Course Description
This Quantitative Research Methods in Kinesiology course will cover how to design, analyze and interpret quantitative research. Topics include: research ethics, research design and analysis techniques and issues, psychometric procedures, descriptive statistics, parametric and non-parametric inferential statistics, and research critiques.

Learning Outcomes

Department Graduate Program Learning Outcomes (PLOs)
Upon completion of the Master’s degree program in the Department of Kinesiology, students should be able to:
- Demonstrate the ability to conduct and critique research using theoretical and applied knowledge (PLO #1)
- Interpret and apply research findings to a variety of disciplines within Kinesiology (PLO #2)
- Effectively communicate essential theories, scientific applications, and ethical considerations in each student's Kinesiology program concentration (PLO #3)
- Interpret and apply research findings through acquired skills in order to become agents of change to address issues in Kinesiology through the application of knowledge and research. (PLO #4)

Course Goals and Student Learning Outcomes
Upon successful completion of this course, students will be able to:
1. Explain the fundamental characteristics of quantitative research methods and their relevance to the field of kinesiology.
2. Design research incorporating various quantitative modes of inquiry.
3. Identify a research problem in kinesiology best addressed with a quantitative or mixed-methods approach.
4. Apply APA style in writing.
5. Demonstrate competence in utilizing library resources for research.
6. Articulate ethical issues in research.
7. Develop critical analysis tools for conducting quantitative research in kinesiology.
8. Understand quantitative research issues that affect the quality of research.

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9. Demonstrate competence in data analysis.
10. Demonstrate proficiency in written communication.
11. Discern when and how to take into consideration group characteristics (e.g., age, gender, culture) when analyzing data.

Required Materials:
- SPSS is available in the Applied Motor Behavior Lab, on library laptops, and in the open use area of the Academic Success Center on the ground floor of Clark Hall.

Course Requirements and Assignments
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. More details about student workload can be found in University Policy S12-3 at http://www.sjsu.edu/senate/docs/S12-3.pdf. All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades.

Class Protocol
All students should demonstrate respect for themselves, each other, and the instructor at all times.

1) Professionalism/Active Participation:
a. Students are expected to arrive and settle by the beginning of lecture.
b. While you are in class, the instructor expects that you participate. That means that you should:
   - Actively prepare by reading any assigned materials,
   - TALK (ask and answer questions),
   - Bring your ideas, and
   - Refrain from anything not class related during class (newspapers, readings for another class, text messages, etc.)
c. Students who show unprofessional/disruptive behaviors (e.g., using electronic devices, texting, sleeping, chatting, browsing, reading/studying other materials) will be asked to leave the classroom.

2) Electronic Devices:
a. Cell phones should be turned off during class. A vibrating cell phone is still an activated cell phone.
b. All headsets/ear buds must be removed upon entering the class.
c. Texting, e-mailing, or surfing on your cell phone or laptop are not appropriate classroom activities.
d. Students who engage in these activities will be asked to leave the classroom.

3) Examination & Quiz:
a. Exams or quizzes will be administered only on the specified dates. No make-up exams and quizzes are administered. However, the instructor reserves the right to give make-up exams or quizzes because of unforeseen valid emergencies which can be officially documented in writing and notified to the instructor via email within 24 hours. Make-up work is only allowed upon presentation of valid medical or legal evidence.

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b. Should a make-up exam and quiz be given, it may differ in style from the original exam or quiz. If a student has a conflict due to an excused absence the exam or quiz, the instructor can arrange for the exam or quiz to be taken before the test date except for on-line quiz.

4) Assignment & Project:
   a. All assignments and projects must be typed and submitted to the proper submission folder in Canvas.
   b. All assignments and projects turned in late will result in a **30% grade reduction** for each class day the assignment is late, unless a documented and compelling reason is provided.
   c. All written work is intended to be the creation of the individual turning in the assignment; no student may use another student's work and claim it as his/her own. Correctly use referenced materials. Do not plagiarize. It is the role and obligation of each student to be aware of the University’s Academic Integrity Policy (S04-12).

5) Email Etiquette:
   When communicating with the instructor via email, you must follow the etiquette below; otherwise the instructor reserves the right of not replying to your email.
   a. Be sure to include a meaningful subject line; this helps clarify what your message is about and may also help the instructor prioritize reading your email.
   b. Just like a written letter, be sure to open your email with a greeting such as Hello Dr. Chang.
   c. Introduce yourself (your name and what class you are taking).

**Course Assignments:**

1. Institutional Review Board required certification
   Institutional Review Board (IRB) approval is required prior to conducting experiments involving people and animals. At SJSU, IRB approval is linked to certification. Please go to the webpage of the Office of Graduate Studies and Research (http://www.sjsu.edu/research/irb/) and link to the IRB training found at the following link for researcher training: http://www.sjsu.edu/research/irb/irb-researcher-training/index.html. Create an account with CITI Program. Complete the human subjects research training. A certificate of your participation and completion of the training is required for completion of the Kin 250 class. Drop an electronic copy of your certificate by clicking on the appropriate link on the Assignments Page of Canvas. This is a criterion referenced assignment that bears no quantitative credit but must be completed to receive a final grade in Kin 250.

2. Exams
   A midterm and final exam will be administered as indicated on the course calendar (last page of this Course Syllabus). Each exam will be developed from classroom and Canvas discussions, and textbook readings.

