Non-Experimental Research Methods (Psyc 316)
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Fall 2014
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Office hours general availability: Mon. & Wed. – 10 am to 11 am; Tues. & Thur. – 12:30 pm to 1:30 pm; other times are available as well – students should always email and schedule time before dropping by office hours

Course Objectives
Psychology is a science. This is true whether its research is based on experimental, quasi-experimental, or non-experimental methods. Psyc 316 has been constructed to provide an opportunity for students to closely examine non-experimental research methods, i.e. methodologies that seek to understand covarying relationships among events or variables without trying to draw conclusions about causality.

A basic goal of Psyc 316 is for students to understand and feel comfortable in articulating the difference between non-experimental and experimental investigations of behavior and cognition. To achieve this goal, students will build on the foundation of knowledge they obtained in Psyc 314. They will focus on the fundamentals of non-experimental methods and be able to contrast those methods to experimental research. They will be able to understand and critically evaluate published research articles that utilize observational, non-experimental methodologies.

Both qualitative and quantitative methods will be integrated into the course. Students will learn to appreciate how qualitative designs offer an approach to develop theory and enrich interpretations; and, they will become proficient in understanding how quantitative non-experimental designs can test hypotheses across complex systems of covarying constructs. They will become more confidently knowledgeable about how correlation, regression, multiple regression, and structural equation modeling techniques affect the ways in which they may decide to organize their own research.

A constant, supportive emphasis across the semester will encourage each student to self-identify those areas of psychological research in which he or she is most interested; each student is expected to begin building a base of theoretical concepts in his or her self-identified area of research interest – especially as regards the application of non-experimental observational research designs. This effort will culminate in a publishable quality research report at the end of the semester; it will provide each student the opportunity to enrich his/her knowledge about his/her personal interests.

Course Prerequisites
Psyc 314 Research Methods: Experimental Designs must be completed (grade of C- or better) prior to enrollment in this class. Note: you may not take Psyc 314 and Psyc 316 concurrently. After taking Psyc 314, students are expected to have a clear understanding of the philosophy of the scientific method, the basic concepts and terms associated with experimental research design, and the Code of Ethics adopted by the American Psychology Association (APA) regarding research with human and animal participants. Students are also expected to be able to write-up scientific studies according to the formatting standards set by the APA.

Required Texts
(1) Readings will be assigned and provided – either via handouts in class or by digital documents on the USC Electronic Blackboard or ARES.

Evaluation Criteria
Grades for this course are based on seven major components. Each of these will be assessed separately and posted in the Blackboard grade-book on the basis of 100 points. This approach to posting grades provides a form of scoring with which each student should be quite familiar. For example: a score of 100 is the best score possible; a score of 70 indicates 70% correct; and so on. However, the proportionally weighted importance of each in computing the final total course score is not the same for each separate component.

The weighted importance for each component on your final total course grade will be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Mid-term examination I</td>
<td>13 %</td>
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<tr>
<td>Mid-term examination II</td>
<td>13 %</td>
</tr>
<tr>
<td>Final Examination (cumulative)</td>
<td>18 %</td>
</tr>
<tr>
<td>Attendance and participation (participation points, responsiveness in discussion)</td>
<td>10 %</td>
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<tr>
<td>Group grade – article critique – presentation and questions combined</td>
<td>11 %</td>
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<tr>
<td>Lab assignments (typical weekly assignments &amp; research report rough drafts)</td>
<td>20 %</td>
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<tr>
<td>Final Research Report</td>
<td>15 %</td>
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**Cut-Points for Letter Grades**
In percentages your letter grade will be assigned as follows:
A = 93.5 (and above), A- = 93.5 to 93.4,
B+ = 86.5 to 89.4, B = 82.5 to 86.4, B- = 79.5 to 82.4,
C+ = 76.5 to 79.4, C = 72.5 to 76.4, C- = 69.5 to 72.4
D = 60 to 69.4, F = below 60.

**Examinations**
There will be three examinations (see course schedule for dates). The examinations will test your understanding of the major concepts in the course and focus on both the details and the "big picture." All examinations are based on a combination of lecture material, class discussions, readings, student oral presentations, video-presentations, assignments, and handouts. Study guides to prepare for the exams will be provided in the form of Think Tanks; these identify the important vocabulary and concepts that will be covered on the exams. Real-time classroom practice for the exams will be provided in class with multiple bonus preps. The think-tank study guides and the bonus-preps are the best representation of what you can expect on the examinations. The exams may consist of multiple-choice questions, matching, and short essays. The two mid-term exams will each separately cover five different weeks of lecture material. The final exam will comprehensively cover everything that has been addressed in the course.

