

Research Design and Analysis II
PSYC 501
Spring 2012

Instructor: Emily Cook, PhD
Office Hrs: T 10-12am; Th 9-11am (317 HM)
Class: Tuesday 4-6:50pm

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Readings

* Most readings will be posted on blackboard. I also will be taking some readings from textbooks that were required from last semester (Fall 2011 – PSYC 500)

Blackboard

Information for this course will be available through Blackboard (<https://blackboard.ric.edu>). If you need assistance accessing BB, please contact the Blackboard Student Help Desk at (401) 456-8803. Blackboard contains a copy of the syllabus, student grades on assignments, overhead slides, study guides, assignments, and any other relevant documents to the content of this class. Please note that the information provided on Blackboard is meant to *serve as a supplement, rather than an alternative*, to regular class attendance and participation. You are still responsible for all information presented during class time.

Course Description

PSYC 501 is intended to introduce students to the design and analysis of experimental and quasi-experimental research designs. Included are between- and within-subjects approaches to single-factor and factorial designs and their corresponding statistical tests for data analysis.

Course Goals: By the end of the course, I expect that you will have gained the following competencies

1. Demonstrate knowledge of experimental and quasi-experimental designs
2. Demonstrate knowledge of between-subjects and within-subjects design
3. Demonstrate knowledge of single-factor and factorial designs
4. Be able to critically evaluate the strengths and limitations of different designs used to study psychological phenomenon.
5. Be able to choose the appropriate statistical tests to answer various research questions.
6. Demonstrate ability to analyze and interpret data for each design
7. Be familiar with the ethics guiding psychological research and specifically IRB procedures at RIC
8. Gain a conceptual understanding of data analytic techniques
9. Enter and Analyze Data in SPSS
10. Write an APA style research proposal

Learning Environment

To achieve the goals of this course we must work together. My role as instructor is to come to class prepared and provide a learning environment that is meaningful and challenging. Class will be conducted in lecture/presentation format and large group discussion. Lectures and in-class discussion will highlight key information from the readings, but new information *not* covered in the readings will be presented.

Your role as a student is to attend class, pay attention, participate in class discussion and activities, complete all class assignments and exams, and read the readings. I also expect that you will respect the class by **turning off your cell phones** and IPODS during the lecture and not bringing outside reading material into class. Laptops are permitted in class but should only be used for taking notes. If laptops are used for other activities (e.g., facebook) then I will no longer allow you to use your laptop. Furthermore, please do not come to class late or leave early without letting me know. Lastly, if the behavior of another classmate is somehow inhibiting your ability to feel comfortable in the learning environment please come and see me.

Course Policies

1. **Attendance:** The concepts and skills covered in this course are advanced and challenging. Accordingly, students are expected to **be present during all classes** and to **arrive on time**. Each student will be allotted **two** “excused” absences over the course of the semester. I assume that these two absences will be for legitimate reasons. Accordingly, there is no need to (i.e., please do not!) explain or document (e.g., doctor’s notes) absences. Additionally, please do not come late to class. Students will be responsible for all material presented during classes they miss. In other words, **the professor will not “re-teach” material missed during class absences during individual appointments.**
2. **Academic Integrity** is the pursuit of scholarly activity free from fraud and deception and is an educational objective of this institution. Academic dishonesty includes, but is not limited to, cheating on exams, having unauthorized possession of exams, fabricating information or citations, facilitating the academic dishonesty of others, and submitting the work of another person as your own (plagiarism). Academic dishonesty may result in a failing grade for the particular assignment or exam, a failing grade for the entire course, or suspension or expulsion from the university.
3. **Plagiarism** has become an increasing problem. Anyone who plagiarizes on a paper will at the very least receive an F on that paper. Please go to the following website to review plagiarism policies. (<http://ric.libguides.com/content.php?pid=96224&sid=720434>)
4. **Disability Accommodations:** Rhode Island College is committed to making reasonable efforts to assist individuals with documented disabilities. If you are seeking reasonable classroom accommodations under the Americans with Disabilities Act and/or Section 504 of the Rehabilitation Act of 1973, you are required to register with the Student Life Office, located in room 127 in Craig Lee (456-8061). To receive academic accommodations for this class, please obtain the proper forms from the Student Life Office and meet with me at the beginning of the semester.

Course Requirements

1. Students will complete assigned readings prior to class.
2. Students will attend all lectures and participate in class discussions and activities.
3. Students will complete two exams. These exams are not cumulative.
4. Students will submit discussion questions weekly the Monday prior to class through the discussion board on blackboard.
5. Students will facilitate a 30-minute discussion on one of the topics covered throughout the semester.
6. Students will develop a research proposal and presentation of that proposal to be handed in at the end of the semester.

