

**Research Methods in Clinical Psychology**  
**Psychology 806**  
**Fall 2011**

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Class Meetings: Tuesdays 9:00 – 11:30 in Davie 261  
Office Hours: By appointment.

**Objectives and Goals**

The goal of this course is to increase students' competence in designing, conducting, and evaluating psychological research. Specific objectives are: (1) mastery of basic design elements of research methodology; (2) competence in evaluating existing and proposed research studies; (3) familiarity with designing a study and proposal writing; and (4) familiarity with professional, diversity, and ethical issues in the conduct and publication of research in clinical psychology.

**Course Requirements and Format**

Course requirements were developed based on a clear teaching philosophy and course objectives for student learning. Class time will be spent primarily in lectures and discussion. Because discussion is central, you will need to read and prepare for each class period in order to participate actively. Also, because we meet just once a week, the reading assignments are sometimes lengthy - do not attempt to do all the assignments in one sitting!

Final grades are based on the following:

<u>Requirement</u>	<u>Evaluation</u>
Written assignments and participation	25%
Midterm exam	30%
Research proposal	30%
Grant review panel (with written critiques)	15%

**Course Resources**

To access the course website, go to <http://blackboard.unc.edu>, log in with your ONYEN name and password, and click on the course name.

**Reading Assignments**

The course readings include research articles and chapters available at the course website in Blackboard. Notes on readings should be brought to class. In preparing your notes, consider your general reactions as well as ideas for discussion that reading the articles generated for you. You should also own or have access to the following reference book as part of your own professional development: **American Psychological Association (2009). *Publication manual (6<sup>th</sup> ed.)*. Washington, DC: Author.**

## **Written Assignments**

A variety of written assignments are to be completed for this course. These have the goal of helping you to develop your ability to evaluate and synthesize empirical research. These assignments primarily include written analyses of articles assigned for class discussion and reaction papers. Additional, ungraded assignments may include short homework assignments (e.g., responses to discussion questions) or brief in class thought pieces.

## **Midterm Exam**

The midterm exam will cover material presented in class, readings and assignments. The goal of this test is to help you consolidate the information that you will learn (concepts, terms, etc.), apply it to problems, use it to interpret existing literature, compare varying perspectives or solutions, and analyze the possible options for a given research problem. There will be two parts to this exam. The first is a 2 page max article critique. The second is two essay questions. This will be a take-home exam that is time-limited.

## **Grant Proposal and Grant Review Panel**

For the culmination of the course, you will submit a 6-page max research proposal and serve on a mock grant review panel that will evaluate research proposals submitted by your classmates. This research proposal should be something that you complete independently from your advisor, should include a primary data collection, should be similar in scope to the master's thesis (i.e., a two-year project with limited budget) but should NOT be your master's thesis. Your thesis and this proposal can be on a shared topic, but the class proposal should be different from the thesis. (Please talk to me about your topics before September 27<sup>th</sup> to avoid confusion about this requirement.) You are required to submit your proposal by November 29<sup>th</sup>. During the final exam period for the course, we will hold mock grant review panels of these submissions. You will be asked to submit written critiques for two proposals written by your peers and to be prepared to discuss these proposals in the style of a grant review panel.

## **Class Participation**

You will not get much out of this course unless you come to class prepared and use class time to engage with the material we're considering. I'm looking for thoughtful input that indicates you're trying to help yourself and others become better researchers and that you've worked on the assignments in connection with readings. Brilliance is not required. If you are shy about speaking up in groups, this is the time to start working on it. If I don't hear from you frequently, I'll call on you and ask questions about readings or the topic of discussion at the moment.

My hope is to create a supportive environment in the classroom, so that you begin to develop an intellectual community that includes not only your advisor's lab group but also classmates who have different research interests than you. Overall my role and that of your fellow students in our class meetings is to support you in the process of learning to think of yourself as a researcher and writer.