**Bonus-Preps**
“Bonus-preps” will be scheduled throughout the semester as preparation for the exams. The bonus-preps are presented in a multiple choice and short answer format. These preps very closely approximate what students can expect to see on the mid-term exams. They are provided as practice for the mid-term exams. They also provide an opportunity for students to earn bonus points to supplement and improve their mid-term exam scores. The better a student performs on the bonus-preps, the more bonus points he or she will earn toward improving his or her mid-term exam raw score. Students cannot disadvantage their final course grade by participating in the bonus-prep opportunities; however, they can advantage their mid-term exam scores by preparing well for the bonus-preps. Furthermore, by keeping up with the readings, by completing and studying the weekly think-tanks (the course “study guides”), and by participating in the class discussions and bonus-preps, students should be well prepared for the exams – they should not need to schedule intense study-time (i.e. cram) for the exams.

**Blog Points**
Internet Blog exercises will be offered throughout the semester as additional conceptual stimuli in the course. The Blog is located via the Tools folder on the course Blackboard. Though Blog participation is completely voluntary, students who decide to participate in these exercises will gain supplemental points to apply to their final exam scores. Similar to the manner in which bonus-preps act to increase mid-term exam scores, blog points act to increase the final exam scores. The difference in the two is that blog points are earned simply via “appropriate” responses, not by the correctness of a blogger’s response.

**Attendance/Participation Points**
Reading the assigned material, engaging the course Blog, and working on the think tanks before class are important to understanding the lecture topics and to participating in the classroom discussions. Various participation point questions will be asked during class for which a response is expected, on paper, and discussions will be based on those questions. Exercises may occasionally be assigned in class in order to help you to understand the course material. These exercises may be worked on in class, or may be due at a later date.

**Lab Assignments and Rough Drafts of the Research Report**
The typical lab assignments are designed for you to gain weekly experience in applied aspects of research methodology, such as the conceiving of a topic for investigation, conducting literature searches, understanding that which should be included in an APA-style research report, managing databases, and analyzing data using various commercially available statistical programs such as SPSS, R, and Lavaan. The primary goal of the lab is for you to “put into practice” the various elements of non-experimental design and analyses that have been the topics of lecture. This goal will culminate in your production of an APA-style research report at the end of the semester. Your Lab grade will be derived from the sum of all typical lab assignments and from the three rough drafts of the research report. The typical assignments will count for approximately 55% and the rough drafts will count for the approximate 45% remainder. Your best efforts should be applied throughout the typical lab assignments and on all three rough drafts. The rough drafts are termed “rough” only because your teaching assistant will be providing feedback and indicating where you can make corrections/additions/alterations to improve the final version of your research report.
**Final Research Report**
One of the major assignments in Psyc 316 is to write a publishable quality, APA-style research report. The report will be due close to the end of the semester (see dates in course schedule). The assignment includes strategic elements that are both qualitative and quantitative. Each student is expected to identify a research question that is relevant to his or her own self-identified area of research interest. After explicitly providing the theoretical foundations for the hypotheses and precisely specifying all the procedures that must be implemented, the students will learn how to apply for approval from the Institutional Review Board. They will then execute the procedures. After obtaining the data, the students will analyze the data, identify significant results, evaluate whether hypotheses have been supported or not, draw conclusions from the results, and modify their theoretical perspectives in a manner that is consistent with the results of the analysis.

**Journal Article Critiques**
One of the best ways to learn about research design is to read and critically evaluate research articles. Eight research articles (downloadable from ARES – electronic reserves) have been selected (each student will choose one pre-matched pair of articles) – to critique and present in class as part of a student group project. The articles are listed below and the dates for their discussion are indicated in the course schedule (see p.6 of this syllabus). The presentations will be led by groups of students; presentations will be 10 minutes in length. Each student is required to be a group member.

Each student must self-select the presentation group of his or her choice via the Group folder on the course Blackboard. This must be done before the second Sunday of the semester. The size of each group will depend on class enrollment, but no group will be larger than five members. For this reason, the earlier a student decides which article he or she would like to present, the more likely he or she will be able to successfully self-select that group. The self-selection task is based on a first-come-first-served procedure. DO NOT SELF-SELECT YOURSELF TO MORE THAN ONE GROUP. If you wish to work as a group with other specific students, you should first determine which group has enough vacancies open to include all of you; then, all should try to self-select to the same group at the same time.

Grades for this assignment will be based partly on group performance and partly on individual performance. Guidelines to help students function well together within a group context will be provided by the beginning of the third week of the semester. Guidelines specifying the information that is expected to be included in the presentation will also be provided.

