San José State University
Department of Sociology and Interdisciplinary Social Sciences
Spring 2019

SOCI 204: Quantitative Methods
Wednesdays 6-8:45p in DMH 162

Course and Contact Information

Instructor: Yvonne Y. Kwan, PhD
Office: Dudley Moorhead Hall 213
Email: yvonne.y.kwan@sjsu.edu
Office Hours: Drop in: Mondays and Wednesdays 1-2p;
By appointment: Mondays and Wednesdays 2-4p (To schedule, see Canvas)
Class Days/Time: Wednesdays 6-8:45p
Classroom: Dudley Moorhead Hall 162

Course Format

Course Website

Course materials such as syllabus, handouts, notes, assignment instructions, additional readings, etc. can be found on the Canvas Learning Management System course login website at http://sjsu.instructure.com. You are responsible for regularly checking with the messaging system through MySJSU at http://my.sjsu.edu to learn of any updates. Be sure to also review your Canvas notification settings, as I will be posting announcements via Canvas. Elect to have announcements forwarded immediately to your primary email address. Please note that this is not an online class. Do not rely on the Canvas site to substitute your presence in class. Your attendance is required to get a good grade. Furthermore, you will be required to submit your written assignments via Canvas. If you have any questions, come to my off hours or consult the eCampus website at http://www.sjsu.edu/ecampus/. Do not wait to ask questions until a few hours before an assignment is due. You may not receive a just-in-time response.

Course Description

In this course, we will begin with a review of univariate descriptive statistics and then shift to making statistical inferences. We will continue the practice of statistical inference with a focus on bivariate relationships and conclude with an exploration of multivariate modeling. Throughout the course we will emphasize the logic underlying statistical analyses and their application to sociological research. The goals of this course are to familiarize graduate students with the foundations of statistical analyses applied to social scientific research as well as the statistical software that performs these analyses. This course is designed to prepare students for advanced statistical techniques most commonly practiced by social science researchers broadly. Finally, this course should allow students the opportunity to link statistical analysis to a literature review.
# Course Goals

<table>
<thead>
<tr>
<th>Program Learning Outcomes</th>
<th>Course Learning Outcomes</th>
<th>Assessment Method</th>
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<tbody>
<tr>
<td>Critical Thinking</td>
<td>Students will use mathematics to solve real life problems. Practice problems and tests questions will be, in most cases, derived from everyday life. After covering introductory concepts and procedures, the course will focus on probability and statistical inference. These concepts and methods are central to statistical analysis. Students will select appropriate statistical methods for analyzing combinations of two nominal, ordinal, and/or interval variables. By applying statistical inference, students will see how analytical techniques underscore many Sociological concepts.</td>
<td>Discussion, Presentations, Exams, Labs</td>
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</tbody>
</table>
| Communication             | Students will be able to articulate insights generated from statistical concepts and analysis. Students will conduct and describe univariate, bivariate and multivariate statistical analyses using Stata. Students will be able to do and communicate the following:  
• conduct and interpret ordinary least squares (OLS) regression analyses in SPSS  
• explain and implement the concept of statistical control  
• be familiar with and able to articulate the logic underlying logistic regression | Class discussion, Presentations, and Labs |
| Evaluate Empirical Sociological Research | Students will read and evaluate empirical sociological research. They will become familiar with the organization and representation of quantitative data in various forms: tables, graphs, rates, percentages and statistical software output. They will draw conclusions from numerical and graphical data. Students will summarize data using measures of central tendency and dispersion, diagnose the fit of linear and nonlinear regression models and perform appropriate diagnostic tests for OLS analyses. | Class discussion, Presentations, and Labs |
| Valuing Diversity and Global Awareness | Students will understand how identities such as race, class, gender, age, sexual orientation, religion, and nationality contribute to a range of social experiences. Classroom material will frequently deal with issues of diversity. Finally, students will conduct a small-scale independent research project with an adequate literature review and an appropriate research design and strategy, which will include demographic variables. | Class discussion, Group work, Presentations, and Lab |
| Writing Component         | In clear and concise language, students will interpret statistical results both in assignments and when responding to short answer/and or essay questions on exams. The thoroughness of their explanations, including coherence and conciseness will be considered in evaluating this part of their work. Additionally, students will run SPSS analysis and interpret SPSS output for descriptive statistics and graphs, comparing two means/proportions, ANOVA, OLS regression, and Logistic Regression. | Assignments, Exams and Presentations |

# Course Materials

Textbooks and Other Readings available on Canvas.

