PSYC 5301.001  
Measurement and Statistics  
Fall '2011' Syllabus

Instructor: Steve Seidel, Ph.D.  
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Phone: 825-2619  
Office: Bay Hall 314  
Office Hours: MTR 11am – 12:30pm and by appointment

COURSE AUDIENCE: This is a methodology/statistics course designed for graduate students pursuing a Masters Degree in Psychology.

COURSE PREREQUISITES: Undergraduate Statistics (PSYC 1342 or its equivalent) and Undergraduate Experimental Psychology (PSYC 3411 or its equivalent)

COURSE DESCRIPTION/PURPOSE: The purpose and design of this course is to cover the research methodology and statistics used in performing psychological experiments. The course is designed to take students from generation of a research topic through design, data collection, statistical analysis, data interpretation, and the final write-up of a research report.

Required Texts:


STUDENT LEARNING OUTCOMES:

Students completing this course will be able ……

- Describe the research methods and statistical tests commonly used in Psychology.
- Identify and critique potential flaws and limitations in psychological studies.
- Demonstrate statistical and measurement knowledge by correctly describing the correct use of means, medians, standard deviations, percentiles, and the like.
- Employ PASW software to find solutions to statistical and methodological questions.
- Utilize the writing style used in psychological research (APA style)
- Propose research designs for particular psychological questions.

INSTRUCTOR & STUDENT RESPONSIBILITIES:

It is the instructor's responsibility to create an environment in which learning can and will occur. As the instructor, I will always be fully prepared to guide the discussions in class and will set the
stage and parameters for all activities that occur within the classroom. I will make myself available during office hours to assist you. Your individual progress toward achieving the course objectives plus your own personal and professional goals is my primary concern. I will also assess your performance toward the course objectives, and keep you informed of your progress and performance in the course.

It is the student’s responsibility to attend class and to be prepared to participate actively. You should actively and regularly share your insights, questions, and ideas with your instructor and fellow students. If you have a suggestion for a better way to stimulate learning in class or are unhappy with any activities of your teacher or fellow students, it is your responsibility to let me know.

EXAMS: Each exam in this class will consist of multiple choice and short answer/statistical interpretation questions. Each exam will be worth 100 points. Students will be allowed calculators and any needed formulas for statistics will be provided.

CLASS PROJECT: The class shall propose a research question, conduct a literature review, design an experiment, collect and analyze data, and write an APA style research manuscript. Where all class members will contribute to the literature review materials and data, all papers must be written individually. All papers should utilize APA style and include an appropriate Title Page, Introduction Section, Methods Section, Results Section, Discussion Section, and Reference Section. The project will be worth 100 points. Grades will be based on the quality of writing and thoroughness of analysis. Final drafts of papers must be received by class time on December 5 (last class day). Late papers will be penalized 5% for every day they are late. I will be happy to give you feedback on rough drafts of your papers as long as I receive requests on or before April 18th. More details will be provided early on during the semester.

HOMEWORK ASSIGNMENTS: Homework will be assigned that is designed to enhance material discussed each week. Homework assignments will be due at the beginning of class at the next class meeting from when it was assigned. There will be 10 assignments. Each assignment is worth 10 points. Late homework will be accepted with a 2 point reduction for each day it is late.

LATE ASSIGNMENTS: Late assignments/papers will be accepted with a deduction of points for lateness. Because the grading system is based on points, some points are always better than no points. Therefore it is always to your advantage to turn in late work.
GRADING
Each component of the course will be worth the following amounts and percentages of your final grade.

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Exams (3 X 100 pts)</td>
<td>300</td>
<td>60%</td>
</tr>
<tr>
<td>Class Project Paper</td>
<td>100</td>
<td>20%</td>
</tr>
<tr>
<td>Homework Assignments (10 X 10 pts)</td>
<td>100</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100%</td>
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</table>

Final letter grades will be assigned based on the following total percentages. If you have questions about your grade at any time, please come see me.