3. Research Project/Final Manuscript in the form of an APA manuscript for publication
   The research project/final manuscript will be developed across the semester by continuously advancing ideas through summaries of relevant scholarship and formulation of ideas. As well, the final manuscript will be no more than a maximum of 20 pages of text (not including Title page, Abstract, References, or Appendices) in APA style. A detailed information for the research project and final manuscript assignment will be posted on Canvas.

4. Presentation
   Students will participate in a group activity to present their research project and to engage in critical analysis of research ideas.
5. Class Activities
Students should attend class regularly ready to discuss a range of short research samples (snippets) to be discussed and critiqued in class. In addition, students will be asked to get involved in data collection for the research.

Course Activities and Evaluation:
1. Institutional Review Board certificate tutorial; complete, save certificate and drop into assignments on Canvas = Criterion referenced
2. Exams (Midterm =15pts & Final Exam=20pts) = **35pts** (PLO #1, #2, and #4)
3. Class Project = **50pts** (PLO #1, #2, #3, and #4)
   ✓ Research proposal = 5pts
   ✓ Drafts (2) = 15pts
   ✓ Presentation= 5pts
   ✓ Final Manuscript= 25pts
4. Class Activities = **15pts** (PLO #1, #2, and #4) **TOTAL: 100 points**

➤ All exams must be taken and all assignments must be accepted for a final grade to be assigned.
➤ Passing grades will not be assigned when tests or assignments are missing.

Grading
Final course grade will be assigned according to the following scale based on the total accumulated percentage of available points during the semester.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A+</td>
<td>98-100%</td>
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<tr>
<td>A</td>
<td>93-97%</td>
</tr>
<tr>
<td>A-</td>
<td>90-92%</td>
</tr>
<tr>
<td>B+</td>
<td>88-89%</td>
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<tr>
<td>B</td>
<td>83-87%</td>
</tr>
<tr>
<td>B-</td>
<td>80-82%</td>
</tr>
<tr>
<td>C+</td>
<td>78-79%</td>
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<tr>
<td>C</td>
<td>73-77%</td>
</tr>
<tr>
<td>C-</td>
<td>70-72%</td>
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<tr>
<td>D+</td>
<td>68-69%</td>
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<tr>
<td>D</td>
<td>63-67%</td>
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<tr>
<td>D-</td>
<td>60-62%</td>
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<tr>
<td>F</td>
<td>&lt; 60%</td>
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University polices
To learn more about all of the San Jose State University policies (drop/add) and services (Counseling, Writing) please go to this easy quick link provided by SJSU: http://www.sjsu.edu/gup/syllabusinfo/
# KIN 250 Quantitative Research Methods in Kinesiology, SP 2019
## Course Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
<th>Readings, Assignments, Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/28</td>
<td>Introduction to the course: Overview of Research in Kinesiology: Basic Research Terminology</td>
<td>Ch. 1 (CR)</td>
</tr>
<tr>
<td>2/4</td>
<td>The Nature and Purpose of Research: Understanding the Research Process</td>
<td>Ch. 1 &amp; Ch. 2 (CR)</td>
</tr>
<tr>
<td>2/11</td>
<td>Reviewing the Literature: Discussion of Topics for Research Project</td>
<td>Ch. 3 (CR) / Ch. 2 (RM)</td>
</tr>
<tr>
<td>2/18</td>
<td>Reading and Evaluating Research Reports</td>
<td>Ch. 4 (CR &amp; RM)</td>
</tr>
<tr>
<td>2/25</td>
<td>Becoming Acquainted with Statistical Concepts: Statistical Issues in Research Planning and Evaluation</td>
<td>Ch. 6 &amp; 7 (RM)</td>
</tr>
<tr>
<td>3/4</td>
<td>Developing the Research Plan</td>
<td>Ch. 5 (CR) / Ch. 4 (RM)</td>
</tr>
<tr>
<td>3/11</td>
<td>Ethical Concerns in Research</td>
<td>Ch. 6 (CR) / Ch. 5 (RM)</td>
</tr>
<tr>
<td>3/18</td>
<td>Experimental Research</td>
<td>Ch. 9 (CR) / Ch. 16 (RM)</td>
</tr>
<tr>
<td>3/25</td>
<td><strong>Midterm Exam</strong></td>
<td></td>
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<tr>
<td>4/1</td>
<td>Spring Recess (No class)</td>
<td></td>
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<tr>
<td>4/8</td>
<td>Descriptive Research</td>
<td>Ch. 6 (CR) / Ch.14, 18 (RM)</td>
</tr>
<tr>
<td>4/15</td>
<td>Descriptive Data Analysis</td>
<td>Ch. 13 (CR)</td>
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<tr>
<td>4/22</td>
<td>Inferential Data Analysis #1</td>
<td>Ch. 14 (CR)</td>
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<tr>
<td>4/29</td>
<td>Inferential Data Analysis #2</td>
<td>Ch. 14 (CR)</td>
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<tr>
<td>5/6</td>
<td>Writing the Research Report: Ways to Reporting Research</td>
<td>Ch.16,17 (CR)/ Ch. 21, 22 (RM)</td>
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<tr>
<td>5/13</td>
<td>Presentation of Research Projects</td>
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<tr>
<td>5/20</td>
<td><strong>Final Exam</strong></td>
<td>Due: Final Paper</td>
</tr>
</tbody>
</table>

- Subject to change with fair notice.
- Changes will be announced in class and/or posted on Canvas.