

CRD 151—INTRODUCTION TO MIXED-METHODS IN THE SOCIAL SCIENCES

Fall 2019

CRN: #37083; #62810; #62812

Professor

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CATALOGUE DESCRIPTION

Basic training in research design with an emphasis on quantitative data analysis, specifically, descriptive and inferential statistics with social science applications. Topics include measurement, tabular and graphic displays of data, estimation, hypothesis testing, and linear regression. In addition, we will cover topics ranging participant observation, survey methods, and interview.

EXTENDED COURSE DESCRIPTION

The purpose of this course is to provide students with a basic introduction to empirical applications in the social sciences including research design, data collection, and analysis. Through readings and assignments, students will advance their understanding of such applications and their ability to critically evaluate claims based on statistical data. The course facilitates these learning outcomes by strengthening numeracy skills as they relate to nature of research design, analysis, and interpretation.

The major objective of this course is to provide students with basic training in quantitative data analysis. Emphases include descriptive and inferential statistics. Students will familiarize themselves with statistical techniques and software (PSPP—free version of SPSS) to organize, test, and evaluate empirical data. Student progress will be evaluated on the basis of three exams (the final exam is comprehensive), a research presentation, and homework assignments. Other course goals include developing an appreciation of statistics, computational competence, and the ability to read the professional social science literature. Students will advance their numeracy skills as they relate to media claims by reading Best's book, *Damned Lies and Statistics*.

COURSE LEARNING OUTCOMES

1. Develop an appreciation and understanding of the crucial linkages between theory and empirics;
 - Assessed via exams, assignments, and research presentation.
2. Acquire basic training in quantitative and qualitative data analysis techniques;
 - Assessed via exams, assignments, and research presentation.
3. Learn to use PSPP software to perform data entry, organization and analysis;
 - Assessed via exams, assignments, and research presentation.
4. Critically evaluate social statistics from various media and scholarly sources;
 - Assessed via exams, assignments, and research presentation.

COURSE OBJECTIVES

1. To generate a critical awareness of methods and issues of political, sociocultural, economic, and environmental forces and how they relate to community development processes at the micro, mezzo, and macro level of analyses.
2. This course also uses theories and concepts of the social sciences to investigate real world problems.
3. To extend skills set for data analysis and visualization of data.
4. To expand an understanding of social uses of statistics in scholarly works and public media.

PROGRAM LEARNING OUTCOMES

This course addresses the following program outcomes (see for more details: <https://www.ucdavis.edu/majors/community-and-regional-development/>):

1. Students will be able to address how social scientific methods may be applied to the study of human behavior, organizational processes, and institutional processes.
2. Students will be able to use theories and concepts of the social sciences to investigate real world problems.
3. Students will develop data analytic skills using statistical software.
4. Students will develop a critical awareness, which they can apply to texts in order to develop skills of critical consumption of knowledge.

Table 1. Program learning outcomes, course learning outcomes, course objectives, and assessment descriptions.

Program Learning Outcomes	Course Learning Outcomes	Course Objectives	Assessment Description
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1. Students will be able to address how social scientific methods may be applied to the study of human behavior, organizational processes, and institutional processes.	Develop an appreciation and understanding of the crucial linkages between theory and empirics	To generate a critical awareness of methods and issues of political, sociocultural, economic, and environmental forces and how they relate to community development processes at the micro, mezzo, and macro level of analyses.	Assessed via exams, assignments, and research presentation
2. Students will be able to use theories and concepts of the social sciences to investigate real world problems.	Acquire basic training in quantitative and qualitative data analysis techniques.	This course also uses theories and concepts of the social sciences to investigate real world problems.	Assessed via exams, assignments, and research presentation
3. Students will develop data analytic skills.	Learn to use statistical software to perform data entry, organization and analysis.	To extend skillset for data analysis and visualization of data.	Assessed via exams, assignments, and research presentation
4. Students will develop a critical awareness, which they can apply to texts in order to develop skills of critical consumption of knowledge.	Critically evaluate social statistics from various media and scholarly sources	To expand an understanding of social uses of statistics in scholarly works and public media.	Assessed via exams, assignments, and research presentation

PRE-REQUISITES

Prerequisite(s): CRD 001; STA 32 or SOC 046B; Any upper division Community and Regional Development course is recommended.

REQUIRED TEXTS

Healey, Joseph F. 2012. *Statistics: A Tool for Social Research, 9th Ed.* Belmont, CA: Wadsworth.
 Best, Joel. 2001. *Damned Lies and Statistics: Untangling Numbers from the Media, Politicians, and Activists.* Berkley, CA: University of California Press.

Excerpts on Canvas from:

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. United State America.

