

**Introduction to Experimental Methods (PSYC A280)**  
**Orange Coast College**  
**Spring 2020**

Lecture/Lab Meetings (Section #36638)  
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](mailto:lconnor1@occ.cccd.edu)

Office Hours: By appointment.

Course Website: <http://loraconnor.com/psych280/>

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

**Course Materials**

- **Required:** Cozby, P.C., & Bates, S.C. (2017). *Methods in behavioral research* (13<sup>th</sup> ed.). Boston: McGraw-Hill (ISBN: 978-1259676987)
- **Recommended:** American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6<sup>th</sup> 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. Exams cannot be made-up, so plan to be present on exam days. **You will need 882-E Forms (green/, half-sheet, 50 questions on each side), #2 pencil, and Small 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 2 APA research papers required in this course. The second paper is done in three steps. These papers include:

- Paper #1: Group Research Paper **(A Group Effort)**
- Papers #2A, 2B, 2C: Research Paper (Rough Draft, Proposal & Final Draft; **An Individual Effort**)

The Research Proposal Paper (Rough Draft & Final Draft) will include a Title Page, Abstract, Introduction section with Literature Review, Method section, and Possible Outcomes section. It should have at least 3 cited peer reviewed references. The Final Research Paper will include the final draft of the Research Proposal Paper, with the Results section added in and the Possible Outcomes section changed to the Discussion section. Although students will collaborate and work together in groups to complete research projects, **you will write your own independent papers**.

**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.

**Late Papers & Assignments:** Most assignments are due before class the following week after they have been assigned, although some due dates vary. Due dates can be found on the class website, the syllabus, and Canvas. Late papers & assignments are dropped 1 full grade (i.e., 10%) for each day they are late. Note: Handing in a paper after the deadline (e.g., after class begins) is equivalent to being one day late.

**Attendance and Participation:** Attendance at all classes/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 contain important material

and lab work it is very difficult and even impossible to make-up. You are responsible for all announcements and work covered during your absence. You are dropped after three absences.

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. Make it a habit to arrive on time to class/lab and stay for the entire session. Schedule personal 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/lab session, or if you cannot be on time for class, you need to drop the class now!

**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.

Coursework	Points	Subtotals	% of Total Grade
Labs Assignments	375		
<b>LABS TOTAL</b>		<b>375</b>	<b>38%</b>
Written Paper 1	50		
Written Paper 2A	75		
Written Paper 2B	75		
Written Paper 2C	75		
<b>WRITTEN PAPER TOTAL</b>		<b>275</b>	<b>28%</b>
Exam 1	75		
Exam 2	75		
Exam 3	75		
<b>EXAMS TOTAL</b>		<b>225</b>	<b>23%</b>
Group Research, Peer Reviews, Presentations & Participation	125		
<b>GROUP WORK TOTAL</b>		<b>125</b>	<b>13%</b>
<b>GRAND TOTAL</b>		<b>1000</b>	<b>100%</b>

<b>A 900-1000</b>	<b>B 800-899</b>	<b>C 700-799</b>	<b>D 600-699</b>	<b>F 0-599</b>
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## TENTATIVE COURSE SCHEDULE

