

## ESP 178 Applied Research Methods

### SYLLABUS

Winter 2020

- Lectures:** TTh 1:40 – 3:00  
Hoagland 168
- Sections:** W 1:10 – 2:00 Wickson 2124  
W 2:10 – 3:00 Wickson 2124  
W 3:10 – 4:00 Wickson 2120B
- Instructor:** Susan Handy  
Office: 2138 Wickson Hall  
Office hours: W 3:00 – 5:00 or by appointment  
e-mail: [slhandy@ucdavis.edu](mailto:slhandy@ucdavis.edu)
- Teaching Asst:** Sam Roodbar  
Office: 2143 Wickson  
Office hours: W 11:00 – 1:00 or by appointment  
e-mail: [sroodbar@ucdavis.edu](mailto:sroodbar@ucdavis.edu)

### Course Objectives

Of the millions who watch sports events, a vanishingly small percentage can play any of the games they watch with anything approaching professional skill, yet virtually all understand the rules well enough to appreciate what they see. The public must then, in the same way, understand science if it is to react intelligently. They must at least be capable of following the game, even if they can't play it.

- Isaac Asimov, 1980.

The purpose of this course is to train students in the fundamentals of research design in the social sciences. Many students will take jobs after graduation where they will, occasionally or frequently, oversee the research process – developing problem statements, issuing calls for proposals, evaluating proposals, choosing a research team, monitoring the research process, using research results in the policy process. Some students will return to graduate school, where they will receive further training in the scientific research process, and may choose a career in research in one field or another. Whatever job students take, they are likely to make use of research produced by others to understand problems and evaluate potential solutions. In fact, all students are consumers of research, whether they realize it or not, throughout their daily lives. With the understanding of research design that students gain through this course, they can be more critical and more effective as both consumers and producers of social science research.

The first half of the course will provide an introduction to the concepts and structure of scientific inquiry. You will develop an understanding of the fundamental distinction between inductive and deductive reasoning, the processes of conceptualization and measurement, the concepts of validity and reliability, and the basic elements of research design. In other words, this part of the course will teach you how to turn a general research question into valid measures of the real world. The remainder of the course will provide an introduction to ways of collecting, analyzing, and presenting data. You will learn the basics of sampling, survey design, qualitative methods, field research, and using census data and other secondary sources, and we will discuss key issues in analyzing quantitative and qualitative data. By the end of the course, you will be conversant in the language of social science research and know what questions to ask of yourself and others in the design of research projects and the use of research results.

### **Assignments and Grading**

You will complete three kinds of activities on which you will be graded: **in-class exercises**, a **research proposal**, and **two midterms**. Lectures, readings, and discussion sections are designed to help you successfully complete these activities – the more that you do, the more that you’ll learn, and the better grade you’ll earn. Assignment prompts are posted in Canvas, and completed assignments will be submitted via Canvas.

#### **In-Class Exercises:**

For the most part, **Tuesday sessions** will be devoted to **lectures**, and **Thursday sessions** will be devoted to **in-class exercises**. The purpose of these exercises is to improve your understanding of the concepts you are reading about and to give you hands-on experience with applying these concepts. In these **exercises**, you will work in small groups of **three to four students** to complete an assigned task during a portion of the class period.

For each exercise, the members of the group will choose **specific roles**, as described in a separate handout: **facilitator**, **recorder**, and **reporter**. At the end of the period, the reporter for randomly selected groups will give a brief summary of their group’s results, and the class will discuss issues that arose during the course of the exercise. The recorder for each group will turn in their notes, with the names on the group members, to the instructor at the end of the class. You will be graded on the percentage of exercises in which you participate.

#### **Research proposal:**

You will prepare a research proposal over the course of the quarter. The purpose of the research proposal is to give you experience in developing a research question, designing a study to address that question, and clearly and concisely describing the proposed study. This assignment will be divided into five stages, designed to help you work towards the final proposal and to enable feedback from the instructors along the way. The assignment is described in more detail in a separate handout, available in Canvas. Each stage of the assignment will be separately graded.

#### **Midterms:**

Two midterms will also be given. The purpose of these exams is to ensure that you have acquired an adequate understanding of the material covered in the class. The **first midterm** will be given in the sixth week of the quarter and will cover material from **Week 1 through Week 5**. The **second midterm** will be given during the last class session of the quarter and will cover the material from **Week 6 through Week 10 of the course as well as some material covered on the first midterm**.

### Sections:

Attendance at sections is mandatory. Activities during sections will aim at two goals: reviewing course materials from the previous week and helping you develop different aspects of your research proposals. In a couple of instances, **selected readings from journal articles will be assigned** before discussion section and made available in Canvas. On these days, please bring copies of articles to your discussion section.

### Grading:

The breakdown in grading for these assignments is as follows:

- In-class exercise participation: 10%
- Section participation: 10%
- Research proposal:
  - Question and background: 5%
  - Literature review: 10%
  - Design and measures: 10%
  - Data collection and budget: 10%
  - Proposal: 20%
- Exams:
  - Midterm 1: 10%
  - Midterm 2: 15%

Papers should be submitted via Canvas. Late papers will NOT be accepted for full credit except with acceptable documented reason, prior permission, or because of a medical emergency. A late paper without an acceptable written excuse will lose one grade step per day for each day it is late. Rewrites will not be accepted; you have time to meet with us for clarification and/or explanation prior to the assignment due date and you should avail yourself of this opportunity.