Osborne, J. W. (2016). *Regression & linear modeling: Best practices and modern methods*. Sage Publications.

Articles available through UC Davis Library and Canvas.

IMPORTANT NOTE: You will also need a basic calculator for exams and assignments. You may not substitute a cell phone or other device in place of a calculator.

COURSE GRADING POLICIES

Exams (150 points; 37.5%): There are two exams in this course, each worth 100 points. All anticipated exam absences must be excused **in advance of the test date**, these include University duties or trips (certified by appropriate faculty/staff), required court appearance (certified by the Clerk of Court), or religious observances. Make-up examinations will be given **ONLY** in the case of extreme emergencies (severe illness, death in the immediate family) and when accompanied by appropriate documentation. In the case of unexcused absences (travel plans, overslept, etc.), there are no make-up exams. Instead, if you miss the first exam, the second exam counts double. If you miss both quarter exams, then the final will count as 75% of your grade. This policy applies only in the retroactive sense. In other words, you may not count a high grade on the first exam as your grade on future exams. Your best strategy is to be present and prepared for *all* the exams.

Research Presentation (50 points; 12.5%): For this portion of your grade, you will conduct original research and present it to the class. You will work in a group to complete this project, although the composition of the groups is up to you, the group must be 5 students*. (* The size of the group is subject to change depending on course enrollment.) **You should choose your group thoughtfully since your group, not just your own work, will be considered as part of your grade.** Each group project will result in a 10-minute class presentation. The project will be discussed at length in subsequent classes; also see the information sheet posted on Canvas for full details.

If you miss your group's class presentation due to an unavoidable preplanned event, you should alert me and the members of your group prior to the presentation. The rest of your group and I will be responsible for suggesting how your participation in the project be graded. If you miss due to a family emergency or emergency illness, you must contact your group immediately. In order to receive full credit for the class project, you will be required to provide a physician note or other relevant documentation.

Research Paper (150 points; 37.5%): For this portion of your grade you will conduct original research with your team and write a journal-style article. Your group work throughout the quarter will lead to this paper. Topics must be relevant to the course, typed, double-spaced, and include proper citations (see APA Style Guide). As a guideline only, papers should be about 12-18 pages, not including tables, figures, and references. You may do a paper based entirely on library research and literature review on a topic, and/or empirical analysis of an available data set. Please see information sheet on Canvas for further information on preparing your research

paper. You will be expected to work on this research project, writing, and presentation activities during assigned lab time. Your **research proposal is due by midnight on October 24th** will be worth 50 of the 150 total points for this assignment. If your paper is late, your grade will be reduced by a letter grade for every day for which it is late.

Homework Assignments (50 points; 12.5%): This portion of your grade is based on the completion of five homework assignments, worth 10 points each. Over the course of the quarter, there will be six homework assignments; you will be graded on five of them (i.e., you get one “bye” week). You may opt out of submitting *one* assignment during the quarter with no penalty; you may **not** submit an extra assignment to make up for poor grades on prior weeks. The TA will grade the first five assignments you turn in; your score will be comprised of those five assignments that are graded. Specifics on the homework assignments will be provided in class. Assignments are due Friday by noon (most will be completed on Canvas; stay tuned).

Grade Scale: Grades are based on points earned and according to the scale, as follows:

A	370-400 pts	B+	350-359 pts	C+	310-319 pts	D+	270-279 pts
A-	360-369 pts	B	330-349 pts	C	290-309 pts	D	250-269 pts
		B-	320-329 pts	C-	280-289 pts	D-	240-249 pts
						F	0-239 pts

GENERAL COURSE POLICIES

Attendance & Participation. Students are expected to attend all classes and to be on time. Attending lectures and participating in classroom activities are essential to your success in this course. You are responsible for all announcements and instructions provided in class, whether or not you are present. I expect students to regularly attend, arrive on time, and stay for the entirety of each class. Be sure to turn off your cell phones. My policy is to allow each student 3 "free" cuts. Additional unexcused absences may result in a lowering of the final grade by one letter grade.

Use of telephones, or other personal technological devices is strictly forbidden in class. Laptops for approved software uses only, your textbooks, pen/pencil, paper, calculator, laboratory computers are acceptable uses of technology. Unless explicitly allowed by the instructor, electronic devices (such as cell phones, notebooks, calculators, etc.) are not allowed to be out of backpacks or purses during quizzes and exams. These electronic devices must be packed away and turned off. Any student who is caught with one of these devices out will have his/her test taken and will be charged with the Honor Code violation of cheating. See this article on the perils of multitasking.

