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

Class Meetings: Tuesday & Thursday, 3:30pm – 4:45pm, Oceanside Campus, room 4612
Course Web 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 Semester Course:

August 25th Course starts; ‘No Shows’ may be dropped to make room for other students who wish to add the course
September 25th Last day to add this class
           Last day to drop the class without receiving a “W” (and still receive a full refund)
November 20th Last day to drop class with a “W” on transcript
December 10th Last day to file for an incomplete the course
December 17th Final Exam (Thursday, 3:30pm – 5:30pm)

Important Note: Please note that up to 13% (two weeks) of the class meetings may take place online. When a class meeting takes place online, an e-mail will be sent to you (using the e-mail address specified in SURF), and a note will be placed on the classroom door. You will be notified one week prior to a class being taught online (note: in the case of an unanticipated event, e.g. illness, less than one week’s notice may be given).
Required Course Materials and Supplies:


2. *SPSS Basics (2nd ed.)*, by Zealure 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). Note that students have access to computers on campus in the library and computer labs.

4. Basic calculator (add, subtract, multiply, divide, and square root)

5. Supplemental materials may include selected articles, handouts, and computer files on Blackboard

6. **Optional:** Some students may prefer to purchase and install SPSS onto their home computer rather than using SPSS in the MiraCosta library or computer lab…

   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.

   If you have Windows Vista or a Mac computer, then you can visit [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 (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. All practice sets, for the entire period leading up to each exam, must be submitted at the start of the exam. The practice sets count as the pass/fail ‘Take Home’ portion of each exam. An exam score of zero will be recorded if the student fails the take home portion. The SPSS files must be retained.

**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 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 all the quizzes and the two tests available for you to make-up or even improve your score. Note that this excludes the exams, which must be completed by the specified deadline.

**Exams:** There are two exams (worth 100 points each) and a final exam (worth 200 points). The two exams and the final exam have a take home portion. If the student does not earn a ‘pass’ on the take home portion, a score of zero will be recorded for the exam (see Practice Sets). 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 Elijo MiraCosta campuses. Students also have the option of purchasing SPSS for home use (as described under Course Materials and Supplies on page 2).

**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. **Learning Community:** Associated with this course is an on-ground learning community. Joining a learning community does not increase your study hours, but rather makes your study more enjoyable, efficient, and productive. 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).

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 who miss more than three class meetings 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. 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 Thursday, 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.

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. **Classroom/Online Conduct, Internet Access, & Harassment**: Courtesy is to be extended to students, the guest speakers, and to the instructor.

If you have a pager or cell phone, either turn it off or place it on the silent (vibrate) mode when you are in class. Students who leave the classroom prior to turning in their examination may receive an "F" for that test. No food or drink is allowed in the classroom per state law.

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.

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**Tentative Schedule**

<table>
<thead>
<tr>
<th>Learning Unit / Homework / Exam</th>
<th>Due Date (Tuesday)</th>
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</thead>
<tbody>
<tr>
<td>Welcome to the Course: How to Succeed (day 1)</td>
<td>Sept 1</td>
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<tr>
<td>1 - How We Use Statistics &amp; Research Methods (2 days)</td>
<td>Sept 8</td>
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<tr>
<td>2 - Applying the Scientific Method &amp; An Introduction to SPSS (2 days)</td>
<td>Sept 15</td>
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<tr>
<td>3 - Making Measurements, &amp; Communicating With Graphs and Tables (2 days)</td>
<td>Sept 22</td>
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<tr>
<td>4 - Describing What's Typical and the Amount of Variability (2 days)</td>
<td><strong>Sept 24</strong> (Thursday)</td>
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<tr>
<td><strong>Exam #1</strong></td>
<td></td>
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<tr>
<td>5 - Writing Descriptive Reports (2 days)</td>
<td>Oct 1 (Thursday)</td>
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<tr>
<td>6 - Symbols &amp; Formulas; Normal Distribution (2 days)</td>
<td>Oct 8 (Thursday)</td>
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<tr>
<td>7 - Standard Scores Continued, Probability, &amp; Correlations (2 days)</td>
<td>Oct 15 (Thursday)</td>
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<tr>
<td><strong>Test #1 (may be taken anywhere online; your best score retained)</strong></td>
<td>Available Oct 16 - 24</td>
</tr>
<tr>
<td>8 - Regression &amp; Coefficient of Determination (2 days)</td>
<td>Oct 22 (Thursday)</td>
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<tr>
<td><strong>Exam #2</strong></td>
<td></td>
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<tr>
<td>9 - Probability &amp; Distribution of Sample Means (2 days)</td>
<td>Nov 3</td>
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<tr>
<td>10 - Hypothesis Testing &amp; Distribution of Sample Means (3 days)</td>
<td>Nov 12 (Thursday)</td>
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<tr>
<td>11 - Research Design &amp; Single Sample t Test (2 days)</td>
<td>Nov 19 (Thursday)</td>
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<tr>
<td><strong>Test #2 (may be taken anywhere online; your best score retained)</strong></td>
<td>Available Nov 20 - Dec 5</td>
</tr>
<tr>
<td>12 - Paired and Independent Sample t Test (3 days)</td>
<td>Dec 3 (Thursday)</td>
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<tr>
<td>13 - One Way ANOVA &amp; Chi Square (2 days)</td>
<td>Dec 10 (Thursday)</td>
</tr>
<tr>
<td><strong>Final Exam</strong></td>
<td><strong>Dec 17</strong> (Th, 3:30 – 5:30)</td>
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</tbody>
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**My Teaching Approach**

⭐ 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