

San José State University
CoSS/Anthropology
ANTH235, Quantitative Methods, Section 1, Spring 2023

Course and Contact Information

Instructor: Elizabeth Weiss
Office Location: CL404R
Telephone: (408) 924-5546
Email: Elizabeth.Weiss@sjsu.edu
Office Hours: Thursdays 3:30 PM to 5:30 PM
Class Days/Time: Thursdays, 6 PM to 8:45 PM
Classroom: CL204
Prerequisites: Students must have successfully completed STAT 95 or equivalent.

Course Description

This course presents advanced quantitative methods with the goal of equipping students for applied anthropology research as well as the knowledge to evaluate anthropological and social science articles. The seminar emphasis will be on understanding statistics, creating databases, using statistical software packages, and employing proper statistics. Students will engage with hands-on use of statistical software packages and application of methods in real-world settings through projects and seminar discussions. Since this is an anthropology course rather than solely a statistical course, the focus will be on teaching students how to think about quantitative datasets in social science settings and think about the role these data play in addressing research questions. Students who have a willingness to think and a desire to learn are fully equipped to be successful in this class, regardless of any prior knowledge of statistics or math-phobias.

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

- LO1 Apply common statistical tests to analyze anthropological data sets.
- LO2 Critically examine the use of statistical analyses in anthropological arguments and published articles.
- LO3 Build datasets appropriate to statistical analyses to address anthropological research questions.

Required Texts/Readings

Textbook

Reading materials will be provided either in PDF format or be made available at the SJSU Library Course Reserve. Students will also be required to find articles using the electronic databases available through the SJSU Library website.

Students will also be required to have SPSS and JASP on their computers.

Course Requirements and Assignments

“Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction,

preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.”

Seminar participation and preparation (1 pts/wk= 15 points): Each student is expected to attend class, bring notes on readings assigned for that day’s discussion, and bring completed answers to the practice problem sets (when assigned). Students who fail to attend seminar meetings, who arrive late, or who do not substantively contribute to the discussion will not receive credit for the week.

Article analysis (2.5 pts/analysis =15 points): Each week that we discuss a particular statistical method/test, students are expected to find a relevant quantitative-based anthropology article which uses that method. These six self-identified case studies will be analyzed and students will submit short summaries (2-4 pages double-spaced) describing the research design, variables and sampling strategies, how the results are reported for the stats test you are highlighting, and quantitative methods of the study. Students will be asked to discuss the article in class. The papers must be turned in to the instructor in class—no papers will be accepted late.

SPSS/JASP lab module (2.5 pts/module =15 points): Six times throughout the semester, students will complete statistical analysis modules that will teach the use of SPSS and JASP software. These lab activities will be started in class, but may take more time outside of class to complete. The lab paperwork must be turned to the instructor at the designated time—no papers will be accepted late.

Mini-projects (2x15pts=30 pts): Two mini-projects will provide hands-on experience with quantitative data generation using methods of ethnographic coding and survey development. These activities are designed to be completed based on in-class practice for each activity. Students will be required to present their findings to the class. Full descriptions of each activity will be provided prior to each assignment—no papers will be accepted late.

Final Examination or Evaluation

Final project (1X25pts=25 pts): The final project will provide hands-on experience with quantitative data generation using methods at least 3 aspects of statistics covered in class. Students will be required to present their projects to the class. Full description of the final project requirements will be provided in class—no papers will be accepted late.

The Final project, which is due during the assigned final time (Monday, May 18th from 5:15 to 7:30 PM) to my office location (CL404R) or via email (Elizabeth.Weiss@sjsu.edu).

“Faculty members are required to have a culminating activity for their courses, which can include a final examination, a final research paper or project, a final creative work or performance, a final portfolio of work, or other appropriate assignment.”

Total points in course=100

Grading Information

A	B	C	D
99-100 = A plus	88-89 = B plus	78-79 = C plus	68-69 = D plus
94-99 = A	84-87 = B	74-77 = C	64-67 = D
90-93 = A minus	80-83 = B minus	70-73 = C minus	63 or less = F

Make-up Work: Only students with a valid documented excuse will be able to take an exam late or turn in an assignment late. If you know in advance that you should be unable to attend a quiz or the final, contact me immediately by e-mailing.

University Policies

Per [University Policy S16-9](#), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on [Syllabus Information web page](#) (<https://www.sjsu.edu/curriculum/courses/syllabus-info.php>). Make sure to visit this page to review and be aware of these university policies and resources.

Classroom Protocol

- All assignments that are sent via email must be submitted on-time, in pdf format, and sent to Elizabeth.Weiss@sjsu.edu with the subject heading indicating the assignment being submitted.
- Students will be held to the highest standards of academic integrity and intellectual ethics. The chief product in the social sciences is new knowledge and original thinking. Plagiarism is intellectually dishonest and a form of theft. It will not be tolerated and will be dealt with in accordance with university Academic Integrity Policy.
- No late assignments will be accepted without prior instructor approval and documented cause. Unless otherwise specified in the instructions, assignments will not be accepted after the last scheduled class.
- The instructor reserves the right to adjust the syllabus, exam dates, or course content as deemed necessary to facilitate the highest achievement and performance of the class, or to explore timely topics.

