Thesis Dates in Case Studies (CS)

Date	Due	Brief Description
Week 1: Tuesday, Sep. 27 Thurs., Sept. 29	Preliminary thesis question 5 key sources	Bring draft of preliminary research question that you hope to explore for your thesis. <i>CS Faculty feedback</i> Bring 5 peer-reviewed sources instrumental to research for 9/29 diagramming workshop
Week 2: Thursday, Oct. 6	Revised research question + 5 sources related to research question	Bring revised research question based on faculty feedback. Also bring five sources that are either the impetus for your research question, or are clearly related to the question you are pursuing. <i>CS Faculty feedback</i>
Week 3: Tuesday, Oct. 11 Thursday, Oct. 13	Answers to prospectus questions 2, 3, 5 Point-based outline of literature review	Write a 1) description of key background information needed to understand your research question, 2) more refined research question, and 3) description of significance. See prospectus. <i>CS Faculty Feedback</i> Create outline structuring the body of your literature review, following instructions for point-based outline in Booth, pp. 175–6. Cite sources to be used in each section. <i>CS Faculty Feedback</i>
Week 4: Tuesday, Oct. 18	Draft of methods (prospectus questions 6 & 7)	Write a description of the study design and methods you will use in your thesis. See prospectus. <i>CS Peer Feedback in class</i>
Thursday, Oct. 20	First <b>complete</b> draft of prospectus	Complete prospectus assignment. This will be distributed to all MES faculty and will be used to assess reader interest. <i>CS Faculty Feedback</i>  Students share research question, state thesis reader preference.
Week 6: Nov. 3	Prospectus draft 2 (to thesis reader)	Revise prospectus and turn this in to your thesis reader. <i>Note: Readers not expected to meet with students prior to receiving 2<sup>nd</sup> draft.</i>
Week 7: Tuesday, Nov. 8	In-class presentation	Presentation of research question and significance
Week 8: Tuesday, Nov. 15	Literature review (to CS faculty and thesis reader)	Turn in your first complete draft of your literature review. <i>CS Faculty Feedback</i>
Week 9: Thurs., Dec. 1	Thesis prospectus & Final poster	Final draft of thesis prospectus, turned in to both Case Studies Faculty and Thesis Reader. Upload final poster to fileshare folder called “Posters to be Printed.”
Week 10 Tuesday, Dec. 6	Presentation/ Prospectus to Director	In-class poster presentation of prospectus Dec. 6  Prospectus due in MES Director’s office by Dec. 8 <sup>th</sup> .