

Introduction to Experimental Methods (PSYC A280)
Orange Coast College
Fall 2018

Lecture/Lab Meetings (Section #21585)
Tuesday and Thursday, 6:00 pm – 9:10 pm

Building and Room: Soc Sci Computer Lab 114

Faculty: Lora Connor

Email: lconnor1@occ.cccd.edu

Office Hours: By appointment.

Course Website: <http://lorac Connor.com/psych280/>

Username: OCCStudent Password: Psych280F17

Prerequisites: Psychology A100 or A100H and completion of or concurrent enrollment in Psychology A160 or Mathematics A160 or Mathematics A160H.

Course Materials

- Cozby, P.C., & Bates, S.C. (2015). *Methods in behavioral research* (12th ed.). Boston: McGraw-Hill (ISBN: 9780077861896)
- American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, D.C.: American Psychological Association.

Course Description: This course addresses the principles and techniques which enter into experimental research concerning behavior and emphasizes designing, conducting, analyzing, and reporting research in the behavioral sciences.

Purpose of the Course: Students will be introduced to behavioral research rationale and its application. The course will be organized around the decision-making processes involved in the development of experimental research. The reasons for conducting experiments, types of experiments, adequate sampling, appropriate methodologies, and statistical treatment of the data will be emphasized. It is expected that the student will develop a familiarity with research terminology, conducting experiments, the analysis and interpretation of data, and the reading and writing of APA papers.

Student Learning Outcomes:

1. Identify, describe, and apply the critical concepts and elements of good research design.
2. Critically review and analyze published psychological research studies to determine the type of research, critical variables addressed, definitions of key concepts, and which statistical analyses used.
3. Critically synthesize the elements of good experimental design to conduct, to analyze statistically, and to write a correctly formatted (American Psychological Association style) research report.

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Course Requirements and Assignments

Exams: There are 3 exams. Tests will consist of multiple choice items and short essay questions. Exams will be based on the textbook, handouts, lectures, and other activities. A test review session will be held before each exam. **You will need 882-E Forms (green, half-sheet, 50 questions on each side), #2 pencil, and Blue Books for exams.**

Lab Projects: Lab projects will emphasize integrating information from the course (e.g., textbook, handouts, and lecture), developing research skills, conducting research, and writing APA format papers. These projects will be conducted at various times during classes.

Group Research Project: Students will form groups of 2 or 3 (preferably 2) to conduct a collaborative research study based on current literature on an agreed upon topic of interest. Groups will formulate a research question to study, develop a research hypothesis, and design an experiment. Projects will be scored on creativity and strength of the design. Individuals who fail to fully contribute to their group project, as assessed by the instructor and **Peer Ratings**, will be penalized.

Written Papers: There are 3 APA research papers required in this course. These papers include:

- Group Research Paper (**A Group Effort**)
- Research Proposal Paper (**An Individual Effort**)
- Final Research Paper (**An Individual Effort**)

The Research Proposal Paper will include a title page, abstract, introduction section with literature review, method section, and discussion section. It should have at least 3 cited references. The Final Research Paper will include a full revision of the Research Proposal Paper, analysis and results sections, and tables and graphs. Although students will collaborate and work together in groups to complete research projects, **you will write your own independent papers.** Late papers are penalized 10 points for each day they are late. Note: Handing in a paper after the deadline (e.g., after class) is equivalent to being one day late.

Group Research Presentation: Each group will present its research findings and explain the significance of the findings to the class in a 15-minute oral presentation. Presentations will be based on the Final Research Project/Paper. Individuals who fail to fully contribute to their group project, as assessed by the instructor and **Peer Ratings**, will be penalized.

Attendance and Participation: Attendance at all classes and labs is mandatory. Attendance will be taken at each session, and students are expected to be on time for each class/lab meeting. Excellent attendance is essential in Psychology 280, as the lectures present very important material and lab work it is very difficult to impossible to make-up.

You are responsible for all announcements and work covered during your absence. You are dropped after three absences from lecture OR one absence from lab plus two absences from lecture. You need to be in class to understand the concepts and their applications.

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If you are text messaging on your phones or listening to music on any of your electronic devices during class, you are being rude and will be counted as absent from that day's class. You may also be asked to drop the class. Cell phone use in class is distracting to you and everyone around you. You will be asked to withdraw from the 3 class if you leave labs or lectures early or you're not paying attention in class (cell phone distractions, etc.).