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ANTH235-01 /Quantitative Methods, Spring 2023, Course Schedule

Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	Jan. 26	Introduction to course and quantitative research; introduction to JASP and SPSS; <u>Lecture 1: The nature of social science research.</u>
2	Feb. 2	<u>Lecture 2: Quantitative Anthropology</u> —Types of data and variables, unit of analysis, samples and populations. <u>SPSS and JASP Module 1, part I: defining variables, entering data.</u> <u>Read: Pallant Ch 1-4, two supplemental readings (pdf), skim Chibnik 1985.</u>
3	Feb. 9	<u>Lecture 3: Missing Data: Anthropological Reality</u> <u>Read: Two supplemental readings (pdf); self-identified article 1 due in class or before class via email.</u> <u>SPSS/JASP Module 1, part II: Checking for missing data, dealing with missing data – turned in at end of class period or the next day during office hours or via email before 4 PM.</u>
4	Feb. 16	<i>Mini-project 1 Introduced</i> <u>Lecture 4: Developing Surveys and questionnaires with scales.</u> <u>Read: Pallant Ch 9; two supplemental readings (pdf).</u> <u>In-class activity: practicing survey development.</u>
5	Feb. 23	<u>Lecture 5: Descriptive statistics and analysis basics</u> —Graphs and frequency distributions, mean, standard deviation and variance, z scores, normal curve, parametric versus non-parametric. <u>SPSS/JASP Module 2: Exploring your data, normality assessment – – turned in at end of class period or the next day during office hours or via email before 4 PM.</u> <u>Read: Pallant Ch. 6, 7.</u>
6	Mar. 2	<u>Seminar Discussion: Spatial analysis in anthropology.</u> <u>Read: Chalmers & Fabricius 2007 (pdf); Logan & Zhang 2004 (pdf); Goodchild et al. 2000 (pdf); Gatrell & Rigby 2004 (pdf).</u> <i>*Mini-project 1: Survey due (either in class or before class via email). Class presentations of projects.</i>
7	Mar. 9	<u>Lecture 6: Comparing groups, part 1: Intro to hypothesis testing, p and significance; t-tests, Z-tests, rank order (Mann-Whitney, Wilcoxon).</u> <u>SPSS/JASP Module 3: Hypothesis testing with t-tests, rank order, and Z-tests – – turned in at end of class period or the next day during office hours or via email before 4 PM.</u> <u>Read: Pallant Ch. 10 & 17, Mann-Whitney/Wilcoxon sections (pg. 227-232); Weiss (pdf); self-identified article 2 due in class or before class via email.</u>
8	Mar. 16	<u>Lecture 7: Comparing groups, part 2: Analysis of variance and non-parametric equivalents (Kruskal-Wallis, Friedman), multivariate analysis.</u> <u>SPSS/JASP Module 4: Hypothesis testing with ANOVA– turned in at end of class period or the next day during office hours or via email before 4 PM.</u> <u>Read: Pallant Ch 18, skim 21-22, Kruskal-Wallis/Friedman sections (pg. 232-237); self-identified article 3 due in class or before class via email.</u>

Week	Date	Topics, Readings, Assignments, Deadlines
9	Mar. 23	<u>Lecture 8: Comparing groups, part 3</u> : Chi-square tests. <u>SPSS/JASP Module 5</u> : Hypothesis testing with Chi-square tests – turned in at end of class period or the next day during office hours or via email before 4 PM. <u>Read</u> : Pallant pg. 215-221; Havlicek (pdf), <i>self-identified article 4 due in class or before class via email</i> .
10	Mar. 28-30	SPRING BREAK
11	Apr. 6	<i>Mini-project 2 Introduced</i> <u>Lecture 9: Quantitative meets Qualitative</u> : Ethnographic interviews, OCM codes, joining qualitative and quantitative research. <u>Read</u> : Weisner 2012 (pdf); five supplemental readings (pdf). <u>In-class activity</u> : practicing ethnographic/visual coding.
12	Apr. 13	<u>Lecture 10: Exploring relationships among variables</u> : Correlation (Pearson's r, Spearman's rho), prediction, regression. <u>SPSS/JASP Module 6</u> : Correlations – turned in at end of class period or the next day during office hours or via email before 4 PM. <u>Read</u> : Pallant Ch 11; <i>self-identified article 5 due in class or before class via email</i> .
13	Apr. 20	<u>Lecture 11: Other Quantitative Data in Anthropology</u> : Historical records, unstructured/structured observation, artifactual datasets, big data. <u>Read</u> : Two supplemental readings (pdf); <i>self-identified article 6 due in class or before class via email</i> . <u>In-class presentations</u> : practicing ethnographic/visual coding of progress of mini-project 2; use feedback to finalize mini-project 2.
14	Apr. 27	Final Project Introduced <u>Seminar Discussion</u> : Replicability Crisis. <u>Read</u> : Two supplemental readings (pdf). <i>*Mini-project 2: Ethnographic coding mini-projects due (either in class or before class via email)</i> .
15	May 4	<u>Seminar Discussion</u> : The politics of data, ethics. <u>Read</u> : Agrawal 2002 [pdf]; Palsson and Rabinow 1999 [pdf]; Code of Ethics of the American Anthropological Association. Work on final project.
16	May 11	Course wrap-up. Presentation of final projects; work of final project utilizing feedback from presentation.
Final Exam	May 18 th (Thursday)	Final Project Due by 7:30 PM: Drop off at CL404R between 5:15 PM and 7:30 PM or Email prior to 7:30 PM.