## **Honor code**

The principals of academic honesty, integrity, and responsible citizenship govern the performance of all academic work and student contact at the University. Your enrollment in this course presupposes a

commitment to the principals embodied in the Code of Student Conduct and a respect for this most significant Carolina tradition. If you have any questions about your responsibility or the responsibility of faculty members under the Honor Code, please consult with someone in the Office of the Student Attorney General (966-4084) or the Office of the Dean of Students (966-4041). Your participation in this course comes with the expectation that your work will be completed in full observance of the Honor Code. Academic dishonesty in any form is unacceptable, because any breach in academic integrity, however small, strikes destructively at the University's life and work. That said, I wish to encourage you to study and discuss together issues related to this course. I also expect you to consult with your advisor throughout the semester as you work on your research and complete readings related to your research. Nevertheless, all written assignments are to be completed independently. Be sure as well that you understand what plagiarism is and pay special attention to the way you cite the work of others.

### Class Schedule

Below I provide an outline of course topics and assignments. I will post weekly assignments as well as assigned readings on blackboard at least one week in advance. However, I reserve the right to make changes to this syllabus as we go in order to enhance the learning process and tailor the class to the particular group of students taking the class this semester.

<b>Date</b>	<b>Topics</b>	<b>Due</b>
<b>8-23</b>	Introduction and Advisor Relationships Scientific Process	<b>Journal</b>
<b>8-30</b>	Scientific Process and Ethics	<b>Reaction Paper</b> <b>Guest: Barbara Goldman??</b>
<b>9-6</b>	Question Development	<b>Assignment</b> <b>Guest: Angela Bardeen</b> <b>(outside consult)??</b>
<b>9-13</b>	Validity: Internal and Statistical Conclusion	<b>Article Review</b>
<b>9-20</b>	Validity: External and Construct Validity	<b>Article Review</b>
<b>9-27</b>	Elements of Design: Sampling / Assignment and Comparison Groups / Treatment	<b>Assignment</b>
<b>10-4</b>	The Randomized Clinical Trial	<b>Article Review</b>
<b>10-11</b>	Other Treatment Outcome Designs	<b>Reaction Paper</b>
<b>10-18</b>	<b>TAKE-HOME EXAM – NO CLASS</b>	<b>Take-home exam due by noon 10/18</b>
<b>10-25</b>	Elements of Design: Psychosocial and Biological/ Neuroscience measurement	<b>Reaction Paper</b>
<b>11-1</b>	Measurement Development Designs	<b>Article Review</b> <b>Guest: Gabriel Dichter??</b>
<b>11-8</b>	Elements of Design: Statistical Analysis	<b>Reaction Paper</b>
<b>11-15</b>	Passive Longitudinal Designs	<b>Reaction Paper</b>
<b>11-22</b>	Experience Sampling Designs	<b>Reaction Paper</b>
<b>11-29</b>	Behavioral Genetics Designs	<b>Study Proposal DUE</b> <b>Guest: Cindy Bulik??</b>
<b>12-6</b>	Quasi-Experimental Designs Wrap-Up	<b>Reaction Paper</b>

<b>12-13</b>	<b>FINAL EXAM TIME</b> <b>Grant Review Panel</b> GROUP A 9-11 GROUP B 1-3	<b>Grant Panel Critiques should be brought to exam period, with final versions turned in by end of the day</b>
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\* For the final, we need to meet in two separate groups for the grant review panel. I'll assign you to groups taking into account preferences for times, but check your schedules early to let me know of potential conflicts.

All assignments, including Reaction Papers, Article Reviews, Homework Assignments, Grant Proposal, and Grant Panel Critiques, should be submitted via the digital dropbox on Blackboard.

## Assignment Details

### **8-23 Introduction and Advisor Relationships / Scientific Process**

**Email to students before semester:** The first meeting of the Clinical Psychology Research Methods course is on Thursday, January 14th at 9:00 In Davie 261. To get you started in this course, I'd like you to look at the course website as well as complete three brief reading assignments before the first class. You can access the course website at <http://blackboard.unc.edu>. Just log in with your ONYEN name and password, and click on the course name. For the first class, please bring the course syllabus and the assigned reading. I look forward to seeing you on the 14<sup>th</sup>!

