Office: ENS 307
Phone/email: 594-5672; slevy@mail.sdsu.edu
Office Hrs: Monday: 11:30 – 1:00 PM; or by appointment

Course Description: This course focuses on the use of statistical procedures most common to the Exercise and Nutritional Sciences. The course begins with a brief overview of basic statistical concepts and moves on to cover the various statistical techniques used in our area of study.

Course Objectives:
Upon completion of this course the student should be able to:
• Demonstrate an understanding of statistical software (SPSS) to create and analyze data.
• Demonstrate an understanding of descriptive and inferential statistics.
• Interpret confidence intervals and compare their use to hypothesis testing.
• Use and interpret one-way analysis of variance (ANOVA).
• Use and interpret repeated measures designs.
• Use and interpret two factor and mixed designs.
• Compare and interpret post hoc tests.
• Interpret output of correlation and regression.
• Select and conduct the appropriate statistical analysis to answer a research question of interest, and interpret and report analysis findings.

Course Materials:
Class Notes Packet: Available in SDSU Bookstore

Evaluation Criteria:
Exam 1 25%
Final Exam 25% (Monday, December 14, 2014; 1:00 – 3:00 PM)
Assignments 25%
Project 25% (Additional information to be distributed / available on Blackboard)

Course Grading:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Grade</th>
<th>Percentage</th>
<th>Grade</th>
<th>Percentage</th>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100%</td>
<td>B</td>
<td>80-85%</td>
<td>C</td>
<td>70-75%</td>
<td>D</td>
<td>60-65%</td>
</tr>
<tr>
<td>A-</td>
<td>88-89%</td>
<td>B-</td>
<td>78-79%</td>
<td>C-</td>
<td>68-69%</td>
<td>D-</td>
<td>58-59%</td>
</tr>
<tr>
<td>B+</td>
<td>86-87%</td>
<td>C+</td>
<td>76-77%</td>
<td>D+</td>
<td>66-67%</td>
<td>Below 58%</td>
<td>F</td>
</tr>
<tr>
<td>Week</td>
<td>Topic</td>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **Week 1: Aug 24, 26** | Background  
- Laying the groundwork  
- Overview of Research & Statistical Design  
- Descriptive and Inferential Statistics | Chapters 1 & 4 Blackboard |
| **Week 2: Aug 31, Sept 2** | Design and analysis of simple experiments  
- Hypothesis testing  
- Alpha and p-values | Chapters 5 & 6 Blackboard |
| **Week 3: Sept 9**  
**Sept 7 / Campus Clsd** | Design and analysis of simple experiments  
- Confidence Intervals vs. hypothesis testing  
- Using SPSS | Chapter 7; SPSS guide course pkt |
| **Week 4: Sept 14, 16** | - Using SPSS – lab 1  
- Errors in decision making |  |
| **Week 5: Sept 21, 23** | - One-way Analysis of Variance (ANOVA) | Chapter 11 |
| **Week 6: Sept 28, 30** | - Treatment effects  
- Power |  |
| **Week 7: Oct 5, 7** | - Repeated Measures ANOVA  
- Within vs. Between subject designs – lab 2 | Chapter 12 |
| **Week 8: Oct 12, 14** | - Repeated Measures designs  
- Intro to multi-factorial design |  |
| **Week 9: Oct 19,21** | **Review**  
**Wed 10/21, Midterm Exam**  
- Two-factor between subjects designs | Chapter 14 |
| **Week 10: Oct 26, 28** | Design and analysis of more complex experiments  
- Two-factor between subjects designs  
- Two-factor mixed designs | Chapter 14 |
| **Week 11: Nov 2, 4** | - Two-factor mixed designs (cont’d)  
- Following up significant interactions | Chapter 14 (review) |
| **Week 12: Nov 9**  
**Nov 11 / Campus Clsd** | - Two-factor mixed designs and deciphering interactions (cont’d) |  |
| **Week 13: Nov 16, 18** | - Critiquing mixed designs in research apps  
- Correlation and Regression approaches |  |
| **Week 14: Nov 23**  
**Nov 25** | **Mon-No Class: Nov 23 – Project work day**  
**Wed-Thanksgiving Holiday-Campus Closed** |  |
| **Week 15: Nov 30**  
**Dec 2** | Correlation and Regression  
- Bivariate correlation & simple regression  
- Introduction to Multiple Regression  
**Wednesday, Dec 2nd – Final Project Due** | Chapter 8 |
| **Week 16: Dec 7, 9** | - Multiple regression  
- Final Exam Review | Chapter 9 |
| **Dec 14** | **Final Exam Monday, Dec 14th , 1-3 PM** |  |
Computer Lab Hours [Love Library] 594-3189

Monday – Thursday  7:00 am – 1 am
Friday            7:00 am – 7 pm
Saturday         10:00 am – 7 pm
Sunday           10:00 am – 1 am

Please note:
If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact Student Disability Services at (619) 594-6473. To avoid any delay in the receipt of your accommodations, you should contact Student Disability Services as soon as possible. Please note that accommodations are not retroactive, and that accommodations based upon disability cannot be provided until you have presented your instructor with an accommodation letter from Student Disability Services. Your cooperation is appreciated.

Assignments
All assignments are due on the announced due date. No late assignments will be accepted.

Academic Honesty, Integrity, and Plagiarism: Please adhere to the guidelines set forth in the Graduate Bulletin (see Regulations of the Division of Graduate Affairs). Not adhering to these guidelines ends badly for all parties involved (i.e., plagiarism will result in a failing grade for the assignment or paper in which plagiarism occurred).

ADDITIONALLY:
Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. You may submit your papers in such a way that no identifying information about you is included. Another option is that you may request, in writing, that your papers not be submitted to Turnitin.com. However, if you choose this option you will be required to provide documentation to substantiate that the papers are your original work and do not include any plagiarized material.

Additional resources that you may find useful