

SOCIOLOGY 401 | Spring 2017 | Willamette University
QUANTITATIVE METHODS OF SOCIAL RESEARCH
MW 12:50-2:20 p.m.

Prof. Michael Niño
Office: Smullin 213
Office Tel. 503-370-6643
Email: mdnino@willamette.edu
Office Hours: MW 2:20pm-3:30 p.m.; or by appointment

Course Overview:

In this course students will apply theory and methodological skills learned in previous course work to their own original quantitative research project. The objective of this course is to train sociology majors to plan and carryout research using: systematic procedures; quantitative data collection methods, strategies, and instruments used in the social sciences (and sociology, in particular); and quantitative data analysis and modeling techniques. Students will learn the core elements of the research process: the scientific method; variables, relationships, and hypotheses; definition and measurement of variables; data validity and reliability; determination of where data will come from (sampling); and issues related to ethics, perspectives, and strategic approaches to social science research, among others. The course will start with a recap of fundamental elements of quantitative methods. Students will then review contemporary sociological research to gain a better understanding of the structure of empirical papers and the art of writing. The course will then shift to an overview of various techniques for analyzing and interpreting quantitative data, and data management using SAS. This course is designed to fulfill the Willamette University writing-centered course designation. Toward this end, students will engage in regular writing, peer-review, and revising exercises.

Students will work in groups, which will be established at the beginning of the semester. The instructor will place students in teams based on similar research interests. Students are required to participate in every aspect of the research process in order to pass this course. Because research is an on-going and unpredictable process, it is important to establish trust, or at least rapport, with your teammates – be aware of strengths, weaknesses, and working styles.

Learning Objectives:

As part of the greater sociology curriculum, this class will contribute to all five of the Department of Sociology's five curricular goals (below):

- 1) To develop students' capacity to think sociologically, cultivating in them a "sociological imagination" with which to interpret the social world,
- 2) To supply students with the ability to apply sociological concepts and theory to an understanding and analysis of human agency and social structure,
- 3) To provide students with the tools needed to think methodologically about how to gather and use data to study social life,
- 4) To cultivate and strengthen students' critical thinking and analytical writing, and
- 5) To provide students with the opportunity to plan and implement an original research project through which they demonstrate an integration of sociological thinking, theory, and research methods.

Learning Outcomes:

By the end of this course, students will be able to:

- 1) Understand and be able to explain how social research is rooted in the scientific method, as well as ways in which social research deviates from this;
- 2) Understand and be able to explain core research concepts, including theory, variable, unit of analysis, model, causation, conceptualization, operationalization, validity, and reliability, among others;
- 3) Be able to formulate a researchable sociological question;
- 4) Be able to carry-out interpretation and analysis of quantitative data;
- 5) Be able to identify and explain appropriate ethical questions and concerns in social research;
- 6) Identify sources and construct an appropriate literature review that frames what is and is not understood about the topic that is addressed by their research question(s);
- 7) Identify, access, and utilize an existing survey dataset to conduct an appropriate quantitative analysis, and write up the results;
- 8) Manage quantitative data using SAS;
- 9) Apply the concepts of transparency, integrity, and reproducibility to quantitative research using TIER protocols;
- 10) Be able to communicate research findings clearly and persuasively through written composition and presentation.

(QA) and (W) General Education Program Credit:

This course fulfills the requirements for both QA and W credit under the Willamette University General Education Program, the core goals of which are already embedded in the Learning Objectives and Learning Outcomes explained above. A summary of these can be found at:

<http://willamette.edu/cla/catalog/overview/cla/generaled/index.php>.

Course Materials:

- 1) **Readings:** This course does not have a required textbook. Students will be required, however, to read current sociological research papers that cover concepts used throughout this course. These readings will be posted on WISE or otherwise distributed in class. See the course schedule for updates during the semester.
- 2) **Software:** Students will be required to use SAS 9.4 for all data management and analysis exercises, as well as use this software for their final project. This statistical software package will be included on all computers in the classroom and will be available in some general access labs. I will provide more information concerning this software in class.

