Course Outline
EST 797 (#37221) 1 cr

ENVIRONMENTAL STUDIES SEMINAR: RESEARCH METHODS

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SUNY College of Environmental Science and Forestry
Spring 2021, F 9:30 – 10:25 am, Bray 300

DESCRIPTION

Overview
This weekly seminar is designed to provide instructor and peer support for graduate students developing formal proposals for their thesis or dissertation research, in conjunction with participants’ primary efforts with their advisor(s) (major professors) and steering committee. All MS and PhD students are welcome; the course is most well suited for those with a human dimensions or policy aspect to their research. MPS students working on a project that requires development of a research proposal are welcome, too. For all participants, the aim is to have a research proposal completed for review and approval by the student’s steering committee by or before the end of the semester, so that data collection may commence shortly thereafter. Includes protection of human subjects training and certification.

Prerequisites
While there are no formal prerequisites, prior completion of EST 603, Research Methods and Design, or its equivalent, is recommended.

Objectives
The primary objective for this seminar is completion of a formal proposal for master's thesis or doctoral dissertation research. Support is provided, as well, toward several intermediate objectives:

- Defining a research question, clearly and succinctly;
- Reviewing prior, related scholarship on that question;
- Selecting appropriate method(s) for data collection and analysis;
- Developing a detailed plan for data collection and analysis, including practical considerations;
- Identifying all permissions required to carry out the proposed study (e.g., steering committee, partner organization, Institutional Review Board); and
- Giving an oral presentation on the research proposal, for feedback from seminar participants.

Additionally, this course is intended to help participants identify and engage in the practical and interpersonal strategies necessary for successfully launching graduate research.
Requirements
- Adhere to ESF’s COVID-19 safety requirements and protocols (see below)
- Read all required texts, in advance of the scheduled session
- Attend all class sessions & participate in class discussions
- Timely completion of all intermediate and final assignments

Recommended
- Attend all Environmental Studies Spring Seminar Series events

Expectations
- Regular communication with thesis advisor(s) & steering committee

Grading
Research proposal & presentation 50%
Intermediate assignments (8) 30%
Attendance & participation 20%

Communication
Office: Baker Lab 214
Hrs.: M 1:30 – 3:30 pm, Th 3:30 – 5:00 pm, & by appointment; via Google Meet
E-mail: <dsonn@esf.edu>; <DASonnenfeld@gmail.com>
URL: http://www.esf.edu/es/sonnenfeld

TEXT
Recommended

Bookstore
ESF Virtual Bookstore, available via myESF. For further information see: http://www.esf.edu/students/books.htm

RESEARCH PROPOSAL

Focus. The major assignment for this seminar is a completed, formal research proposal for a master's thesis, PhD dissertation, or MPS synthesis project.

Contents. Each of the following components should be included in the proposal:
- Title/ cover page
- Abstract
- Statement of problem/ research question
- Justification
- Literature review
- Formal statement of research question
- Dependent and independent variables
- Hypotheses
- Research design and methods
- Protection of human subjects
- Research schedule
- Resource requirements
- Budget
- Funding
- Bibliography
Oral presentation. Present your proposal in class, length TBA (Week 13). Submit slides digitally (PDF format), via Blackboard. (20% of assignment grade)

Completed proposal. 20 pp. maximum (double-spaced, 12 pt. Times New Roman), plus cover sheet, abstract, references, and appendices. Spelling- and grammar-checked; appropriate use of citations and references. Submit digitally (.docx format) via Blackboard, by the beginning of the regularly scheduled Final Exam period for this course. (80% of assignment grade)

Intermediate deliverables*

- Research question and abstract ........................................ Week 2
- Topic reflection .............................................................. Week 3
- Working bibliography ..................................................... Week 5
- Literature review ............................................................ Week 6
- Research methods outline ............................................. Week 8
- Research methods ........................................................... Week 9
- Human subjects protections .......................................... Week 10
- Research practicalities ................................................... Week 11
- «Draft» research proposal, including introduction .......... Week 12

* Submit digitally (in both PDF and .docx format), via Blackboard

SCHEDULE

Week 1 (Feb. 12) – Introduction

*** Participant introductions ***

Personal introduction
Program/ Advisor/ Steering committee
Research topic
Research status
What would be most helpful from this seminar?