### Readings

The course textbook is available here:

[http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1002&context=oa\\_textbooks](http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1002&context=oa_textbooks)

This text will be your key reference for the fundamental concepts of research that we'll be covering in the first half of the course. Lecture notes will be an important supplement to the textbook and will be posted in Canvas, along with any Powerpoint presentations I use. I will also be assigning other readings that will be posted in Canvas.

### Expectations

I expect you to attend class, read assigned chapters and articles, participate in in-class exercises and discussion sections, and submit an original proposal that reflects your own original work. Plagiarism, the intentional or inadvertent use of someone else's work without appropriate credit, will not be tolerated! Cutting and pasting material from the web and claiming it as one's own is a serious offense that merits disciplinary action. Lots of useful websites are available to help you determine when citations are appropriate and to avoid accidental plagiarism (e.g., this site at UCD: <http://sja.ucdavis.edu/avoid.htm>). I encourage you to discuss your work with your classmates in discussion sections and outside of class, but the work you submit must be your own. Please familiarize yourself the [Code of Academic Conduct](#).

Learning is ultimately your responsibility, but we have an obligation to facilitate that learning by providing a coherent guide to the course material and assigning activities that give you an effective opportunity to apply that material. You can expect us to provide clear direction and timely feedback on assignments and to provide adequate response to questions and concerns. You can expect us to be fully prepared for class sessions and available during office hours.

Students who require special accommodations because of disabilities should visit the Student Disability Center (<http://sdc.ucdavis.edu/>) at the beginning of the quarter. We will not be able to provide for special accommodation unless the student has first gone through the process required by the DRC. Students who will be missing class or cannot meet assignment deadlines for religious or medical reasons or for essential family business should let us know as far ahead as possible and must provide written documentation if we request it.

### **Schedule**

The schedule for the course is outlined below. Classes will alternate between lectures and in-class exercises. We expect you to complete assigned readings **before** each class. Discussion sections will focus on reviewing the material covered in class that week, preparing for the midterms, and building the skills necessary to complete the proposal assignment. Due dates for the five stages of the proposal assignment are evenly spread at two week intervals across the 10 weeks of the quarter. The first midterm is scheduled for February 11th, and the second midterm is scheduled for March 13th. Changes in the schedule will be announced in class and posted in Canvas.

## ESP 178 Schedule - *subject to change*

Date	Day	Topics	Readings	Proposal Due Dates
1/7	Tues	Introduction	Cul-de-sacs proposal	
1/8	Wed	<i>"What is science?"</i>		
1/9	Thurs	Conceptualization	Chapter 1 thru p. 6 Chapter 2 Chapter 3 p. 20-24 Chapter 4 thru p. 28	
1/14	Tues	Exercise: Conceptualization	Schneider article	
1/15	Wed	<i>Discussion of topics</i>		
1/16	Thurs	Exercise: Operationalization	Chapter 6 thru p. 47 Chapter 7 p. 55-61	
1/21	Tues	Research design and causality criteria	Chapter 5 Schutt reading 1	1. Question and background
1/22	Wed	<i>Lit searches</i>		
1/23	Thurs	Exercise: Research design and causality	Ecological Fallacy explanation from UC Berkeley; "The ecological fallacy rides again"	
1/28	Tues	Experiments	Chapter 10 (stop after block designs) Schutt reading 2	
1/29	Wed	<i>Reading articles</i>		
1/30	Thurs	Exercise: Experiments		
2/4	Tues	Sampling	Chapter 8; Course handouts	2. Literature review
2/5	Wed	<i>Review for midterm</i>		
2/6	Thurs	Exercise: Sampling		
2/11	Tues	<b>Midterm 1</b>		
2/12	Wed	<i>Human subjects/IRB</i>		
2/13	Thurs	Survey research	Chapter 9 (skip "interview survey" section); Chapter 16; Schutt handout on pros and cons of survey methods	

<b>Date</b>	<b>Day</b>	<b>Topics</b>	<b>Readings</b>	<b>Proposal Due Dates</b>
2/18	Tues	Exercise: Survey design	Fowler, 1992; Dillman, 1991; Dillman and Bowker, 2001	3. Research design
2/19	Wed	<i>Reading articles</i>	<i>TBD</i>	
2/20	Thurs	Exercise: Scales		
2/25	Tues	Data analysis	Chapter 14 Chapter 15 thru p. 134	
2/26	Wed	<i>Ex: Survey workshop</i>		
2/27	Thurs	Exercise: data analysis		
3/3	Tues	Observations, secondary data, and case studies	Chapter 11	4. Data collection instrument and budget
3/4	Wed	<i>Ex: census data</i>		
3/5	Thurs	Qualitative research and analysis	Chapter 9, p. 78-80 Chapter 12, p. 106-111 Chapter 13	
3/10	Tues	Course wrap-up and review	Article for midterm	
3/11	Wed	<i>Proposal review</i>		
3/12	Thurs	<b>Midterm 2</b>		
3/19	Thurs	<b>Proposal due 10 am</b>		5. Full proposal