Each presenting group must provide a one-page presentation-summary of the article to all in attendance at the time of your presentation. Your presentations will be assessed on clarity, accuracy, and professionalism. The use of PowerPoint is required. Each presentation group has also been assigned a second article about which they are expected to pose questions of another group (see course schedule). Each individual group member is expected to ask at least one question of the other group. The questions should address experimental design issues as relevant to the second article.

**Articles for Critical Evaluation (downloadable from ARES)**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Presentation Articles</th>
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Missed assignments and/or examinations
Missed participation/class-exercises and examinations cannot be made up and will result in a grade of zero. Students who experience medical emergencies preventing them from attending class on days where class exercises, quizzes, or examinations are scheduled are required to provide original documentation from their physicians within one week explaining their absence. USC athletes should meet with Dr. Breland by the end of the second week of the semester regarding their scheduled athletic events that may conflict with course requirements. *Students honoring religious holy days are treated in a similar fashion.* Exams will be rescheduled for those whose absences are excused. Participation and class-exercises can be made up (when excused) by writing four-page papers on topics as assigned by Dr. Breland.

Tardy policy
There is a large amount of material to cover in this course. Tardy students (more than 5 minutes late) are disruptive to the class, and significantly retard the flow of information. After a first tardy, each time a student is late for class, his/her class grade will be dropped by 1% on the final lab grade.

Cell Phone and Electronic Device Policy
Cell phones should be turned off during class. Computers may be used for note taking purposes only. Any other usage (such as accessing Facebook, email, or gaming in class) is not permitted and will result in disciplinary action.

Course Participation
You are expected to be prepared for class by completing the required readings or exercises BEFORE class, and should be prepared for discussion of the assignments (and participation point questions).

Academic Dishonesty and DSP Arrangements
Students are held to the highest standards of ethical conduct. You may not submit work for this class that you or anyone else has presented, even in part, for this or another class. You should be especially vigilant with regard to plagiarism (presenting someone else's ideas as your own, whether deliberately or accidentally). Note that plagiarism includes the use of another's writing without proper use of quotation marks, the borrowing of a word or phrase, the use of an idea, or the paraphrasing of material if that phrase, idea, or material is not properly introduced and/or documented (including merely rearranging phrases into an original form), and presenting a paper written by or produced in collaboration with someone else (friend, colleague, professional writer) as solely your own work.

Students with disabilities and/or special needs should be registered through the University DSP and should meet with me regarding the arrangements approved through the DSP within the first week of entering the course.

