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Faculty Syllabi

Fall 2018

Psych 200

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**Research Methods
Psychology 200
Fall 2018**

**Monday, Wednesday & Friday, 9:20-10:10
Olin Hall 129**

Instructor

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Office Hours

Monday 1:00-2:30
Wednesday 10:15-11:30
Thursday 11:00-12:00
Also by appointment

Course Overview and Goals

Research Methods is designed to introduce students to the methods psychologists use to ask and answer questions about human behavior. As a required course for psychology and behavioral neuroscience majors and minors, primary aims of the course are to engage students in the kinds of research tasks psychologists and neuroscientists do and to provide a foundation of skills and experiences students will build upon in all upper-level psychology and neuroscience courses. This course is a challenging one that requires consistent and focused attention and hard work. We will work toward the following goals that were developed by the Psychology Department faculty for this course:

1. Students will appreciate the value of using quantitative methods to test ideas about human behavior. They will understand the ways in which these methods help us to debunk possibly appealing but flawed theories and build an evidence-based understanding of behavior.
2. Students will learn the fundamental importance of measurement in quantitative research. They will be able to distinguish different types of variables and measurement scales and understand principles of reliability and validity.
3. Students will understand the conceptual underpinnings of well-done non-experimental and experimental designs and will be able to explain why researchers would choose one design over the other (or choose to use both).
4. Students will be familiar with the statistical tools used to analyze research results, especially the central principles underlying measures of central tendency, statistical significance, correlation, and factorial design, including main and interaction effects.
5. Students will be able to discuss the implications and limitations of research results intelligently. While developing a healthy skepticism, students will appreciate the importance of research findings for advancing theory and informing practice in psychology.
6. Students will learn how to write an APA-style research paper.

Required Texts

- Cozby, P. C., & Bates, S. C. (2018). *Methods in behavioral research* (13th ed.). New York: McGraw Hill.
- Articles and additional readings available on moodle.
- For additional guidance on how to write APA style papers:
 - Kahn, J. Sample APA paper for students (on Google Drive)
 - Purdue OWL (an online, APA writing guide):
<http://owl.english.purdue.edu/owl/resource/560/01/>
- Optional: American Psychological Association (2009). *Publication Manual of the American Psychological Association* (Sixth Edition). Washington, DC (available in library)

Class Attendance

Class attendance is particularly important for this course because of the emphasis on in-class work and discussion. Therefore, attendance is mandatory. If you need to miss class because of an illness or emergency, you are responsible for obtaining class notes, handouts, announcements, etc. Please note that it is impossible to receive credit for class participation if you are absent, and your participation grade will be adversely affected by more than two absences. As soon as possible, please inform me of any religious holidays or approved Colgate athletic or other commitments that might require you to miss class so that alternative arrangements for completing work can be made at the earliest opportunity.

Honor Code

All work submitted for evaluation in this course assumes adherence to the honor code of Colgate University. Unless instructed otherwise, all of your work in this course should represent completely independent effort. No part of your tests or papers completed for this course may be shared with other students in this class or with students in future classes. In addition, you may not refer to tests, papers, or assignments from previous classes.

Evaluation

Evaluation of your performance in this course will be based on various tests, papers, and other assignments worth a total of 100 points. Each component is described in greater detail below.

Letter grades will be assigned based on the following scale:

A = 100-93 A- = 92-90 B+ = 89-87 B = 86-83 B- = 82-80 C+ = 79-77
C = 76-73 C- = 72-70 D+ = 69-67 D = 66-63 D- = 62-60 F = 59-0

- Tests and exam 45 points
 - Three cumulative tests (10 points each) and one cumulative final exam (15 points)
- Research projects and papers 50 points
 - Project 1 = 15 points, Project 2 = 25 points, Project 3 = 10 points
- Class participation 5 points

Assignments will be penalized one full letter grade (e.g., A- to B-, C to D) for each part or whole day the assignment is late. No extension or make-up option is available for class discussion.

If you feel you may need an accommodation based on the impact of a disability, please contact me privately to discuss your specific needs. Also, please contact Lynn Waldman, Director of Academic Support and Disability Services at 315-228-7375 in the Center for Learning, Teaching, and Research. She reviews documentation to determine and help coordinate reasonable and appropriate accommodations for students with disabilities.

Tests and Exam

There will be three cumulative tests and one cumulative final exam in this course. The first three tests will be taken in class on **September 24, October 22** and **November 9**, and the final exam will be given during the scheduled final exam period on **December 20**. Test and exam questions will be drawn both from your readings and from material covered in class and will emphasize the synthesis and application of your knowledge about research methods. Only under extraordinary circumstances will a make-up test/exam be administered. It is your responsibility to make all arrangements for the make-up test/exam before the start of the regularly scheduled test.

Research Projects and Papers

Three projects will provide the framework for our study of research methods. The first project will allow you to propose an observational study to test a well-known saying or proverb. You will work in teams to design your study, and the project will also result in an APA-style research proposal. The second project will allow you to complete a more structured experiment on a specific research topic: embodied cognition and foreign language learning. You will review the literature, collect data, code and analyze data, and write up a complete APA-formatted journal article. The third project is a group-based research proposal on a topic of your choice. This proposal will allow you to synthesize what you've learned all semester and to practice your oral presentation skills. You will create short presentation that will be discussed in class, and based on that feedback, you will write a brief paper due at the start of the final exam. Much more information about each of these projects and assignments will be given to you in class.