- ❖ Ophir, E., Nass, C., & Wagner, A. D. (2009). Cognitive control in media multitaskers. *Proceedings of the National Academy of Sciences*, 106(37), 15583-15587.

Important Note on the Reading. The reading for this class is not easy. In some cases, you will need to read the material more than once and spend considerable time and effort to figure out what the tables, charts, and graphs are saying. The best strategy is to read through the material at least once before it is scheduled for discussion in class and then read it again after it has been discussed. You will want to bring your calculator, textbook, and supplementary

materials found online to each class so that you have those materials handy for class discussion and activities.

Practice Homework Exercises. The nature of mathematics is such that the more you practice, the greater your skill. There are a series of homework practice exercises at the conclusion of each chapter in the textbook that are highly encouraged for your success in this course.

Grades. Grade disputes will not take part in class. If a student feels s/he has been unfairly graded on an assessment and would like to request consideration for partial or full credit for a particular item or items, they should do so through the rebuttal process. Full information on the rebuttal process is provided on Canvas. Although we make every effort to update Canvas with assignment grades, Canvas may not accurately reflect your grade. Therefore, please keep in mind that Canvas provides an idea of your grade but may not reflect your final grade for the course.

Email responses. I will do my best to respond to your emails within 48 hours of receiving them. However, make sure that if an issue does arise that you let me know as soon as you can so that we may plan accordingly.

Community expectations. This class is a community of learning and will function best when we all agree and abide by principles of reciprocity, fairness, compassion, and collaboration. The following are some good guidelines on how to support one another in the classroom. For more information on the below topics see for a start

<https://cee.ucdavis.edu/resources/jitt/microaggressions-and-microaffirmations-series>).

Pro-active approach to micro-aggressions: Microaggressions are forms of systemic everyday symbolic violence, such as daily, intentional or unintentional, verbal, behavioral, and environmental indignities. They can be layered assaults that include insults or judgements related to race, ethnicity, citizenship, gender sexual orientation, age, type of college (4-year vs. transfer student), immigration status, language, disability, socioeconomic status, and religion. Microaggressions found in classrooms and other educational settings can have a psychological, academic, and physical toll on those who experience them. To foster safe learning environment for all those in this learning community, please:

- Be intentional about creating space where all feel safe, supported, and encouraged to ask questions and participate.
- Respect: be respectful of classmates, professor, guests throughout all class activities.
- Nonjudgmental approach—disagreement without putting other people down
- Openness: avoid assuming and assigning intentions, beliefs, or motives to others.
- Recognize and respond to microaggressions when they occur.
- Do not make assumption about gender, race, ethnic background, religion, etc. when presenting material, asking for opinions, or making a commentary
- Always feel free to seek assistance or advice from on-campus resources (a non-exhaustive resource list prepared by CEE is on Canvas)

Information on [microaggressions](#) adapted from UCD Center for Educational Effectiveness. For more information on implicit bias see [Project Implicit](#) (Harvard University).

UNIVERSITY POLICIES & RESOURCES

Americans with Disabilities Act for Students with Special Needs Statement. Any students with disabilities or other special needs, who need special accommodations in this course, are invited to share these concerns or requests with the instructor and contact UC Davis Student Disability Center for disability access: <https://sdc.ucdavis.edu/>. Students who have, or suspect they may have, a disability should seek services through Disability Services. Students must be registered with Disability Services and receive written authorization to obtain disability-related accommodations.

Code of Academic Conduct. The Code of Academic Conduct applies to all undergraduate students, full-time, and part-time, at UC Davis. UC Davis expects and requires behavior compatible with its high standards of scholarship. By accepting admission to the university, a student accepts its regulations (i.e., Code of Academic Conduct: <http://sja.ucdavis.edu/files/cac.pdf>) and acknowledges the right of the university to take disciplinary action, including suspension or expulsion, for conduct judged unsatisfactory or disruptive. Please note all students must acknowledge their classroom responsibilities by going to <https://participate.ucdavis.edu/> no later than the quarter add deadline.

Plagiarism. With all the materials that you use, be sure to cite the source. Note that plagiarism includes the direct lifting of text and re-stating of arguments without citation from texts in any language, not just English. If you use a website, include the URL and the date you accessed it. Cutting and pasting from a website that is not acknowledged is plagiarism. Students caught plagiarizing will be referred to Student Judicial Affairs and receive a "zero" for the assignment. For additional information on what constitutes plagiarism, go to: <http://sja.ucdavis.edu/files/plagiarism.pdf>.

