Psychology 501  
Foundations of Behavioral Research  
MWF 11:00 – 11:50 Gilman 2204

<table>
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<tr>
<th>Instructor</th>
<th>Todd Abraham</th>
<th>TA</th>
<th>Jeritt Tucker</th>
</tr>
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<tbody>
<tr>
<td>Office</td>
<td>W-053 Lagomarcino Hall</td>
<td>Office</td>
<td>W-239 Lagomarcino Hall</td>
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<tr>
<td>Office Hours</td>
<td>T 10:00 – 11:30; W 12:00 – 1:30</td>
<td>Email</td>
<td><a href="mailto:jrtucker@iastate.edu">jrtucker@iastate.edu</a></td>
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<tr>
<td>Email</td>
<td><a href="mailto:abrahamt@iastate.edu">abrahamt@iastate.edu</a></td>
<td>Phone</td>
<td>515-294-4948</td>
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<td>Phone</td>
<td>515-294-4948</td>
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<td>515-294-8759</td>
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**Prerequisites**

Statistics 401 or equivalent

**Course Goals**

Research methodology/design, measurement, statistical analysis, and statistical computing are vast areas, each with their own texts, literature, advances, and sub-disciplines within psychology. Exhaustive coverage of any one of these topics is beyond the scope of a semester-long course. Rather, my goal is to provide you with a solid introduction to these topics and to develop an understanding of how integration of these areas is vital to conducting scientific research. My hope is that this course prepares you to pursue further coursework and independent study in each of these quantitative areas.

**Companion/Supplemental Texts**

**Methodology/Measurement/Design**


**Statistical Methods**


**Statistical Computing with SPSS**


Assessment

Assignments

Assignments will require analysis, interpretation, and reporting of statistical results using the methods we cover in class. SPSS computing necessary for the assignments will be completed as a group in class on Fridays. A portable storage device for datasets, output, and notes is strongly recommended. Your independent interpretations of the results and answers to questions about the results will be due on the following Wednesday.

- Assignments: 200 points (10 assignments @ 20 points each) See Schedule for Dates

Exams

The course will include three exams. Two shorter exams will be completed in class on the Fridays indicated below. The final exam for the course will occur at the scheduled time for this course during finals week. All three exams are closed book and closed notes.

- Exam 1 (Weeks 1-5): 50 points Friday 10/03/14
- Exam 2 (Cumulative w/focus on Weeks 6-10): 50 points Friday 11/07/14
- Exam 3 (Cumulative w/focus on Weeks 11-16): 100 points Monday 12/15/14 (9:45 – 11:45)

Final Course Grades

Course grades will be determined from the total number of points earned on the assignments and exams based on the scale below.

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<th>Points</th>
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<td>372-400</td>
<td>A</td>
<td>320-331</td>
<td>B-</td>
<td>268-279</td>
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<td>360-371</td>
<td>A-</td>
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<td>348-359</td>
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<td>332-347</td>
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<td>280-291</td>
<td>C-</td>
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Accommodations

Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact me to set up a meeting within the first two weeks of the semester or as soon as you become aware of your need. Before meeting with me, you will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-7220 or email disabilityresources@iastate.edu. Retroactive requests for accommodations will not be honored.
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<tr>
<th>Week</th>
<th>Topics</th>
<th>Required Readings &amp; Assignments</th>
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Assignment #1: Graphic Exploration of Data (Due Wednesday 9/17)
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<th>Required Readings &amp; Assignments</th>
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<td><strong>Assignment #2: Single Group Analysis (Due Wednesday 9/24)</strong></td>
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<td><strong>Assignment #3: Multiple Correlation &amp; Reliability/Validity (Due Wednesday 10/01)</strong></td>
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<td><strong>EXAM 1: Friday 10/03</strong></td>
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<td>Week</td>
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<td><strong>Assignment #4: Comparing Independent Samples (Due Wednesday 10/15)</strong></td>
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<td><strong>Assignment #5: One-Way ANOVA (Due Wednesday 10/22)</strong></td>
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<td>10/24 Between Subjects Factorial Designs</td>
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<td><strong>Assignment #6: Factorial ANOVA (Due Wednesday 10/29)</strong></td>
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<td>10/27 Repeated Measures</td>
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<td>10/31 Dependent Samples</td>
<td><strong>Assignment #7: Mixed ANOVA (Due Wednesday 11/05)</strong></td>
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<td><strong>EXAM 2: Friday 11/07</strong></td>
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<td>12</td>
<td>Linear Model</td>
<td>Assignment #8: Linear Regression &amp; Diagnostics (Due Wednesday 11/19)</td>
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<td>Regression Diagnostics</td>
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<td>ANCOVA</td>
<td>Assignment #9: ANCOVA &amp; Logistic (Due Wednesday 12/03)</td>
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<td>The Logistic Model</td>
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<td>14</td>
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<td>Thanksgiving Break</td>
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<td>15</td>
<td>Multiple Regression</td>
<td>Assignment #10: Multiple Regression Models (Due Wednesday 12/10)</td>
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<td>16</td>
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<td>17</td>
<td>Final Exams</td>
<td>Final Exam: Monday 12/15/14 9:45 – 11:45 am</td>
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