Course Policies:

- 1) **Classroom Behavioral Expectations:** Students are expected to assist in maintaining a classroom environment that is conducive to learning. To assure all students have the opportunity to gain knowledge from time spent in class, students are prohibited from engaging in any form of distraction. This includes tardiness. Inappropriate behavior in the classroom shall result, minimally, in a request to leave class.

- 2) **Electronic Devices:** As a courtesy to other students and to the instructor, *turn off and put away* electronic devices such as Cell Phones/Pagers/Portable Media Devices.
- 3) **Academic Integrity:** Cheating and/or plagiarism will not be tolerated at any time. You are expected to understand and comply with WU's plagiarism and cheating policy http://www.willamette.edu/cla/catalog/resources/policies/categories/plagiarism_cheating.php. You must submit your OWN work. If you copy answers from another student, you will receive a zero (0) on that assignment/quiz/exam. Advice on avoiding plagiarism is offered by the Purdue University Online Writing Lab at <http://owl.english.purdue.edu/owl/resource/683/01/>.
- 4) **Disability Accommodation:** My goal is to create a learning environment that is usable, equitable, inclusive and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, please notify me as soon as possible. Students with disabilities are also encouraged to contact the Accessible Education Services office in Matthews 103 at [503-370-6737](tel:503-370-6737) or disb-info@willamette.edu to discuss a range of options to removing barriers in the course, including accommodations.
- 5) **Religious Practice:** Willamette University recognizes the value of religious practice and strives to accommodate students' commitment to their religious traditions whenever possible. When conflicts between holy days or other religious practice and academic scheduling arise, every effort should be made to allow students to adhere to their tradition, including, when possible, excusing class absences and allowing make-up work. A student anticipating the need to miss a class for religious reasons should alert the faculty member within the first two weeks of the semester, and the two of them should determine the next course of action. Any unresolved difficulty+ should be referred to the Office of the Chaplains.

Course Project: The main objective of this class is to design and complete a paper that is driven by sociological theory and supported by empirical data. There are many components to designing and executing a comprehensive and professional paper. All assignments included in this course will touch on the most fundamental components of a sociological paper that uses quantitative data. Although, the final project will be completed in teams, a number of assignments throughout the semester will be individual assignments. A summary of all course requirements have been provided below along with their respective point values. If a course assignment is marked with a **(I)**, then it considered an individual assignment. If a course assignment is marked with a **(T)**, then it is considered a team assignment. A detailed description of each assignment will be handed out in class at least one week prior to the specified due date.

| <i>Course Assignments</i> | <i>Points</i> |
|---|---------------|
| Statement of Research Interests (I) | 15 |
| Review quiz (I) | 20 |
| Quantitative analytical response (I) | 20 |
| Research topic and data source (T) | 30 |
| Annotated Bibliography (I) | 20 |
| SAS Lab (I) | 40 |
| Draft of introduction and literature review (T) | 40 |
| Identifying Variables Assignment (T) | 20 |
| Proposal and Annotated Bibliography II (T) | 40 |
| Analysis and Interpretation Lab (I) | 40 |
| Code, edited tables, and interpretation findings (T) | 100 |

| | |
|---------------------------------------|-----|
| Discussion and conclusion section (T) | 30 |
| Final Paper (T) | 100 |
| Presentations (T) | 50 |
| <i>Total Points</i> | 565 |

Points Breakdown

| | |
|---------|---|
| ≥508 | A |
| 507-452 | B |
| 451-395 | C |
| 394-339 | D |
| <338 | F |

SCHEDULE

Week 1: (Jan. 18)

Topic: Introduction and foundations of quantitative data analysis

Assignment: Statement of Research Interests (in class assignment)

Week 2: (Jan. 23, 25)

Topic: Foundations of quantitative data analysis

W: Frankfort-Nachmias, Chava, David Nachmias, Jack Deward. 2015. **“Elements of Research.”** Chapter 3, Pp. 45-58 in *Research Methods in the Social Sciences*. New York: Work Publishers.

W: _____. 2015. **“Measurement.”** Chapter 7, Pp. 122-137 in *Research Methods in the Social Sciences*. New York: Work Publishers.

W: _____. **“Sampling and Sample Designs.”** Chapter 8, Pp. 144-161 in *Research Methods in the Social Sciences*. New York: Work Publishers.