Main texts are the following:


Software

A central component of this course will be the use of the statistical software package SPSS to analyze quantitative data. Our class will have access to a lab in which all of the computers are equipped with SPSS. You may also download and install a copy of SPSS on your PC or Mac here: [http://itsdev2.sjsu.edu/services/software/#SPSS](http://itsdev2.sjsu.edu/services/software/#SPSS). You will have to log in with your ONE SJSU account. Then, you will get access to a Google Drive Folder entitled “SPSS.”
Software Support

https://stats.idre.ucla.edu/spss/
https://libguides.sjsu.edu/c.php?g=230360&p=1889484
https://www.ssric.org/trd/spss16

Dataset

GSS 2016 and other datasets available for download in Canvas

Tools

Calculator with a square root function and a stapler.

**Classroom Protocol**

By all means, treat your fellow students and your instructor with respect. Be on time, be engaged, avoid using your electronic gadgets, and do your part to help make a great learning experience. Students are required to participate in class discussions and exercises and be attentive to lectures and discussions. Lecture slides will be posted to Canvas, but they are often quite sparse and comprised primarily of images. Also, if students are found failing to take notes, your privilege of accessing the slides online may be revoked at the instructor’s discretion. You may use tablets and laptops during class for notetaking, accessing your readings, or running data analysis. If electronics are misused, they may be banned at the instructor’s discretion. Any disrespectful or threatening behavior will be reported to campus administration and campus police.

- Do the required reading **before class** and as needed
- Follow the student code of conduct (see below)
- Do your own work on the assignments, projects and exams
- Your attendance is expected. Absence is not an acceptable excuse for ignorance of the course content, assignments, or exam dates. Emails with any variation of the following question, “Did I miss anything important?” will be directed toward the syllabus and course Canvas page.
- Lack of planning on your part does not constitute an emergency on my part.
Student Code of Conduct

If you have a medical problem that makes it difficult for you to come to class, pay attention in class, stay awake in class, or participate in class, please come see me during office hours ASAP or have Accessible Education Services contact me. If not, you may get docked participation points.

I will be keeping a log of student participation, which will note if a student is not only speaking up in class but more importantly, actively listening and taking notes. Likewise, I also keep a log of students who are distracted and/or distract others. Merely showing up for class will not earn you a passing grade for participation. You can be physically present without being mentally present. If that is the case, you should not bother coming to class because you will not likely benefit from this absent-presence. And, your actions, such as doing homework for other classes, texting with whomever, online shopping, binge watching TV, snapchatting, or whatever else you choose to do can be distracting and detrimental to the success of others in the class.

Please turn off all phones and mobile digital devices during class. Laptops can only be used for taking notes and for relevant web searches; no emailing, texting, and other activities unrelated to this class. These and other diversions are not acceptable during class time and will lower your grade. Please be respectful of everyone’s time and efforts. Note: It may also be possible to speak too much. Remember to “step up or step back” as appropriate.

Email Protocol

When emailing the instructor, you MUST include the following information in your draft. If not, you may not get a response to your email. Also, if your question can be addressed by reviewing the syllabus, you may not get a response.

Subject: SOCI 204 - [insert short topic of email content]
Body:
Dear Dr. Kwan,

After perusing the syllabus and checking in with a fellow classmate, I have a question regarding [insert question here].

Sincerely,
[insert First Name and Last Name]

Do not expect to receive an immediate reply. Expect your email to be returned within 48 hours, not inclusive of weekends. Because of this, make good use of office hours.

If you are reading this far along into the syllabus, good for you! To receive extra credit that will be added to your overall grade at the end of the semester, email me a file or link of your favorite meme or gif. Of course, you MUST use the above format—if not, no extra credit for you! You must also email me before our first day.
Course Requirements and Assignments

HOMEWORK TYPE A (40%)

These assignments will serve as low-stakes opportunities to practice implementing statistical techniques, sometimes without the use of software. They will be evaluated on a complete/not complete basis. In order to benefit the most from these exercises you should complete the assigned readings prior to the class meetings.

HOMEWORK TYPE B (40%)

Homework assignments will be an extension of material introduced in class. They will require you to apply statistical techniques and concepts to problems, typically with the use of software. Homework must be submitted (hard copy) at the beginning of class on the due date.

PAPER AND PRESENTATION (20%)

Throughout the semester, please conduct a literature review to link to your statistical analysis. You will present your findings to the class. Additional workshop assignments will also be given.