Expectations/ assumptions

Master’s thesis – traditional format
Ch.1 Introduction*
Ch.2 Literature Review *
Ch.3 Methods*
Ch.4 Results
Ch.5 Discussion

* Included in research proposal

Master’s thesis – manuscript format
(Ph.D. dissertation – traditional & manuscript formats)
Advisor/ Steering committee

Aims of this seminar

Provide instructor and peer support for research proposal development process
Primary effort is between student, advisor & steering committee
A participatory seminar (not a lecture course)
Help participants identify practical and interpersonal strategies necessary for successfully launching graduate research

Syllabus review

Textbook
Grading
Deliverables

Selecting a Research Topic

Selecting a topic

The relationship between theory and method
What makes a problem/topic interesting?
What is researchable? Feasibility...
The 'so what?!' factor
The value of simplicity

Research question

What is a research question?
What makes a good research question?

Abstract

Elements of an abstract

RECOMMENDED:

Bui, ch 1, "Overview of the Master's Degree and Thesis"
Bui, ch 2, "Selecting a Research Topic"

OTHER:


*** Homework Assignment #1 – Research Abstract (due Fri. 2/19) ***

*** Meet w/ advisor(s) and take steps towards establishing/meeting with Steering Committee ***

Week 2 (Feb. 19) – Research Proposals

*** Discussion of research questions/abstracts (Homework Assignment #1) ***

Research proposals (review)

Why write a research proposal?
Who reads your research proposal?
What is included in the research proposal?

Approvals needed

Major professor(s)
Steering committee
Sponsoring/cooperating organization (as applicable)
Institutional Review Board (IRB)
Ch. 1 Introduction

- Research question
- Rationale
- Context (scholarly, policy, location)
- Significance
- Limitations

RECOMMENDED:
- Bui, ch 2, "Selecting a Research Topic" (review)
- Bui, ch 5, "How to Write Chapter One, Introduction"

*** Homework Assignment #2 – Topic reflection (due Fri. 2/26) ***

**Week 3 (Feb. 26) – Research Workshop #1**

*** Debrief: Topic reflection (Homework Assignment #2) ***

+ The art of successfully working with your thesis advisor(s) and Steering Committee

**Week 4 (Mar. 5) – Literature Review I**

*** Informal check-in ***

Ch. 2 Literature review

- Review of the literature
  - Identification of the scholarly/policy domain(s) in which the proposed study will be situated
  - Key scholarly/ research/ policy contributions in those domains
  - Significant debates, controversies
  - Important gaps

- Proposed study
  - Your proposed (synthesized) theoretical framework
  - The anticipated contributions that your study will make to this/ these field(s) of study

Practicalities

- Reliable sources/ accessing scholarly literature
- Identifying relevant, peer-reviewed journals
- Annual reviews/ review essays
- Bibliographical databases
- Properly citing and referencing source material

RECOMMENDED:
- Bui, ch 3, "Using the Literature to Research Your Problem"
- Bui, ch 6, "How to Write Chapter Two, Literature Review"

OTHER:


*** Homework Assignment #3 – Working Bibliography (due Fri. 3/12) ***
Week 5 (Mar. 12) – Literature Review II

*** Discussion of Working Bibliographies (Homework Assignment #3) ***

Ch.2 Literature review (review)

Review of the literature
Proposed study

Practicalities (review)

RECOMMENDED:
Bui, ch 3, "Using the Literature to Research Your Problem" (review)
Bui, ch 6, "How to Write Chapter Two, Literature Review" (review)

*** Homework Assignment #4 – Ch.2 Literature Review (due Fri. 3/19) ***

Week 6 (Mar. 19) – Research Workshop #2

*** Debrief: Ch.2 Literature Review (Homework Assignment #4) ***

Week 7 (Mar. 26) – Research Methods I

*** Check-in on overall progress with thesis research projects ***

Including update on formation/ status of Steering Committee, etc.

Research stages (review)

Overview of research methods (review)

Quantitative (multivariate) methods
Qualitative (interpretive) methods
Using available data
Multimethod and applied research methods

Ch.3 Research methods

Proposed method(s) for data collection
Justification for this/ these selected method(s)
Limitations of proposed method(s)
Measures to be taken to address/ mitigate these limitations
Proposed procedures for data coding, entry and management
Proposed procedures for data interpretation and analysis

RECOMMENDED:
Bui, ch 7, "How to Write Chapter Three, Methods"

OTHER:
Davies, Martin, & Nathan Hughes. 2014. Doing a Successful Research Project Using Qualitative or Quantitative Methods, 2nd ed. Palgrave.

