Statistics for Behavioral Sciences (Psyc/Soc 104)

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Office hours: Monday, Oceanside Campus, room 3110, 3:30pm – 4:30pm
Tuesday & Thursday, Oceanside Campus, room 3110, 2:45pm – 3:15pm
Or by Appointment

Online Course Site: blackboard.miracosta.edu

Course Catalog Description: Statistical methods for analyzing data in the behavioral sciences. Topics include basic research design; descriptive statistics, probability and sampling distributions; statistical inference and power; linear correlation and regression; t-test and one-way analysis of variance; chi-square. Students will use appropriate technology (e.g., calculators and SPSS) to analyze real-world data, and report results using American Psychological Association style. Not open to students with credit in PSYC 104/SOC 104.

Prerequisite: MATH 101 with a grade of “C” or better or qualification through the Math Competency Exam or approved equivalent.

Course Objectives (with SLOs designated by an asterisk*):
(1) To achieve an understanding of:
   1. The experimental, correlational, and survey research methods,
   2. The normal distribution and standard scores, and
   3. Probability, sampling distributions, and hypothesis testing.
(2) Analyze research data (e.g., using SPSS, Excel)*
(3) Determine the appropriate statistical test, given a data set and hypothesis*
(4) Interpret results and communicate research findings*

Important Dates for our Fall 2009 Late Start Semester Course:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>September 8th</td>
<td>Online course starts - Welcome!</td>
</tr>
<tr>
<td>September 10th</td>
<td>Those students that have not entered the online course on Bb by this date may be dropped to make room for other students who wish to add</td>
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<tr>
<td>September 14th</td>
<td>Last day to add this class</td>
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<tr>
<td>September 17th</td>
<td>Last day to drop the class without receiving a “W” (and still receive a full refund)</td>
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<tr>
<td>November 23rd</td>
<td>Last day to drop class with a “W” on transcript</td>
</tr>
<tr>
<td>December 10th</td>
<td>Last day to file for an incomplete the course</td>
</tr>
<tr>
<td>Dec 9th - Dec 15th</td>
<td>Final Exam (Must Schedule at the Academic Proctoring Center)</td>
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Onsite Proctored Exams: There are three Behavioral Statistics exams. They will take place at the MiraCosta Academic Proctoring Center (www.miracosta.edu/StudentServices/ProctoringCenter). There is a proctored testing center at both the Oceanside and San Elijo campuses. Students will have one week to complete each exam. The exams must be completed by the specified deadline, during the operating hours of the proctored testing centers. Note that if needed, students may be able to arrange to take exams elsewhere (e.g., at the Proctoring Center of a local college).
Required Course Materials and Supplies:

2. *SPSS Basics (2nd ed.)*, by Zealure C. Holcomb (Publisher: Pyrczak Publishing).
3. Students will need to have regular and frequent access to internet connected computers (e.g., with the ability to display Adobe Acrobat Ver. 9.0 files, view images, and play audio and video files).
4. Basic calculator (add, subtract, multiply, divide, and square root)
5. Supplemental materials may include selected articles, handouts, and computer files on Blackboard
6. SPSS Statistical Software: Your options include
   (A) Use SPSS on the MiraCosta campus at the library or computer labs;
   (B) If you have a PC with Windows 98, Me, XP, or 2000, then you may purchase the SPSS Student Version 13.0 at the MiraCosta Bookstore. Note that this software expires 13 months after it is installed; it does not work with Windows Vista, nor does it work with Mac Windows emulators, or
   (C) If you have Windows Vista or a Mac computer, then go to [www.onthehub.com/spss](http://www.onthehub.com/spss). Select SPSS 6-Month rentals. The SPSS version you download depends upon your operating system (note: choose the lower priced ‘GradPack Base’ version). When ready, click on the ‘Details’ link for the product, then ‘Add to Cart,’ then register at the site (Note: to receive the student discount, you must fax or upload evidence of your student status: e.g., copy of your dated student ID card, dated printout of your class schedule, or another MiraCosta document identifying you as a student).