Assignment: Review quiz (in class assignment)

Week 3: (Jan. 30, Feb. 1)

Topic: Research design

Readings

W: Regnerus, Mark. 2012. **“How Different are the Adult Children of Parents who have Same-Sex Relationships? Findings from the New Family Structures Study.”** *Social Science Research* 41: 752-770.

W: Cheng, Simon, and Brian Powell. 2015. "Measurement, Methods, and Divergent Patterns: Reassessing the Effects of Same-Sex Parents." *Social Science Research* 52: 615-626.

Assignment:

- 1) Quantitative Analytical Response due on 2/1 (in class)
- 2) Research topic and data source due on 2/4 at 11:59pm (drive folder)

Week 4: (Feb. 6, 8)

Topic: Sourcing and the Literature Review

M: Galvan, Jose. 2009. "Writing Reviews of Academic Literature: An Overview." Chapter 1, Pp. 1-7 in *Writing Literature Reviews*. New York: Routledge.

M: _____. "Selecting a Topic and Identifying Literature for Review." Chapter 3, Pp. 18-28 in *Writing Literature Reviews*. New York: Routledge.

M: _____. "General Guidelines for Analyzing Literature." Chapter 4, Pp. 31-42 in *Writing Literature Reviews*. New York: Routledge.

M: _____. "Synthesizing Literature Prior to Writing a Review." Chapter 8, Pp. 71-78 in *Writing Literature Reviews*. New York: Routledge.

Assignment: Annotated Bibliography due on 2/11 at 11:59pm (drive folder)

Week 5: (Feb. 13, 15)

Topic: Introduction to SAS

Readings

Cantrell, Casey. n.d. "A Hands-On Introduction to SAS Programming", Clarion Consulting, Los Angeles, CA.

Assignments: Draft of introduction and literature review due on 2/18 at 11:59pm (drive folder)

Week 6 (Feb. 20, 22)

Topic: Data management and Writing

Readings

O'Leary, Zina. 2013. "Crafting a Research Proposal." Chapter 5, Pp. 72-83 in *The Essential Guide to Doing Your Research Project*. Los Angeles: SAGE.

Assignments: Identifying Variables Assignment due on 2/25 at 11:59pm (drive folder)

Week 7: (Feb. 27, March 1)

Topic: *Data Management and Writing*

Assignment: SAS Lab due on 3/4 at 11:59 (drive folder)

Week 8: (March 6, 8)

Topic: *Data Management and Descriptive Statistics*

Assignment: Proposal and Annotated Bibliography II due on 3/11 at 11:59pm (drive folder)

Week 9: (March 13, 15)

Topic: *Data management and multivariate statistics*

Field, Andy, and Jeremy Miles. 2010. **“Regression.”** Chapter 7, Pp. 171-222 in *Discovering Statistics Using SAS*. Los Angeles: SAGE.

Allison, Paul D. 2001. **“Binary Logit Analysis: Basics.”** Chapter 2, Pp. 5-28 in *Logistic Regression Using SAS: Theory and Application*. Cary: SAS Institute Inc.

Week 10: (March 20, 22)

Topic: *Multivariate statistics*

Assignment: Analysis and Interpretation Lab

Week 11: (March 27, 29) – spring break

Week 12: (April 3, 5)

Topic: *Presenting and interpreting findings*

Assignment: Code, edited tables, and interpretation of findings due 4/8 at 11:59pm (drive folder)

Week 13: (April 10, 12)

Topic: *The discussion and conclusion section*

M: Galvan, Jose. 2009. **“Writing Discussion Sections.”** Chapter 12, Pp. 107-113 in *Writing Literature Reviews*. New York: Routledge.

Assignment: Discussion and conclusion section due on 4/15 at 11:59pm (drive folder)

Week 14: (April 17, 19)

Topic: Writing empirical research and group presentations

Week 15: (April 24, 26)

Topic: Presenting empirical research

Assignment: Group Presentations

Week 16 (May 1)

Note:

- 1) *May 2nd and 3rd are study days (no classes)*
- 2) *Finals from May 4-6*
- 3) *May 7th is a study day*
- 4) *Finals resume May 8-9*

***For this course, your final paper will be due on May 5th at 5pm.**