Exams. You will be required to take two exams in this class. The last exam will be your final. The final is not cumulative. The midterm exam may consist of multiple-choice, short answer, fill-in-the-blank items, and application questions. The final exam will be a combination of an in-class exam with multiple choice and short answer questions but will also have a take-home SPSS component. You will be tested on information presented during lectures, class discussions, and on your assigned readings. **There will be no excuses or make-ups if you miss one of the exams.** If you must miss for emergency, you must contact me before the test and make an appointment to take it before you return to class.

Discussion Questions. Before 5:00 pm on Mondays (that is, the day before the class meeting), submit to the discussion board on blackboard **3** questions for discussion. These questions may range from questions of fact or meaning to questions about the pros and cons regarding certain methodological choices. Your questions also may be comments that simply indicate what you found most interesting, important, puzzling, infuriating, etc. about the reading. Provide enough context that your classmates and I can understand your question, and try to direct us to a specific passage in the text that forced you to articulate your question most sharply. Distributed over email in a timely manner, these questions will not only help you organize your response to the readings but will also serve as a guide for discussion. **If something else is due in a given week then you do not need to turn in discussion questions.**

Leading Class Discussion. Each student will be asked to lead a 30 minute class discussion once throughout the course of the semester. This discussion will focus on some aspect of the topic that we discuss within the class. During the first week of class students will choose the topic/week that they will present. Students will be expected to bring in outside information to class that is relevant to the topic chosen. Students will present information to the class on that outside information and be responsible for generating discussion. Your presentation should set out what you see as the *context, key concepts, and controversies* related to this topic.

Final Research Proposal and Presentation. Students will be required to individually prepare a 10-20 page research proposal (including references but not appendices). This research proposal is due in class on 5/2/12. This research proposal is designed to address a research question of your choosing from the field of Psychology and should build off the topic chosen in the fall semester. Specific instructions for the paper will be posted on Blackboard under course documents. During the course of the semester, you will hand in a **two-page**

research summary of the proposal (for which will receive a separate grade) and a **final draft** of your research proposal. The research proposal summary will include a broad statement of the problem, proposed research methods for studying the problem, and your references to date. The final proposal will include an abstract, literature review, statement of your hypotheses, a methods section, plan of analyses, and a limitations section. Papers must be in APA format and typed. A useful FAQ about APA writing style can be found at <http://www.apastyle.org/learn/faqs/index.aspx>. Papers should not be handed in late. Any late paper will result in a letter grade off the final paper grade for each day it is late. Please see me as soon as possible if you have any questions regarding expectations for the paper. Grades will take into account quality of writing (grammar, punctuation, sentence structure, etc.) and whether the proposal demonstrates an understanding of material presented during the semester and how it should be applied to a specific research question. Students who reproduce phrases or sentences from the work of others in their own writing without appropriate quotation marks and page references *have committed plagiarism*. All students are required to turn in a signed copy of the “Statement Regarding Plagiarism” (attached) with their final paper.

Students will present their research proposal to class. Each student will have 15 minutes to provide the background/rationale, review of the literature, research questions/hypotheses, methods, and plan of analyses. Presentations will be judged on content, organization, presentation style, accuracy, and the integration of the literature, the hypotheses, and the methods.

Grading

Final grades will be computed as follows:

Class Participation and Discussion Questions	15 points
Class Led Discussion	25 points
Exam 1	50 points
Exam 2	60 points
Pre-Proposal	20 points
Proposal	70 points
Proposal Presentation	20 points
Total	260 points

Points will be converted to a traditional 100 point grading scale for assignment of grades:

A (94% and higher)	A- (90-93.99)
B+ (87-89.99)	B (84-86.99)
B- (80-83.99)	C+ (77-79.99)
C (74-76.99)	C- (70-73.99)
D+ (67-69.99)	D (64-66.99)
D- (60-63.99)	F (less than 60)

Note: The instructor reserves the right to change the syllabus as necessary. **You are responsible for all changes to the syllabus and all information presented during class time, regardless of whether or not you attended class.**

Course Calendar			
Date	Topic	Readings	Assignments Due
Week 1 – 1/24/12	Writing a Research Paper and Proposal	<ul style="list-style-type: none"> Bem, D. J. <i>Writing the empirical article.</i> Pajares, F. (2007) <i>Elements of a proposal.</i> Al-Riyami, A. (2008). <i>How to prepare a research proposal.</i> 	Bring a Copy of Last Semesters Lit Review
Week 2 – 1/31/12	Foundations of Experimental Designs	<ul style="list-style-type: none"> Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). <i>Experiments and generalized causal inference. Chapter 1. (Note. Do not read Chapter 14 also embedded in this document).</i> Rosenthal & Rosnow. <i>Randomized controlled experiments and causal inference (Chapter 7).</i> Cook, T. D., & Campbell, D. T. <i>The conduct of randomized experiments.</i> Orne, M. T. (1962). On the social psychology of the psychological experiment as a social institution. <i>American Psychologist, 17, 776-783.</i> 	
Week 3 – 2/7/12	Single Subject Experimental Designs	<ul style="list-style-type: none"> Furlong et al. <i>Single subject research design (2 documents)</i> Logan et al. (2008). Single-subject research design: Recommendations for level of evidence and quality rating. <i>Developmental Medicine & Child Neurology, 50, 90-103.</i> Horner et al. (2005). The use of single-subject research to identify evidence-based practice in special education. <i>Exceptional Children, 71, 165-179.</i> 	
Week 4 – 2/14/12	Foundations of Quasi-Experimental Designs	<ul style="list-style-type: none"> Cook & Campbell. <i>Quasi-Experiments: Nonequivalent control group designs. Chapter 3</i> Cherulnik. P. D. (2001). <i>Evaluating Quasi-Experimental research designs (pgs. 243-258).</i> Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). <i>Statistical Conclusion Validity and Internal Validity. Chapter 2 (Read only pgs. 184-192 & 203-214)</i> Durant, R. H. (2001). Evaluation of a peaceful conflict resolution and violence prevention curriculum for sixth-grade students. <i>Journal of Adolescent Health, 28, 386-393.</i> 	