Class Participation

The format of this class requires that the assigned readings be completed before the date they will be covered in class. I expect you to be thoroughly engaged with the material, your colleagues, and me for the full 50 minutes of each class session. Your contribution to the class activities and discussion is viewed as an essential component of your own learning process, as well as that of your classmates. Thus, 5% of your grade in the course is based on participation in class activities and discussions. *Everyone* is expected to participate at *every* class meeting. If you are hesitant about speaking up in class, talk to me about it without delay, and I will help you get started. Remember that the *quality* of your contributions is more important than the *quantity*. Your weekly contributions to class meetings will be scored as follows:

- 3 Good contributions (comments, questions, and responses move the discussion forward)
- 2 Neutral contributions (comments, etc. do not move the discussion forward) or minimal contributions
- 1 Listening attentively but no contributions
- 0 Not engaged or absent

Research Participation

Being involved in ongoing research in the Psychology Department is a valuable opportunity for you to gain experience with the process of research from the perspective of a research participant. To that end, you are required to be a research participant in three hours of research or to complete three short research papers. You will receive a handout with more specific details on this component of the course early in the semester.

List of Moodle Readings (listed on schedule below)

- Goel, V. (2014, June 29). Facebook tinkers with users' emotions in news feed experiment, stirring outcry. *New York Times*.
- Kelly, S. D., Manning, S., & Rodak, S. (2008). Gesture gives a hand to language and learning: Perspectives from cognitive neuroscience, developmental psychology and education. *Language and Linguistics Compass*, 2, 569-588.
- Kelly, S. D., Ozyurek, A., & Maris, E. (2010). Two sides of the same coin: Speech and gesture mutually interact to enhance comprehension. *Psychological Science*, 21, 260-267.
- Mazza, S., et al. (2016). Relearn faster and retain longer along with practice, sleep makes perfect. *Psychological Science*, 0956797616659930.
- McGurk, H., & MacDonald, J. (1976). Hearing lips and seeing voices. *Nature*, 264(5588), 746.
- Open Science Collaboration. (2015). Estimating the reproducibility of psychological science. *Science*, 349(6251), aac4716.
- Wachsmuth, I. (2006). Gestures offer insight. *Scientific American Mind*, 17, 20-25.
- Waldman, K. (2014, June 28). Facebook's unethical experiment. *Slate*.

Schedule

Week	Date	Topic/Assignment	Readings
1	8/30	9:00-9:30: Half Day	—
	9/3	Introduction	C&B Ch1
2	9/5	Good research starts with a good question	C&B Ch2; Mazza et al. (2016); McGurk & McDonald (1976)
	9/7	Hypothesis testing and research ethics Research question due	C&B Ch3; Goel, 2014; Waldman, 2014; Colgate IRB site
	9/10	Variables and validity	C&B Ch4 & Literature review
3	9/12	Observational research Present one relevant paper to class	C&B Ch6 (119-127) & Literature review
	9/14	Operational definitions and measurement Complete behavioral observation	C&B Ch5
	9/17	Using questionnaires	C&B Ch7 (pp. 136-153)
4	9/19	Descriptive statistics and correlation	C&B 12
	9/21	Writing and APA style Operational Definitions & Procedure Worksheet due	C&B Appendix A; Purdue OWL; Sample APA paper
	9/24	Writing and APA style Exam 1	Journal articles
5	9/26	Workshop	Journal articles
	9/28	Workshop	Journal articles
	10/1	Introduction to topic two Paper One due	—
6	10/3	Background on topic two	Kelly, Manning & Rodak, 2008 (pp. 1-7) & Wachsmuth, 2006
	10/5	Experimental design	C&B Ch8
	10/8	Fall break	—
7	10/10	Experimental design Data collection	C&B Ch9
	10/12	Dissecting a journal article Data collection complete	Journal articles & Kelly, Ozyurek & Maris, 2010
	10/15	Coding and literature review	Journal articles
8	10/17	Article presentations	Journal articles
	10/19	Article presentations & coded data	Journal articles
	10/22	Questions about literature Exam 2	Journal articles
9	10/24	Inferential statistics	C&B Ch13 & Appendix C
	10/26	SPSS workshop	C&B Ch13 & Appendix C
	10/29	Replication and Generalization	C&B Ch14 & Open Science Collaboration (2015)
10	10/31	Writing: Method section	C&B Appendix A; Purdue OWL; & Sample APA paper
	11/2	Writing: Results section	C&B Appendix A; Purdue OWL; & Sample APA paper
	11/5	Writing: Discussion section	Journal articles
11	11/7	Writing: Discussion section	Journal articles
	11/9	Exam 3	—

	11/12	Workshop	Journal articles
12	11/14	Workshop	Journal articles
	11/16	Introduction to topic three Paper Two due	—
	11/19	Thanksgiving Break	—
13	11/21	Thanksgiving Break	—
	11/23	Thanksgiving Break	—
	11/26	Brainstorm with group for Research Proposal	Journal articles
14	11/28	Brainstorm	Journal articles
	11/30	Proposal idea due	Journal articles
	12/3	Methods workshop	Journal articles
15	12/5	PowerPoint workshop (visit from ITS video specialist, Sarah Kunse)	Journal articles
	12/7	Research proposal presentations	—
	12/10	Research proposal presentations	—
16	12/12	Research proposal presentations	—
	12/14	Research proposal presentations	—
17	12/20	Final Exam (incl. Final Proposal)	—

Note: C&B = Cozby and Bates text; APA = APA publication manual.