Title IX. Title IX prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, you can receive confidential support and advocacy from the Center for Advocacy, Resources, and Education (CARE) at ucdcare@ucdavis.edu or 530.752.3299. In addition, Student Health and Counseling Services (SHCS) provides confidential counseling to all students and can be reached 24/7 at 530.752.2349. You can also report sexual violence or sexual harassment directly to the University's Title IX Coordinator at wjdelmendo@ucdavis.edu or 530.752.9466. Reports to law enforcement can be made to the UCD Police Department at 530.752.2677. More information on UC Davis sexual violence prevention and response resources can be found at <http://sexualviolence.ucdavis.edu/>.

Mandatory Reporting. Faculty and TAs are required under the UC Policy on Sexual Violence and Sexual Harassment to inform the Title IX Coordinator should they become aware that you or any other student has experienced sexual violence or sexual harassment. There are other confidential and anonymous resources for you if you do not want your experience to be mandatorily reported. Please see Resources for UC Davis students on our Canvas course site.

Resources for UC Davis Students. See Canvas for a list of several resources for you provided by UC Davis. This list is prepared by the Center for Educational Effectiveness.

COURSE SCHEDULE OF READINGS AND ASSIGNMENTS:**

<u>Date</u>	<u>Topic</u>	<u>Readings</u>	<u>Research Project Assig.</u>
Sept 26 (Week 1)	Course Introduction & Data Sources	Healey, prologue Read Best, <i>Damned Lies!</i>	<i>Sign up for your groups</i>
I. Research Design			
Oct 1	Introduction to Research Design (IRD): Philosophy of Science	Kuhn, Thomas. <i>The Structure of Scientific Revolutions</i> (Canvas)	
Oct 3 (Week 2)	IRD: Selecting Your Research Approach	Ch. 1, Creswell & Creswell	<i>Finalize your groups</i>
Homework Assignment #1 Book report on Damned Lies! Due 10/5 midnight			
Oct 8	IRD: Reviewing the Literature	Ch. 2, Creswell & Creswell	<i>Identify your topic</i>
Oct 10 (Week 3)	IRD: Using Theory & Developing your research questions and hypotheses	Ch. 3, 7 Creswell & Creswell	<i>Annotated bib.</i>
HA #2: 10-15 annotated sources for annotated bibliography due by midnight Oct. 12			
II. Qualitative Methods			
Oct 15	Designing surveys	Ch. 8, Creswell & Creswell	<i>Research questions & hyp.</i>
Oct 17 (Week 4)	Analyzing survey data	Ch. 3, Creswell & Poth	
<p><u>Guest lecture: Dr. Vikram Koundinya, Department of Human Ecology, Cooperative Extension Specialist</u></p>			
HA #3: Survey Assignment (TBD) due by midnight on Oct. 19th			
Oct 22	What are qualitative methods? How do I choose a method?	Ch. 4, Creswell & Poth; Ch. 9, Creswell & Creswell	<i>Lit review</i> <i>Identify data source(s)</i>
Oct 24 (Week 5)	Analyzing qualitative data	Ch. 8, Creswell & Poth	
Research proposal due by Oct 25 by midnight			

III. Quantitative Methods			
Oct 29	EXAM I	<u>Lab</u> : Jake Tutorial on using Python/R	
Oct 31 (Week 6)	<u>Review</u> : Normal Curve, Sampling Distribution	Ch. 5-6, Healey	
HA #4 due by 11/2 midnight			
Nov 5	<u>Review</u> : Confidence intervals and hypothesis testing	Ch. 7-8, Healey	<i>Edit research proposals</i>
Nov 7 (Week 7)	<u>Introducing</u> : Correlation	Ch. 14, Healey	
HA #5 due by 11/9 midnight			
Nov 12	Linear OLS regression	Ch. 16, Healey	<i>Identify Methods</i>
Nov 14 (Week 8)	Multiple OLS regression	Ch. 16, Healey	
HA #6 due by 11/16 midnight (Regression: Applications & Interpretations)			
Nov 19	Applying OLS Regression to answer research questions & <u>Bonus Lab</u>	Denzin, Norman K. "Triangulation 2.0." <i>Journal of mixed methods research</i> 6.2 (2012): 80-88; McKinney, Kick, and Cannon. (2015). <i>Human Ecology Review</i> 21(1): 109-132. -HER presentation	
Nov 21 (Week 9)	Binary Logistic Regression	Ch. 5, Osborn (2017)	<i>Initial analyses</i>
Nov 26	EXAM II	<u>No Lab This Week.</u>	
Nov 28 (Week 10)	<i>Happy Thanksgiving!</i>		
Dec 3	Group presentations		<i>Work on Final Paper</i>
Dec 5 (Week 11)	Group presentations		
Final group paper due 11:59 pm on December 9th			

** The schedule of readings and assignments is approximate because there may be some topics that warrant extended coverage in class.