Date	Topic	Readings	Assignments Due
Week 5 – 2/21/12	Quasi-Experimental Designs: Longitudinal	<ul style="list-style-type: none"> • Cook & Campbell. <i>Quasi-experiments: Interrupted time-series designs: Chapter 5.</i> • Robinson, K., Schmidt, T., & Teti, D. M. <i>Issues in the use of longitudinal and cross-sectional designs.</i> • TBA • Cook, E.C., Buehler, C., & Fletcher, A. C. (In Press). A process model of parenting and adolescents' friendship competence. <i>Social Development.</i> 	Pre-proposal Due
Week 6 – 2/28/12	MIDTERM		
Week 7 – 3/6/12	Ethics	<ul style="list-style-type: none"> • www.citiprogram.org (bring certificate to class) 	Rough draft of RIC IRB application
Week 8 – 3/13/12	NO CLASS – SPRING BREAK		
Week 9 – 3/20/12	Inferential Statistics Revisited	<ul style="list-style-type: none"> • Kranzler, J. H. (2011). <i>Introduction to inferential statistics.</i> • Kline. (2009). <i>Chapter 5.</i> • Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). <i>Statistical conclusion validity and internal validity. Chapter 2 (Read only pgs. 193-203)</i> • Tabachnick & Fidell. <i>A guide to statistical techniques: Chapter 2.</i> 	
Week 10 – 3/27/12	Single-factor designs I: Between and Within Ss ANOVA	<ul style="list-style-type: none"> • Pittenger. <i>Research Design II: Single Variable Between-Subjects Research – Chapter 11.</i> • Jamal, M. (2004). Burnout, stress, and health of employees on non-standard work schedule: A study of Canadian workers. <i>Stress and Health, 20</i>, 113-119. • Pittenger. <i>Research Design IV: Correlated-Groups Designs, Chapter 11.</i> • Weinfurt, K. P. (2004). <i>Multivariate Analysis of Variance.</i> • Miller, J. J., Fletcher, K., Kabat-Zinn, J. (1995). Three-year follow-up and clinical implications of a mindfulness meditation-based stress reduction intervention in the treatment of anxiety disorders. <i>General Hospital Psychiatry, 17</i>, 192-200. 	

Date	Topic	Readings	Assignments Due
Week 11 – 4/3/12	Single-factor designs I: Between and Within Ss ANOVA	Meet in Computer Lab	
Week 12 – 4/10/12	Factorial Designs: Between Ss ANOVA	<ul style="list-style-type: none"> • Pittenger. <i>Research Design III: Between subjects factorial designs. Chapter 12.</i> • Li, M. H. (2008). Relationships among stress coping, secure attachment, and the trait of resilience among Taiwanese college students. <i>College Student Journal, 42</i>, 312-325. • Mertler & Vannatta (2005). <i>Chapter 4.</i> • Mertler & Vannatta (2005). <i>Chapter 5.</i> • Hughes, B. M. (2007). Social support in ordinary life and laboratory measures of cardiovascular reactivity: Gender differences in habituation-sensitization. <i>Annals of Behavioral Medicine, 34</i>, 166-176. 	
Week 13 – 4/17/12	Factorial Designs: Between Ss ANOVA	Meet in Computer Lab	
Week 14 – 4/24/12	Advanced Statistical Applications for Experimental and Quasi-Experimental Designs	<ul style="list-style-type: none"> • Klem, L. (2005). <i>Structural equation modeling.</i> • Holmbeck, G. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. <i>Journal of Consulting and Clinical Psychology, 65</i>, 599-610. • Hayes, A. F. (2006). A primer on multilevel modeling. <i>Human Communication Research, 32</i>, 385-410 	
Week 15 – 5/2/12	Wrap-Up and Class Presentations	<ul style="list-style-type: none"> • No Reading 	Final Proposals and Class Presentations
TBA	FINAL EXAM		