Assessment

<table>
<thead>
<tr>
<th>ASSESSMENT CRITERIA</th>
<th>% POINTS POSSIBLE</th>
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<tbody>
<tr>
<td>Homework A</td>
<td>40%</td>
</tr>
<tr>
<td>Homework B</td>
<td>40%</td>
</tr>
<tr>
<td>Paper and Presentation</td>
<td>20%</td>
</tr>
</tbody>
</table>

Grading Policy


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<tr>
<th></th>
<th>A 93-100</th>
<th>A- 90-92.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>B+</td>
<td>87-89.9</td>
<td>B 83-86.9</td>
</tr>
<tr>
<td>C+</td>
<td>77-79.9</td>
<td>C 73-76.9</td>
</tr>
<tr>
<td>D+</td>
<td>67-69.9</td>
<td>D 63-66.9</td>
</tr>
<tr>
<td></td>
<td>F&lt;60</td>
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University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. are available here at the Office of Graduate and Undergraduate Programs website at http://www.sjsu.edu/gup/syllabusinfo/.

Credit Hours

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on.

Academic Integrity

Students should be familiar with the University’s Academic Integrity Policy. Your own commitment to learning, as evidenced by your enrollment at San Jose State University and the University’s integrity policy, require you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The website for Student Conduct and Ethical Development is available at http://www.sa.sjsu.edu/judicial_affairs/index.html.

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person’s ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include in your assignment any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Policy F06-1 requires approval of instructors.

Plagiarism

Please keep in mind that plagiarism is the use of someone else’s language, images, data, or ideas without proper attribution. It is a very serious offense in both academic and professional environments. In essence, plagiarism is both theft and lying: you have stolen someone else’s ideas, and then lied by implying that they are your own. At the very least, plagiarism will result in grade penalties. It can also result in failing the course and having the incident noted in your SJSU student records. If you are unsure of what constitutes plagiarism, it is your responsibility to educate yourself or ask for clarification before you turn in written work. Examples of plagiarism: If you use a sentence (or even a part of a sentence) that someone else wrote and do not reference the source, you have committed plagiarism. If you paraphrase somebody else’s theory or idea and do not reference the source, you have committed plagiarism. If you use a picture or table from a web page or book and do not reference the source, you have committed plagiarism. If your paper incorporates data that someone else has collected and you do not reference the source, you have committed plagiarism.

A tutorial to explain how to identify and avoid plagiarism is available here: https://libguides.sjsu.edu/plagiarism

For examples of paraphrasing and quotation, please see the following: http://www.indiana.edu/~istd/overview.html
http://www.indiana.edu/~istd/examples.html
http://www.indiana.edu/~frick/plagiarism/item1.html

For the SJSU policy on plagiarism, please read the “Academic Integrity Policy” at http://info.sjsu.edu/static/schedules/integrity.html

Dropping and Adding

If you would like to add this class and the class is not full, you must attend the first day of class and approach the instructor before or after class. You will not be guaranteed a seat, but your chances of getting in with be high if you continue to attend and check in with your instructor every day for two full weeks. Any absences in the meantime will automatically void this informal contract.

It is your responsibility to confirm your continued registration in the course. If you decide not to continue in the course, it is your responsibility to formally withdraw from the course. Failure to withdraw can result in a U for the course that will turn into an F grade. Students are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Information on registration is available at http://www.sjsu.edu/registrar/students/registration/Registration_Resources/index.html

Consent for Recording of Class and Public Sharing of Instructor Material

University Policy S12-7, http://www.sjsu.edu/english/frosh/program_policies/index.html, requires students to obtain
instructor’s permission to record the course. “Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor’s permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.” In order to gain the instructor’s permission, you must submit a written request, identifying the period of recording, whether for the whole term or on a class by class basis. In classes where active participation of students or guests may be on the recording, permission of those students or guests should be obtained as well. “Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.”
Academic Resources and Accommodations

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students requesting accommodations must register with the Accessible Education Center to establish a record of need.

Student Technology Resources

Computer labs for student use are available in the Academic Success Center located on the 1st floor of Clark Hall and on the 2nd floor of the Student Union. Computers are also available in the MLK Library.

Peer Connections

Peer Connections is located in Room 600 in the Student Services Center. It is designed to assist students in the development of their full academic potential and to motivate them to become self-directed learners. The center provides support services, such as skills assessment, individual or group tutorials, subject advising, learning assistance, summer academic preparation and basic skills development. The website is located at http://peerconnections.sjsu.edu.