#### **Reading assignment:**

Hussong, A.M. (2009). Summary of sources on professional development and entering graduate school. McFall, R.M. (1991). Manifesto for a Science of Clinical Psychology. *Clinical Psychologist*, 44, 75-88.

Hayes, S.C. (1998). Thirteen rules of success: A message for students. *The Behavior Therapist*, 21, 47-49.

#### **Other resources:**

APA ethical guidelines. ([www.apa.org/ethnics.code.html](http://www.apa.org/ethnics.code.html))

APA 6<sup>th</sup> edition style manual.

Online resource: <http://owl.english.purdue.edu/owl/resource/560/01/>

Guidelines for specific writing assignments

Developing your CV. <http://owl.english.purdue.edu/owl/resource/641/01/>

Some wonderful general resources for writing are also available through the OWL (Online Writing Lab) at Purdue: <http://owl.english.purdue.edu/owl/>

### **8-30 Scientific Process and Ethics**

#### **Reading assignment:**

Shadish, W.R., Cook, T.D., & Campbell, D.T. (2001). Experimental and Quasi-Experimental Designs. Read Chapter 1, pp 1-32.

Popper, K. (1964). Scientific theory and falsifiability. In J. A. Mouton and E.H. Freund (Eds.), *Problems of Philosophy: A book of readings*, pp. 541-547. MacMillan: New York.

Platt, J.R. (1964). Strong Inference. *Science*, 146, 347-353.

Moffitt, T.E. (1993). Adolescent-limited and life-course persistent antisocial behavior: A developmental taxonomy. *Psychological Review*: 100, 674-701.

Sternberg, R.J. (2006). Reviewing Theory Articles. In J.M. Darley, M.P. Zanna, & H.L. Roediger (Eds.), *The Compleat Academic* (2<sup>nd</sup> ed.). Chapter 3, pp. 43-58. Washington, DC: APA.

#### **Other resources:**

Kazdin, A. E. (2003). *Research design in clinical psychology* (4<sup>th</sup> ed.). Boston: Allyn & Bacon. Chapter 5 (pp. 110-129).

Taylor, S.E., & Martin, J. (2004). The academic marathon: Controlling one's career. Chapter 19, pp. 363-392. In J.M. Darley, M.P. Zanna, & H.L. Roediger (Eds.), *The Compleat Academic* (2<sup>nd</sup> ed.). Washington, DC: APA.

IRB handout from Barbara Goldman

Kazdin, A. E. (2003). *Research design in clinical psychology* (4<sup>th</sup> ed.). Boston: Allyn & Bacon. Chapter 17, pp 497-593 (skip pages 518-523).

Fisher et al. (2002). Research ethics for mental health science involving ethnic minority children and youths. *American Psychologist*, 57, 1024-1040.

Sue, S., Kuraski, K.S., & Srinivasan, S. (1999). Ethnicity, gender and cross-cultural issues in clinical research, (pp. 54-71). In P.C. Kendall, J.N. Butcher, and G.N. Holmbeck (Eds.), *Handbook of Research Methods in Clinical Psychology* (pp 3-30). New York: Wiley & Sons.

## **9-6 Question Development**

### **Reading assignment:**

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182. You can skip the sections that lay out the analytic approach if you like, though the conceptual premise is useful to know.

Tesser, A., & Martin, L. (2006). Reviewing empirical submissions to journals. In R.J. Sternberg (Ed.), *Reviewing Scientific Works in Psychology*. Chapter 1, pp. 3-29. Washington, DC: APA.

Bem, D.J. (2004). Writing the empirical journal article. In J.M. Darley, M.P. Zanna, & H.L. Roediger (Eds.), *The Compleat Academic* (2<sup>nd</sup> ed.). Chapter 10, pp. 185-220. Washington, DC: APA.

Eusis-Lang, C. & Reveles, A. (1998). Use of counselor street talk to stimulate self-disclosure of inner-city youths. In J. Meltzoff, *Critical thinking about research: Psychology and related fields*.

### **Other resources**

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 57, 316-331 - focus on 316-319 and 325-327 - the big picture models more than the specific examples.