Course Format & Requirements

By taking this course, you are agreeing to put aside a minimum of six to nine hours a week every single week to learn about how to apply, interpret, and critically evaluate behavioral statistics. If you do not have the time in your schedule to make this commitment, it is strongly suggested that you wait until a later semester to take this course.

Textbooks: The *Workbook* introduces you to the main concepts, terminology, theory, and application of statistics in the behavioral sciences. The *SPSS Basics (2nd ed)* text introduces you to using the SPSS statistical application. The main portion of each chapter in the *SPSS Basics (2nd ed)* text is dedicated to walking you through how you would do a particular data analysis and then report the results APA style.

Practice Sets: The practice sets are assignments where you will be using SPSS to record and analyze research data. You will find the Practice Set assignments listed both in the assigned Learning Unit and also in the ‘Prepare for the Exam’ folder on Blackboard. All practice sets, for the entire period leading up to each exam, must be submitted at the start of the exam. The files (e.g., SPSS files) must be retained - as they may later be required by the instructor or to complete subsequent assignments. You may ask others for assistance with understanding the concepts and ideas addressed in the homework assignment.

The practice sets count as the pass/fail ‘Take-Home’ portion of each exam. The in-class portion of the exam will be graded only for students who receive a passing grade for the ‘Take-Home’ portion.

Quizzes: There are thirteen online quizzes (worth 10 points each). The quizzes are to be completed by the specified deadline (listed in Blackboard). The quizzes are based upon the assigned reading. The quizzes involve multiple-choice, matching, computations, and short answer.

Tests: There are two online tests (worth 50 points each). These two tests can be taken repeatedly - until the due date - to improve your score. The best score is the grade recorded. The Tests take into consideration the assigned reading. The Tests involve multiple-choice, matching, computations, and short answer.
Make-up and Retaking Quizzes & Tests: On the weekend prior to finals week, I will again make the quizzes and the two tests available for you to make-up or even improve upon your score. Note that this excludes the exams, which must be completed by the specified deadline.

Exams: The exams must be taken on campus at the Academic Proctoring Center. Students will have until the specified deadline to complete each exam, during the operating hours of the Academic Proctoring Center. Failure to take an exam by the specified deadline, or to follow the rules at the Academic Proctoring Center, may result in a zero for the exam grade. Do not wait until the last moment to sign up for an exam. Missing an exam appointment may result in a zero for your exam grade (i.e., treat it like any other scheduled exam).

There are two exams (worth 100 points each) and a final exam (worth 200 points). The exams and final exam will address your (1) knowledge, understanding, application, analysis, and critical evaluation of statistics, (2) ability to appropriately use SPSS, and (3) ability to read and create documents where you communicate statistical results. The two exams and the final exam have a take home portion, which must be completed and turned in at the start of the exam in order for the exam itself to be graded. Note that the final exam is cumulative.

Critical Thinking & ‘Research Write-Up’ Journal: There are ten critical thinking and ‘research write-up’ journal entries (each worth 5 points, and graded pass/fail). The journal assignment includes responding to critical thinking prompts, gaining practice and feedback on your writing up research results, plus learning from what other students have to share; you may also be asked to respond to what your fellow students (and you are always welcome to do so spontaneously in a courteous manner).

SPSS: The SPSS software is available for student use in the computer labs and the library at both the Oceanside and San Eliono MiraCosta campuses. Students also have the option of purchasing SPSS for home use (as described under Course Materials and Supplies on page 2). Using SPSS is a required part of the course.

Instructor Response to E-mail and Phone Messages: I typically respond within 24 hours or sooner (Monday - Friday) to e-mail, text messages, and phone calls. I make every effort to respond quickly, but must balance e-mail with other work responsibilities. If you have not heard back within 48 hours, consider contacting me again (as the e-mail address used may have been incorrect, etc).