SJSU Writing Center

The SJSU Writing Center is located in Room 126 in Clark Hall. It is staffed by professional instructors and upper-division or graduate-level writing specialists. Our writing specialists have met a rigorous GPA requirement, and they are well trained to assist all students at all levels within all disciplines to become better writers. The Writing Center website is located at http://www.sa.sjsu.edu/writingcenter/.

ACCESS SJSU Social Sciences Success Center: Clark Hall 240

ACCESS provides advising for undergraduate students majoring or want to major in any in the Department of Social Sciences. Students can find academic tutoring and advising in critical areas such as writing and statistics in a quiet, comfortable study environment. Students can talk with a professional advisor about requirements for their major, general education courses, changing majors and much more. Students can get advice on developing study strategies, improve time management, and general information on how to navigate the SJSU experience. For any student needs, problems or situations, this Center can provide a start for a solution. It is also a nice quiet place to study.

Late Work

Under no circumstances will late work be accepted without penalty, at the discretion of the instructor, if you do not offer a compelling explanation to your instructor with ample lead-time. I understand that emergencies arise, so please notify me as soon as possible if such emergencies may interfere with your class performance or participation.
## Course Schedule

This schedule is a “living document”: I may adjust the course schedule as the semester progresses. A current syllabus will always be available under the course “Files” on Canvas.

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topics, Readings, Assignments</th>
</tr>
</thead>
</table>
| 1    | 1/30  | Introduction to Quantitative Analysis  
AFK Chapters 1 and 4 |
| 2    | 2/6   | Getting to Know Your Data  
Ho Chapters 1 and 2  
Lab: Inputting and Managing Data, Dummy Variables |
| 3    | 2/13  | Graphs and Numerical Summaries  
AFK Chapters 2 and 3  
Ho Chapters 3-7  
HW #1A (due 2/20) |
| 4    | 2/20  | Probability and Sampling Distributions  
AFK Chapters 5 and 7  
Ho Chapter 11  
HW #2A (due 2/27) |
| 5    | 2/27  | Hypothesis Testing  
AFK Chapter 9  
Ho Chapter 12  
HW #3A (due 3/6) |
| 6    | 3/6   | Comparing Two Group Means and Proportions  
AFK Chapter 10  
HW #4A (due 3/13) |
| 7    | 3/13  | Categorical Variables  
AFK Chapter 11  
Ho Chapter 15  
Lab: Revisiting Dummy Variables  
HW #1B with Lab (due 3/20) |
| 8    | 3/20  | Regression  
AFK Chapter 12  
Ho Chapter 10 |
| 9    | 3/27  | Multiple Regression  
AFK Chapter 13  
HW #2B with Lab (due 4/10) |
<p>| 10   | 4/3   | SPRING RECESS |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topics, Readings, Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>4/10</td>
<td>ANOVA and ANCOVA</td>
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<tr>
<td></td>
<td></td>
<td>AFK Chapter 14</td>
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<tr>
<td></td>
<td></td>
<td>Ho Chapter 14</td>
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<tr>
<td></td>
<td></td>
<td>HW #3B with Lab (due 4/17)</td>
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<tr>
<td>12</td>
<td>4/17</td>
<td>Logistic Regression</td>
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<td>Pampel, “Logistic Regression: A Primer”</td>
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<tr>
<td></td>
<td></td>
<td>HW #4B with Lab (due 4/24)</td>
</tr>
<tr>
<td>13</td>
<td>4/24</td>
<td><strong>NO CLASS.</strong></td>
</tr>
<tr>
<td></td>
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<td>At-Home Workshop: Research Rationale, Causal Diagram, Research Question, Brief Literature Review</td>
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<td>Maroto (2016).pdf</td>
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<td>Final Pre-Paper Assignment 1 (due 5/1)</td>
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<tr>
<td>14</td>
<td>5/1</td>
<td>In-Class Workshop: How to apply quantitative analysis to your research question?</td>
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<td>McCabe et al. (2011).pdf</td>
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<tr>
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<td>Final Pre-Paper Assignment 2 (due 5/8)</td>
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<tr>
<td>15</td>
<td>5/8</td>
<td>In-Class Workshop: Run analysis</td>
</tr>
<tr>
<td>16</td>
<td>5/13</td>
<td>Final Presentations</td>
</tr>
<tr>
<td><strong>FINAL EXAM</strong></td>
<td>5/15</td>
<td><strong>Final Paper Due</strong></td>
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