Sternberg, R.J. (2006). Reviewing theory articles. In J.M. Darley, M.P. Zanna, & H.L. Rodeidiger (Eds.), *The Compleat Academic* (2<sup>nd</sup> ed.). Chapter 3, pp. 43-58.

Eisenberg, N. (2000) Writing a literature review. In R.J. Sternberg (Ed.), *Guide to Publishing in Psychology Journals*, (pp. 17-34). New York: Cambridge University Press.

APA Publication Manual, p. 61-77

## **9-13 Validity: Internal and Statistical Conclusion**

Homework for today: Readings will be heavier. I will ask you to critique an article for this session. There is a reading to guide you in doing this, however, I'd like you to just do one of these to get a baseline on how you are currently approaching the task. For that reason, I won't over structure it but I will ask you to consider a few things: length, organization, and who are you writing to. This should not be over two pages but you should come in prepared with questions about the process.

### **Reading assignments:**

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin Co. Chapter 2 (pp. 33-63), sections of Chapter 5 (pp. 156- -160)

## **9-20 Validity: External and Construct Validity**

Homework for today: Critique the Gaye-Schloffen & Nussbaum article.

### **Reading assignments:**

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin Co. Chapter 3 (pp. 64-102)

Gaye-Schloffen, E., & Nussbaum, S. (1998). In J. Meltzoff, *Critical thinking about research: Psychology and related fields* (pp. 219-222). Washington, D.C.: American Psychological Association.

Helms, J.E. (2005). The meaning of race in psychology and how to change it: A methodological perspective. *American Psychologist*, 60, 27-36.

Recommended but not required:

Mook, D.G. (1992). In defense of external invalidity. In A. E. Kazdin (Ed.), *Methodological issues and strategies in clinical research* (pp. 119-136). Washington, DC: American Psychological Association.

Gopen, G.D., & Swan, J.A. (1990). The science of scientific writing. *American Scientist*, 78, 550-558.  
Eusis-Lang critique

## **9-27 Elements of Design: Sampling / Assignment and Comparison Groups / Treatment**

Homework for today: QRCs.-

### **Reading assignments**

Shadish, W.R., Cook, T.D., & Campbell, D.T. (2001). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin Co. Read pp 246-251, skim 269-277.

Roosa, M.W., Liu, F.F., Torres, M., Gonzales, N.A., Knight, G.P., & Saenz, D. (2008). Sampling and recruitment in studies on cultural influences on adjustment: A case study with Mexican Americans. *Journal of Family Psychology*, 22, 293-302.

Kazdin, A.E. (2003). *Research Design in Clinical Psychology*, 4<sup>th</sup> edition. Boston, MA: Allyn & Bacon. Read Chapter 7, pp. 184-211.

### **Other resources**

Doss, B.D., & Atkins, D.C. (2006). Investigating treatment mediators when simple random assignment to a control group is not possible. *Clinical Psychology: Science and Practice*, 13, 321-336.

Weersing, V.R. (2006). Testing theory or changing the world? Balancing the competing goals of psychotherapy research. *Clinical Psychology: Science and Practice*, 342-345.

Required Reading:

(1) On control/comparison groups: Kazdin (2003) pp 184-211

Kazdin, A.E. (2003). *Research Design in Clinical Psychology*. Boston, MA: Allyn & Bacon.

(2) On treatment implementation: Shadish et al.

Shadish, W.R., Cook, T.D., & Campbell, D.T. (2001). Experimental and quasi-experimental designs for generalized causal inference. Boston, MA: Houghton Mifflin Co. Read pp. 314-322.

## **10-4 The Randomized Clinical Trial**

### **Reaction Paper**

Baucom, D.H., Hahlweg, K., & Kuschel, A. (2003). Are waiting-list control groups needed in future marital therapy outcome research? *Behavior Therapy*, 34, 179-188.