Extra Credit: A 3% boost maximum can be applied toward your final course grade. Extra credit only applies to grades that are already passing (e.g., C becoming a B, B becoming an A).

A. Optional Learning Community: Associated with this course is an on-campus learning community. This is a great for students appreciate some ‘in person’ instruction. For every 3 learning community meetings you attend, you will receive a 1% boost to your course grade (up to the maximum extra credit of 3% for grades of C or better). The learning community will start meeting the fourth week of the semester. Time and location to be announced.

B. Learn about other extra credit opportunities on our Blackboard course site

Course Policies and Procedures

1. Academic Honesty: Cheating and/or plagiarism (using the work or ideas of another as your own) are unacceptable academic behaviors. The student who violates academic honesty will fail the test or assignment. In addition, all students who violate academic honesty will have their name forwarded to the Vice President of Student Affairs (where further action may be taken).

2. Class Involvement/Drop Policy: Students are expected to read the course material, actively participate in discussions, complete homework activities, and take the quizzes and exams. Students that fall behind the deadlines for the learning units AND become inactive for a two week period (e.g.,
are two weeks or more behind the deadlines for the required quizzes/homework/discussions/exams) during the semester may be dropped from the course.

3. **Grading Policy:** Course grades are computed on a percentage basis (90%=A, 80%=B, 70%=C, 60%=D, <60%=F). There are a total of 680 points. Without any curve, the grade cut-offs would be as follows:

- **Course Grade:** A: 612 points, B: 544 points, C: 476 points, D: 408 points

At the decision of the instructor, a curve may be applied (but only if it will benefit the students).

- **Pass/No Pass:** Students may petition Admissions and Records to receive a Pass/No Pass in place of a letter grade (by the deadline), but are recommended to first consult with their academic counselor.

Minimum needed to earn a 'Pass' is 74%.

- **Incomplete:** Students seeking an "I" (incomplete) must file a petition, with their instructors citing "unforeseeable, emergency and justifiable" reasons. The deadline to do so is Dec 10th.

- **Withdrawal:** Withdrawing from the course is ultimately the student's responsibility. If you stop attending, you must go to Admissions & Records (by the specified deadline) and drop the course or you may receive an "F" at the end of the semester.

**Blackboard:** Blackboard does not keep an accurate count of the total points possible. It excludes from the total points possible any assessments that you did not complete. There is a total of 680 points.

Note that all your quizzes and both tests are graded immediately, with feedback given to you on your performance for each question, and specific help is also provided regarding the questions missed. The Critical Thinking and 'Research Write-Up' journals are graded within 8 working days of the listed deadline for the learning unit. Exams are graded within 8 working days of when you took them.

4. **Student Disability Accommodations:** A student with a verified disability may be entitled to appropriate academic accommodations. If you have a disability and believe that you will need accommodations, you are encouraged to contact both your instructor and/or the Disabled Students Program & Services Office (760-795-6658).

5. **Course Conduct, Internet Access, & Harassment:** Students are to practice courtesy and common sense. Students that violate online courtesy will receive a warning describing the online violation. The student must respond to the warning with an acknowledgement of the violation and a statement of future compliance to appropriate behavior. If there is a repeat violation, the student’s access to the course will be denied until he or she meets with the Vice President of Student Services. The student will receive an email notification of the violation and the review proceedings. Then the student may be given the option to drop the course or to agree to comply with the rules of conduct. The student will not be re-admitted into the class until the instructor receives a written statement of re-admittance from the Vice President of Student Services. Continued violations and disturbances will result in the student’s dismissal from the course.

Please note that MiraCosta College supports academic freedom, and consequently, there are no filters or other controls placed upon access to electronic content, either on the Internet or otherwise. If you should find yourself subjected to offensive content, either sexual or otherwise, you should inform your instructor of this situation at the first opportunity.