*** Homework Assignment #5 – Research methods outline (due Fri. 4/2) ***

**Week 8 (Apr. 2) – Research Workshop #3**

*** Discussion of research methods outline (Homework Assignment #5) ***

Why choose that/those particular method(s)? Implications of this choice?
Ready for next steps in research project development?
Any changes in research question?
Any questions? challenges? problems?
Reflections on the research project as a whole

*** Homework Assignment #6 – Ch.3 Research Methods (due Fri. 4/9) ***

**Week 9 (Apr. 9) – Human Subjects Protection**

*** Debrief: Ch.3 Research Methods (Homework Assignment #6) ***

Foundations (review)

Who are 'human subjects'? (definition)
Why do they need protection, and from whom?
How are they protected, and by whom?
Federal guidelines and regulations, incl. the Belmont Report
Professional codes of conduct
SU/ ESF Institutional Review Board procedures

Applications

RECOMMENDED:
Bui, ch 4, "Conducting Ethical Research"

OTHER:
Singleton & Straits, Approaches to Social Research, ch 3

*** Homework Assignment #7 – Human Subjects Protection (due 4/16) ***

**Week 10 (Apr. 16) – Research Nuts & Bolts**

*** Discussion of human subjects protection (Homework Assignment #7) ***

Resource requirements & provision

Projected expenses/ overview of options
Staffing (e.g. research assistants)
Materials and equipment needed
Testing and data analysis expenses
Transportation, accommodations, other expenses

Proposed budget
Projected expenses (required & optional), itemized & (sub-) totaled
Week 11 (Apr. 23) – Research Workshop #4

*** Discussion of research practicalities draft (Homework Assignment #8) ***

*** Homework Assignment #9 – Research Proposal draft (due Fri. 4/30) ***
  + Including draft introduction

Week 12 (Apr. 30) – Research Workshop #5

*** Debrief: Research Proposal draft (Homework Assignment #9) ***

Week 13 (May 7) – Presentations

Finals Week – Finalized Research Proposals Due

NOTICES

COVID-19 testing & safety requirements

ESF is committed to the health and safety of every one of its students, faculty, and staff, and members of the Syracuse community. Toward this end, all students are required to participate in surveillance testing between February 1 – 5, and weekly thereafter during the Spring 2021 semester, at Syracuse University’s Stadium Testing Center (Gate N). Individuals identified as COVID-19 positive will be contacted and directed to receive a clinical diagnostic test through their health care provider. Additional ESF COVID-19 safety requirements include:

- Wear a face mask or covering while on campus and in this class*;
- Maintain a 6 ft. distance in the classroom;
- Wear a face mask or covering off campus where physical distancing measures cannot be maintained;
- Wash your hands often & cover coughs and sneezes;
- Monitor your health daily;
- Self-report symptoms, possible exposure, positive test results;
- Stay home when you’re sick; and
- Adhere to any directive to quarantine or isolate.

* Individuals unable to wear a mask for medical reasons should contact Syracuse University’s Center for Disability Resources (CDR) via their website at https://disabilityresources.syr.edu, by phone 315.443.4498, or email disabilityresources@syr.edu.
Fire alarm procedures

If a fire alarm sounds, while staying 6 ft. apart, exit the building immediately to the designated area for this course. Maintain physical distancing but stay together as a class, until released. Take all personal belongings with you, including electronics, backpacks, coats, and keys. Please let your instructor know in advance if you might have any special needs in case of a building evacuation. For further information, contact the ESF Division of Student Affairs, 110 Bray Hall, tel. 315.470.6660, or email studenthelp@esf.edu.

Accommodations

ESF works closely with Syracuse University’s Center for Disability Resources (CDR) in assisting students with learning and physical disabilities. If you think you may need accommodations in this course related to a disability, you may contact the ESF Division of Student Affairs, 110 Bray Hall, tel. 315.470.6660, or email studenthelp@esf.edu, for assistance with the process. You may also contact CDR directly via their website at https://disabilityresources.syr.edu; or call 315.443.4498 or email disabilityresources@syr.edu for more detailed information. CDR is responsible for coordinating disability-related academic accommodations and will work with the student to develop an access plan. Since academic accommodations may require early planning and generally are not provided retroactively, please contact ESF’s Division of Student Affairs or CDR as soon as possible to begin this process.