ENVS 83: Environmental Social Science Research Methods

Instructor: Michael Cox
Class periods: T-Th 10:00-11:50
Class location: 028 Haldeman
Office location: 105 Fairchild
Email: Michael.e.cox@dartmouth.edu
Office hours: X-hours
X-hours: W 3-3:50

Course description and background

This course is designed to train students in some of the skills that are important in research in human-environment interactions. Such interactions include humans extracting important renewable and non-renewable natural resources such as fish and forests, as well as producing wastes, such as greenhouse gases. This course is particularly recommended for students planning to conduct graduate-level research or senior theses related to human-environment interactions.

The course is oriented around one major activity, which is an individual project in which students will develop research proposals to answer questions regarding some aspect of human-environment interactions.

Readings

Cox, M. 2015. A basic guide for empirical environmental social science. Available at http://www.ecologyandsociety.org/vol20/iss1/art63/


Course policies

Academic honor: The Dartmouth Academic Honor Principle applies in this class (see http://www.dartmouth.edu/judicialaffairs/honor/index.html).

Student needs: Students with disabilities enrolled in this course and who may need disability-related classroom accommodations are encouraged to make an appointment to see me before the end of the second week of the term. All discussions will remain confidential, although the Student Accessibility Services office may be consulted to discuss appropriate implementation of any accommodation requested.

Religious observances: I realize that some students may wish to take part in religious observances that occur during this academic term. Should a religious observance conflict with your participant in the course, please come speak with me before the end of the second week of the term to discuss appropriate accommodations.
Expectations, Grading and Assignments

Your grade will be based on the following components:

Class participation (10%)
Class participation will be evaluated based on your attendance to class periods and your level of activity within those periods. In a course this size I take this part of student evaluation seriously.

In-class midterm (15%)
There will be one in-class midterm in the second half of the term. This will be cumulative and cover all of the assigned readings for the course.

Take-home midterm (15%)
There will also be a take-home midterm in the second half of the course.

Research proposals (60%)
The primary project in the class will consist of a research proposal, which you will essentially be working on throughout the term. This project is broken down into many assignments, listed below. The due date for each assignment is listed below in the schedule. Each assignment is due by 5pm on the date indicated. Please hand in the assignments by emailing them directly to me. Additional information on my expectations for each assignment will be discussed in the days leading up to the due date for that assignment.

- Research question draft 1 (5%)
- Research question draft 2 (5%)
- Literature review (5%)
- Sampling draft (5%)
- Measurement draft (5%)
- Analysis draft (5%)
- Presentations (10%)
- Proposal final draft (20%)
Course Schedule

March 31: Introduction to the class
   No reading

April 2: How to start a research project, and basic scientific terminology
   Rubric, “introduction” and appendix 2
   Ecology, chapter 1

April 7: Research design and experimentalism vs. observationalism
   Rubric, “research design”
   Ecology, chapters 2 and 4

April 9: Research design, induction vs. deduction, and review
   Rubric, appendix 3
   Assignment: Research questions draft 1

April 14: Sampling
   Rubric, “sampling”
   Fowler, chapters 3 and 4

April 16: Measurement: basics
   Rubric, “measurement”

April 21: Measurement: surveys
   Fowler, chapters 5 and 6

April 23: Review day
   Assignment: Research questions draft 2

April 28: Quantitative analysis
   Rubric, “types of quantitative analysis”
   Ecology, chapter 4

April 30: Qualitative analysis
   Rubric, “types of qualitative analysis”
   Assignment: Literature review

May 5: Guest lecture

May 7: Acequia research in New Mexico
   Rubric, appendix 4
   Assignment: Sampling draft

May 12: Evaluative criteria
   Rubric, “evaluative criteria” and “relationships among the criteria”

May 14: Review day and work on research proposals
   Assignment: Measurement draft
May 19: In-class midterm

May 21: Work on research proposals
   Assignment: Analysis draft

May 26: Discussion of take-home midterm and work on research proposals

May 28: Guest lecture or no class.
   Assignment: Take-home midterm

June 2: Final presentations

PROPOSAL FINAL DRAFT DUE JUNE 5th AT 5PM