6. **Additional Resources:** MiraCosta College provides free peer tutoring for this course (call 760-795-6682). Peer tutors are competent (they previously earned an "A" or 'B' in this course) and friendly. Appointments must be made 24 hours in advance. You can also attend the learning community for this course (which meets once a week for an hour outside of class). Additionally, you may post your questions to 'Ask A Question' on Blackboard and/or make use of office hours.
My Teaching Approach: To Provide...

- A supportive community for learning, critical thinking, and discussion
- Clear and understandable lessons that are interesting and applicable to the 'real world'
- A well structured course designed for your success
- Opportunities to frequently and easily self-assess your understanding
- Assistance for students to develop good study skills and habits

Tentative Course Schedule

<table>
<thead>
<tr>
<th>Learning Unit / Homework / Exam</th>
<th>Due Date (Thursday)</th>
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</thead>
<tbody>
<tr>
<td>1 - How We Use Statistics &amp; Research Methods</td>
<td>Sept 10</td>
</tr>
<tr>
<td>2 - Applying the Scientific Method &amp; An Introduction to SPSS</td>
<td>Sept 17</td>
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<tr>
<td>3 - Making Measurements, &amp; Communicating With Graphs and Tables</td>
<td>Sept 24</td>
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<tr>
<td>4 - Describing What’s Typical and the Amount of Variability</td>
<td>Oct 1</td>
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<tr>
<td><strong>Exam #1</strong>: To be taken at the MiraCosta Academic Proctoring Center</td>
<td>Oct 1 – Oct 7</td>
</tr>
<tr>
<td>5 - Writing Descriptive Reports</td>
<td>Oct 10 (Saturday)</td>
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<tr>
<td>6 - Symbols &amp; Formulas: Normal Distribution</td>
<td>Oct 15</td>
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<tr>
<td>7 - Standard Scores Continued, Probability, &amp; Correlations</td>
<td>Oct 22</td>
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<tr>
<td>Test #1 (may be taken anywhere online; your best score retained)</td>
<td>Oct 23 – Oct 31</td>
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<tr>
<td>8 - Regression &amp; Coefficient of Determination</td>
<td>Oct 29</td>
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<tr>
<td><strong>Exam #2</strong>: To be taken at the MiraCosta Academic Proctoring Center</td>
<td>Nov 2 – Nov 6</td>
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<tr>
<td>9 - Probability &amp; Distribution of Sample Means</td>
<td>Nov 12</td>
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<tr>
<td>10 - Hypothesis Testing &amp; Distribution of Sample Means</td>
<td>Nov 19</td>
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<tr>
<td>11 - Research Design &amp; Single Sample t Test</td>
<td>Nov 26</td>
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<tr>
<td>Test #2 (may be taken anywhere online; your best score retained)</td>
<td>Nov 27 – Dec 5</td>
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<tr>
<td>12 - Paired and Independent Sample t Test</td>
<td>Dec 3</td>
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<tr>
<td>13 - One Way ANOVA &amp; Chi Square</td>
<td>Dec 10</td>
</tr>
<tr>
<td><strong>Final Exam</strong>: To be taken at the MiraCosta Academic Proctoring Center</td>
<td>Dec 9 – Dec 15</td>
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Academic Proctoring Center

**MiraCosta College**: Sign up to take your exams during the morning, afternoon, or evening hours, either at the Oceanside or the San Elijo campus. There are no fees. To find out more, or schedule an exam:
Oceanside Campus: (760) 757-2121 x6471  San Elijo Campus: (760) 944-4449 x7752
Website: [www.miracosta.edu/StudentServices/ProctoringCenter](http://www.miracosta.edu/StudentServices/ProctoringCenter)

**Other Colleges**: Alternatively, you may arrange to take your exams at another college that is geographically closer to you (but keep in mind that these colleges typically charge a fee). To find out more, refer to the MiraCosta Academic Proctoring Center website: [www.miracosta.edu/StudentServices/ProctoringCenter](http://www.miracosta.edu/StudentServices/ProctoringCenter) or contact Lisa Menuck at [lmenuck@miracosta.edu](mailto:lmenuck@miracosta.edu), (760) 757-2121 x6471