Make it a habit to arrive on time to class/lab and stay for the entire class/lab session. Schedule doctor appointments at times other than when the class meets. During class, turn off your cell phones and do not disrupt the class by jumping up and leaving to use your cell phone. If you cannot attend each lecture and lab session, or if you cannot be on time for class, you need to drop the class now!

| Grading | Points | Subtotals | % of Total Grade |
|---------------------------------------|---------------|------------------|-------------------------|
| Exam 1 | 75 | | |
| Exam 2 | 75 | | |
| Exam 3 | 75 | | |
| Exams Total | | 225 | 23% |
| Labs Assignments | 340 | | |
| Labs & Participation Total | | 340 | 34% |
| Written Paper 1 | 50 | | |
| Written Paper 2 | 75 | | |
| Written Paper 3 | 50 | | |
| Written Paper 4 | 75 | | |
| Written Paper Total | | 250 | 25% |
| Group Research Projects | 60 | | |
| Group Research Presentation | 125 | | |
| Group Research Total | | 185 | 19% |
| Grand Total | | 1000 | 100% |

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|-------------------|------------------|------------------|------------------|----------------|
| A 900-1000 | B 800-899 | C 700-799 | D 600-699 | F 0-599 |
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Academic Honesty: Cheating and/or plagiarism will result in an “F” grade, as well as disciplinary action from the Dean of Students Office.

Drops: If you decide to drop the course, it is your responsibility to do so before the published deadlines or you may end with an “F” in the class. I do not give incompletes to students who are unable to complete the coursework. Students may be automatically dropped by the instructor if they fail to attend the first class or have 4 consecutive absences.

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| TENTATIVE COURSE SCHEDULE | | | | |
|---------------------------|--------------|--|---|--|
| Week | Dates | Readings Due | Lecture & Exam Dates | Lab & Due Dates |
| 1 | 8/28 8/30 | Chapter 1 | <ul style="list-style-type: none"> • T: Introductions, course overview, and questions • TH: Ch1-Scientific Understanding of Behavior | <ul style="list-style-type: none"> • TH: False Consensus Effect Demonstration • TH: Scientific Understanding of Behavior • TH: Choose Research Groups (All Due before class 9/4) • TH: Research Project Approval Form (DUE TUES 9/18) |
| 2 | 9/4 9/6 | Chapter 2 | <ul style="list-style-type: none"> • T: Ch2-Where to Start: The Process of Research • TH: Introducing Internet Library & Research | <ul style="list-style-type: none"> • T: Reading a Research Article Activity • TH: Library Activity (All Due before class 9/10) • DUE T: Choose Research Groups |
| 3 | 9/11 9/13 | Chapter 3 Appendix-A | <ul style="list-style-type: none"> • T: APA Format & Evaluating Sources • TH: Ch3:Ethics in Behavioral Research • TH: Informed Consent | <ul style="list-style-type: none"> • T: Research Project Approval Form • T: Self-Scoring APA Exercise • T: Cummens Article- APA Format Activity (All Due before class 9/18) • TH: Informed Consent Construction (DUE 10/19) • |
| 4 | 9/18 9/20 | Chapter 4 Chapter 5 Cohen , J. (1992). A power primer. <i>Psychological Bulletin</i>, 112(1), 155-159. | <ul style="list-style-type: none"> • T: Ch4 Fundamental Research Issues • TH: Ch5 Measurement Concepts | <ul style="list-style-type: none"> • T: Hypothesis and Operational Definition Exercise • TH: Reliability, Validity, & Reactivity Activity • DUE T: Cummens Article- APA Format Activity • DUE T: Research Project Approval Form • DUE TH: Group's Research Hypothesis (Discussion) |
| 5 | 9/25 9/27 | | <ul style="list-style-type: none"> • T: In-Class Experiment • TH: Discuss Group Research Projects • TH: Summary and Review for Exam | <ul style="list-style-type: none"> • T: In-class experiment: Worksheet & APA Format Research Paper #1 (DUE FRI 9/28) • TH: Begin APA Paper #2: Group Research Project Proposals |