- Over 90% (360 - 400 pts) = A
- 80 – 89% (320 – 359 pts) = B
- 70 – 79% (280 – 319 pts) = C
- 60 – 69% (240 – 279 pts) = D
- Below 60% (below 240 pts) = F

ETHICS TRAINING
In addition, each student will be required to complete the Institutional Review Board’s required Ethics training. At the end of this training, students will print out a certificate and provide a copy to the instructor. Failure to complete this training will result in the student’s grade being lowered 1 letter (10%). Information on this training can be found at http://research.tamu.edu/compliance/irb/irbHome.html.

ATTENDANCE: Attendance is expected. If you must miss class, you will be held responsible for all material presented in those classes.

LIBRARY/UNIVERSITY RESOURCES: TAMUCC offers a variety of computer laboratories that provide students with easy access to SPSS software. The University Library has sufficient resources available for students in this course to access the materials they need to complete the assignments for this course.

GRADE APPEAL PROCESS
As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamu.edu/provost/university_rules/index.htm. For
assistance and/or guidance in the grade appeal process, students may contact the Office of
Student Affairs.

ACADEMIC ADVISING

The College of Liberal Arts requires that students meet with an Academic Advisor as soon as
they are ready to declare a major. The Academic Advisor will set up a degree plan, which must
be signed by the student, a faculty mentor, and the department chair. The College’s Academic
Advising Center is located in Driftwood 203E, and can be reached at 825-3466.

NOTICE TO STUDENT WITH DISABILITIES

Texas A&M University-Corpus Christi complies with the Americans with Disabilities Act in
making reasonable accommodations for qualified students with disabilities. If you suspect that
you may have a disability (physical impairment, learning disability, psychiatric disability, etc.),
please contact the Services for Students with Disabilities Office, located in Driftwood 101, at
825-5816. If you need disability accommodations in this class, please see me as soon as
possible.
## Schedule and Topics

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading/Assignment (Field)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/29</td>
<td>Overview of Course/Why Statistics? Introduction to Course Class Project</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>9/5</td>
<td>NO CLASS – LABOR DAY</td>
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</tr>
<tr>
<td>9/12</td>
<td>Statistics Primer/Introduction to SPSS Literature Reviews</td>
<td>Chapters 2 &amp; 3</td>
</tr>
<tr>
<td>9/19</td>
<td>The Art of Presenting Data Method Sections</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>9/26</td>
<td>Understanding Statistical Assumptions Correlation</td>
<td>Chapters 5 &amp; 6</td>
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<tr>
<td>10/3</td>
<td>Correlation/Regression Reliability Analysis/Validity</td>
<td>Chapters 6 &amp; 7</td>
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<tr>
<td>10/10</td>
<td>Exam 1</td>
<td>Chapters 1-7</td>
</tr>
<tr>
<td>10/17</td>
<td>Basics of Experimentation T-tests and ANOVA</td>
<td>Chapters 9 &amp; 10</td>
</tr>
<tr>
<td>10/24</td>
<td>ANCOVA and Factorial ANOVA</td>
<td>Chapters 11 &amp; 12</td>
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<tr>
<td>10/31</td>
<td>Factorial ANOVA (cont'd) Repeated Measures ANOVA</td>
<td>Chapters 12 &amp; 13</td>
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<td>11/4</td>
<td>Last Day to Drop a Class</td>
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<tr>
<td>11/7</td>
<td>Mixed Design ANOVA &amp; Review For Exam 1</td>
<td>Chapter 14</td>
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<tr>
<td>11/14</td>
<td>EXAM 2: Chapters 9-14</td>
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<tr>
<td>11/21</td>
<td>NonParametric Tests Writing Discussion Sections</td>
<td>Chapter 15</td>
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<tr>
<td>11/28</td>
<td>Factor Analysis</td>
<td>Chapter 17</td>
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<tr>
<td>12/5</td>
<td>Review for Final Project Papers are Due</td>
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<tr>
<td>12/12</td>
<td>4:30-7pm Exam 3</td>
<td>Chapters 15 &amp; 17</td>
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