Special Notes
1. This course is challenging and 100% attendance is expected of all students. It is clear that students who attend class regularly, stay up with the readings, complete the assignments with full effort, and who do not leave studying until the last moment typically find that they enjoy the course more and achieve at least a C or better in this course. As in any course, work of a significantly high caliber in each of the components of this course is considered to be B (good) or A (exceptional) work. It is especially important that you be on time for class, have completed your reading assignments prior to class-time, and that you are prepared for discussion of these materials in class.
2. All assignments in this course are expected to be word-processed and graphs/tables should be computer-generated.
3. All assignments should be completed using APA-style, including the use of a title page. They are due at the beginning of class on the due date. Word-processing and data management are available in several computer labs on campus. You should consult your APA publication manual for all writing assignments.
4. All students are expected to have access to the student computer network. It is your responsibility to ensure that your access is up-to-date during the semester.
5. Tutors are available for this course through the Center for Academic Support (213-740-0076) and through the Writing Center (213-740-3691). If you should find that you are not doing as well in this course as you would like, please see me immediately. The longer you delay, the more you will disadvantage your ability to do well.
<table>
<thead>
<tr>
<th>Wk #</th>
<th>Begin Date</th>
<th>Lectures</th>
<th>Labs</th>
<th>Assigned Readings (on ARES)</th>
</tr>
</thead>
</table>
| 1    | 8/25       | Introduction to class  
Brief review of Psyc 274 & 314                                             | Introductory Lab  
Overview of SPSS and data set characteristics/  
iStar application | Reference: *Preparatory Thoughts for Non-Experimental Research Methods: A context from which to initiate a study of non-experimental methods in psychological research*, Breland |
| 2    | 9/1        | Monday – University Holiday – Labor Day  
Choosing a line of research; Methods for building theory in non-experimental research  
**Students should select Critique Group by noon 9/7** | No LAB                                                                  | Reference: *Theory Construction and Model Building Skills*, Jaccard & Jacoby, as excerpted from pp 39-91                                                   |
| 3    | 9/8        | *BonusPrep #1 – beginning of last lecture of week  
Correlation and covariances; Simple regression; Prediction/accounting for variance | Literature search for research topic;  
Downloading R statistical program and Short Demo | Reference: *Regression Basics 2nd edition*, Kahane, as excerpted from pp 1-36                                                                  |
| 4    | 9/15       | Multiple regression; Understanding published depictions of Moderating Variables; Introductory discussion of Qualitative Research | Discussion of Archival Data Sets; Further SPSS Review; Considering the Research Report Outline | Article: *Age and Creativity at Work*, Binnewies, Ohly, and Niessen  
Paper: *Introductory Thoughts for an Intra-Course Study of Qualitative Research Methods*, Breland                                               |
| 5    | 9/22       | Qualitative Investigations:  
Considering an initial, explorative approach to your research questions; Quantitative vs. Qualitative debate | Data cleaning; Intro to Regression in SPSS;  
CITI Ethics Certification | Reference: *Qualitative research methods*, B. Berg, as excerpted from pp. 101-152                                                               |
| 6    | 9/29       | *BonusPrep #2 – end of last lecture of week  
Continued discussion of Qualitative Investigations and methods of analyzing qualitative interviews; types of analytic frameworks | Importing data to R; R regression analyses  
*research question and initial outline due* | Reference: *Focus Groups*, R. Krueger, as excerpted from pp. 35-61                                                                                 |
| 7    | 10/6       | *Mid-Term Exam #1 – second lecture of week  
Summary discussion of Qualitative Investigations; Review for Mid-Term Exam #1 | Constructing Items for Non-Experimental Surveys;  
Accessing PsycInfo published scales |  
**Prepare for the Mid-Term**                                                                                                                                 |
| 8    | 10/13      | Concluding Qualitative Non-experimental Investigations  
Mixed Method Designs; Introductory Concepts in Developing and Testing Hypotheses of Moderating Variables | LabBonus opportunity:  
Expectations for the Rough Draft of the Introduction to the Research Report  
*iStar proposal submitted* | Articles: (1) Sexual pleasure and sexual risk among young women who use methamphetamine: A mixed methods study, Lorvick et al.  
(2) The everyday violence of hepatitis C among young women who inject drugs, Bourgeois, et al.                      |
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<tbody>
<tr>
<td>9</td>
<td>10/20</td>
<td>Consideration of Moderating, Mediating, and Suppressor Variables in Regression Analyses Introduction to Factor Analyses</td>
<td>* Rough draft of Introduction section due Regression Analyses with Moderating and Mediating variables</td>
<td>Reference: <em>Designing, testing...moderator effects</em>, Whisman &amp; McClelland, pp 111-120</td>
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<tr>
<td>10</td>
<td>10/27</td>
<td>Measurement theory and constructing scales; Understanding the basics of Exploratory and Confirmatory Factor Analysis</td>
<td>Reliability Analyses and Factor Analyses; Emphases in Writing the Methods section of research report</td>
<td>Reference: <em>Test Theory: A Unified Treatment</em>, R. McDonald, as excerpted from pp 55 – 75 Reference: <em>An Easy Guide to Factor Analysis</em>, P. Kline, as excerpted from pp 28-41; 56-79</td>
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<td>12</td>
<td>11/10</td>
<td>SEM growth model designs; Developmental designs; Investigating a system of interrelated factors</td>
<td>Downloading and Analysis of Research Report data</td>
<td>Article: <em>Latent growth curve analysis of accelerating decline in cognitive abilities in late adulthood</em>, Finkel, Reynolds, McArdle, and Gatz</td>
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<td><em>Mid-Term Exam #2 – First lecture of week</em></td>
<td>Prepare for the Mid-Term</td>
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<td>14</td>
<td>11/26</td>
<td>Wed-Fri – University Holiday – Thanksgiving</td>
<td>NO LAB TA Consultation If Needed by appointment regarding RR analyses</td>
<td>Published articles as assigned to groups (see page 3 of syllabus)</td>
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<tr>
<td>15</td>
<td>12/1</td>
<td><strong>Group Article Critique Presentations</strong> <em>Final course review</em></td>
<td><em>Final Draft of research report due</em> LabBonus Opportunity Review of Lab</td>
<td>Published articles as assigned to groups (see page 3 of syllabus)</td>
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<td>Lecture Section 52613 (TTh 11:00 am)</td>
<td>Exam in Lecture Room Duration: 2 hours</td>
<td>Cumulative Exam</td>
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<td>Exam on Tuesday 12/16 at 8:00 am</td>
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<td>Lecture Section 52616 (MW 12:00 am)</td>
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<td>Exam on Friday 12/12 at 11:00 am</td>
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