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| 6 | 10/2 10/4 | Chapter 8 Required Reading for Observational Lab Exercise | <ul style="list-style-type: none"> • T: EXAM #1 • TH: Ch 8 Experimental Design | <ul style="list-style-type: none"> • TH: Experimental Design Activity (DUE before class 10/9) • TH: Work on APA Paper #2: Group Research Project Proposals • TH: Extra Credit Activity (In-Class Only) |
| 7 | 10/9 10/11 | Chapter 6 Chapter 7 | <ul style="list-style-type: none"> • T: Ch 6 Observational Methods • TH: Ch7 Asking People about themselves: Survey Research | <ul style="list-style-type: none"> • T: Observational Lab • T: Quant & Qual Analysis Activity • TH: Closed vs. Open- Ended Questions Demo • TH: Survey Research Activity (All Due before class 10/16) • T/TH: Work on APA Paper #2 |
| 8 | 10/16 10/18 | | <ul style="list-style-type: none"> • T: Class Survey & Evaluating Data in Excel and SPSS • TH: Work on Informed Consent & APA Format Research Proposal Rough Draft Paper #2 | <ul style="list-style-type: none"> • T: Class Survey Activity • T: Data Entry, Import, & Analysis (All Due before class 10/16) • Informed Consent & APA Format Research Proposal (Rough Draft) Paper #2 (DUE FRI 10/19) |
| 9 | 10/23 10/25 | Chapter 9 Chapter 10 “Writing a Psychology Literature Review” | <ul style="list-style-type: none"> • T: Ch 9 Conducting Experiments • TH: Ch 10 Complex Experimental Designs • Summary and Review for Exam #2 | <ul style="list-style-type: none"> • T: Confounding Variables Activity • T: Conducting Experiments Activity • T: Online Experiments • TH: Complex Experimental Designs (All Due before class 11/01) • TH: Research Proposals/Projects |
| 10 | 10/30 11/1 | Chapter 11 | <ul style="list-style-type: none"> • T: EXAM #2 • TH: Ch 11 Single-Case, Quasi-Experimental, and Developmental Research TH: Review-Writing a Research Proposal | <ul style="list-style-type: none"> • TH: Single-Case, Quasi- Exp, & Develop Activity • TH: Research Projects |
| 11 | 11/6 11/8 | Chapter 12 Appendix-C | <ul style="list-style-type: none"> • T: Design Strengths-Weaknesses & Confounding Variables • TH: Ch 12 Understanding Research Results: Description & Correlation | <ul style="list-style-type: none"> • T: Evaluating Research Methods in Popular Media • TH: Description & Correlation • TH: Describing Correlation Coefficients (All Due before class 11/13) • APA Format Research Proposal (FINAL DRAFT) Paper #3 (DUE FRI 11/13) |

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| 12 | 11/13 11/15 | Chapter 13 | <ul style="list-style-type: none"> • T: Final Research Proposal Paper • T: Research Project Presentations & Graphs • TH: Ch 13 Understanding Research Results: Statistical Inference • TH: Using the Correct Statistical Tests | <ul style="list-style-type: none"> • T: Statistical Inference • T: Statistical Decisions • TH: Work on Final Research Presentations • TH: Using the Correct Statistical Test Activity • TH: Experimenting with a Data Set <p>(All Due before class 11/20)</p> |
| 13 | 11/20 11/22 | Chapter 14  | <ul style="list-style-type: none"> • T: Ch 14 Generalizing Results • TH: Thanksgiving | <ul style="list-style-type: none"> • T: Generalizations Activity • T: Is it a Correlation or is it an Experiment Activity • T: Finish Research Presentations <p>(All Due before class 11/27)</p> |
| 14 | 11/27 11/29 | | <ul style="list-style-type: none"> • T/TH: Wrap-Up: Finish Research Projects, Papers, & Presentations • T/TH: Gather Data from Fellow Students | <ul style="list-style-type: none"> • T/TH: Complete Research Projects, Papers, & Presentations • TH: Research Presentations |
| 15 | 12/4 12/6 | | <ul style="list-style-type: none"> • Summary and Review for Final Exam | <ul style="list-style-type: none"> • T & TH: Research Presentations • Final Research Paper #4 (DUE FRI 12/7) |
| 16 | 12/11 12/13 | | <ul style="list-style-type: none"> • T: FINAL EXAM | |

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