Stiles, W.B., Hurst, R.M., Nelson-Gray, R., et al. (2006). What qualifies as research on which to judge effective practice? In J.C. Norcross, L.E. Beutler, and R.F. Levant (Eds.), *Evidence-based Practices in Mental Health: Debate and Dialogue on the Fundamental Questions*, (chapter 2, pp. 57-130). Washington DC: APA. REQUIRED: 81-118, remainder of chapter is recommended.

Recommended:

Kendall, P.Cl., Flannery-Schroeder, E.C., & Ford, J.D. (1999). Therapy outcome research methods. In P.C. Kendall, J.N. Butcher, & G.N. Holmbeck (Eds.), *Handbook on research methods in clinical psychology* (pp. 364-402). New York: Wiley.

## **10-11 Other Treatment Outcome Designs**

## **10-25 Elements of Design: Psychosocial and Neuroscience/Biological Measures**

### **Reaction Paper**

(4) I suspect this is review, so skim but if it's not these are the basics:

Kazdin, A.E. (2003). Assessment methods and strategies. In A.E. Kazdin (Ed.), *Research Design in Clinical Psychology*, (pp. 355-367). Boston, MA: Allyn & Bacon.



Helms, J.E. (2005). The meaning of race in psychology and how to change it: A methodological perspective. *American Psychologist*, 60, 27-36.

Recommended:

(1) Dawis, R.V. (1987). Scale construction. *Journal of counseling psychology*, 34, 481-489.  
VERSION HERE IS SAME ARTICLE BUT REPRINTED IN A CHAPTER - SO PAGE NUMBERS DON'T MATCH.

(2) On observational coding: Cone, J.D. Chapter on Observational Assessment: Measure development and research issues.

Bingenheimer, J.B., Raudenbush, S.W., Leventhal, T., & Brooks-Gunn, J. (2005). Measurement equivalence and differential item functioning in family psychology. *Journal of Family Psychology*, 19, 441-455.

## **11-1 Measurement Development Designs**

Penny, A.M., Waschbusch, D.A., Klein, R.M., Corkum, P., & Eskes, G. (2009). Development a measure of sluggish cognitive tempo for children: Content validity, factor structure, and reliability. *Psychological Assessment*, 21, 380-389.

Burns, G. L., Desmul, C., Walsh, J.A., Silpakit, C., Ussahawanitchakit, P. (2009). A multitrait (ADHD-IN, ADHD-HI, ODD toward adults, academic and social competence) by multisource (mothers and fathers) evaluation of the invariance and convergent/discriminant validity of the Child and Adolescent Disruptive Behavior Inventory with Thai adolescents. *Psychological Assessment*, 21, 635-641.

## **11-8 Elements of Design: Statistical Analysis**

Reaction Paper

Curran, P.J., & Willoughby, M.T. (2003). Implications of latent trajectory models for the study of developmental psychopathology. *Development and psychopathology*, 15, 581-612.

Husson, A.M., Feagans Gould, L. \*, & Hersh, M.A. \* (2008). Conduct problems moderate self-medication and mood-related drinking consequences in adolescents. *Journal of Studies on Alcohol and Drugs*, 69, 296-307.

Recommended:

Fritz, M.S., & MacKinnon, D.P. (2007). Required sample size to detect the mediated effect. *psychological science*, 18, 233-239.

Cohen, J. (1990). Things I have learned (so far). *American Psychologist*, 45, 1304-1312.

Atkins, D.C., Bedics, J.D., McGlinchey, J.B., & Beauchine, T.B. (2005). Assessing clinical significance: Does it matter which method we use? *Journal of Consulting and Clinical Psychology, 73*, 982-989.

## **11-15 Non-Experimental Designs involving repeated sampling**

### **Reaction Paper**

**Shadish field experimentation  
Mccall and Applebaum**

## **11-22 Experience Sampling and Burst Designs**

Napa Scollon, C., Kim-Prieto, C., & Diener, E. (2003). Experience sampling: Promises and pitfalls, strengths and weaknesses. *Journal of Happiness Studies, 4*, 5-34.

## **11-29 Behavioral Genetics Designs**

**Guest: Cindy Bulik**

**Twinning article and Bulik article**

## **12-6 Quasi-Experimental Designs**

**Wrap-Up**