Week	Dates	Readings Due	Lecture; Exam Dates	Lab; Due Dates
1	1/28 1/30	Chapter 1	<ul style="list-style-type: none"> <li>• T: Introductions, course overview, and questions</li> <li>• TH: Ch1-Scientific Understanding of Behavior</li> <li>• TH: False Consensus Effect <b>Demonstration</b></li> </ul>	<ul style="list-style-type: none"> <li>• TH: Scientific Understanding of Behavior</li> <li>• TH: Choose Research Groups (2 people) <b>(All Due before class 2/4)</b></li> <li>• TH: Research Project Approval Form <b>(Due Tue 2/18)</b></li> </ul>
2	2/4 2/6	Chapter 2	<ul style="list-style-type: none"> <li>• T: Ch2-Where to Start: The Process of Research</li> <li>• T: Introducing Internet Library &amp; Research</li> </ul>	<ul style="list-style-type: none"> <li>• <b>T: Choose Research Groups (In-Class Due 2/4)</b></li> <li>• T: Reading a Research Article Activity</li> <li>• TH: Library Activity <b>(All Due before class 2/11)</b></li> </ul>
3	2/11 2/13	Chapter 3 Appendix-A	<ul style="list-style-type: none"> <li>• T: APA Format &amp; Evaluating Sources</li> <li>• T: Ch3: Ethics in Behavioral Research</li> <li>• TH: Informed Consent</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• T: Cummins Article-APA Format Activity <b>(Due Fri 2/21)</b></li> <li>• TH: Informed Consent Construction <b>(Due 3/20)</b></li> </ul>
4	2/18 2/20	Chapter 4 Chapter 5	<ul style="list-style-type: none"> <li>• TH: Ch4: Fundamental Research Issues</li> <li>• T: Ch5: Measurement Concepts</li> <li>• <b>TH: No Class: Happy Faculty/Staff Development</b></li> </ul>	<ul style="list-style-type: none"> <li>• T: Group's Research Project Approval Form <b>(Due Tues 2/18)</b></li> <li>• T: Hypothesis and Operational Definition Exercise</li> <li>• T: Reliability, Validity, &amp; Reactivity Activity <b>(Due before class 2/25)</b></li> </ul>
5	2/25 2/27		<ul style="list-style-type: none"> <li>• T: In-Class Experiment</li> <li>• TH: Discuss Group Research Projects</li> <li>• TH: Summary and Review for Exam</li> </ul>	<ul style="list-style-type: none"> <li>• <b>T &amp; TH: In-Class experiment: Worksheet &amp; APA Format Research Paper #1 (Due Fri 2/28)</b></li> </ul>
6	3/3 3/5	Chapter 8 <u>“Required Reading for Observational Lab Exercise”</u> (See LABS	<ul style="list-style-type: none"> <li>• <b>T: Exam #1</b></li> <li>• TH: Ch 8: Experimental Design</li> </ul>	<ul style="list-style-type: none"> <li>• TH: Experimental Design Activity <b>(Due before class 3/10)</b></li> <li>• TH: Work on APA Paper #2A: Group Research Project Proposals <b>(Due Fri 3/20)</b></li> </ul>

		page on class website)		<ul style="list-style-type: none"> <li>• TH: Extra Credit Activity <b>(In-Class Only)</b></li> </ul>
7	3/10 3/12	Chapter 6 Chapter 7	<ul style="list-style-type: none"> <li>• T: Ch 6: Observational Methods</li> <li>• TH: Ch7: Asking People about themselves: Survey Research</li> <li>• TH: Closed vs. Open-Ended Questions <b>Demonstration</b></li> </ul>	<ul style="list-style-type: none"> <li>• T: Observational Lab <b>(In-Class Only)</b></li> <li>• TH: Closed vs. Open-Ended Questions <b>(In-Class Demo Only)</b></li> <li>• TH: Quant &amp; Qual Analysis Activity</li> <li>• TH: Survey Research Activity <b>(All Due before class 3/17)</b></li> <li>• <b>F: Informed Consent</b></li> <li>• <b>F: APA Format Research Proposal (Rough Draft) Paper #2A</b> <b>(Due before class 3/20)</b></li> </ul>
8	3/17 3/19		<ul style="list-style-type: none"> <li>• T: Work on APA Format Research Proposal Final Draft Paper #2B</li> <li>• TH: Class Survey &amp; Evaluating Data in Excel and SPSS</li> </ul>	<ul style="list-style-type: none"> <li>• TH: Class Survey Activity <b>(In-Class Only)</b></li> <li>• TH: Data Entry, Import, &amp; Analysis <b>(Due before class 3/31)</b></li> <li>• Work on APA Format Paper-Final DRAFT #2B <b>(Due Fri 4/10)</b></li> </ul>
	3/24 3/26	SPRING BREAK		
9	3/31 4/2	Chapter 9 Chapter 10 <a href="#">“Writing a Psychology Literature Review”</a>	<ul style="list-style-type: none"> <li>• T: Ch 9: Conducting Experiments</li> <li>• TH: Ch 10: Complex Experimental Designs</li> <li>• Summary and Review for Exam #2</li> </ul>	<ul style="list-style-type: none"> <li>• T: Confounding Variables Activity</li> <li>• T: Conducting Experiments Activity</li> <li>• T: Online Experiments</li> <li>• TH: Complex Experimental Designs <b>(All Due before class 4/9)</b></li> </ul>
10	4/7 4/9	Chapter 11	<ul style="list-style-type: none"> <li>• <b>T: Exam #2</b></li> <li>• TH: Ch 11: Single-Case, Quasi-Experimental, and Developmental Research</li> <li>• TH: Review-Writing a Research Proposal</li> </ul>	<ul style="list-style-type: none"> <li>• TH: Single-Case, Quasi-Exp, &amp; Develop Activity</li> <li>• <b>T: APA Format Research Proposal (FINAL DRAFT) Paper #2B</b> <b>(All Due before class 4/14)</b></li> </ul>
11	4/14 4/16	Chapter 12 Appendix-C	<ul style="list-style-type: none"> <li>• T: Design Strengths/Weaknesses &amp; Confounding Variables</li> </ul>	<ul style="list-style-type: none"> <li>• T: Evaluating Research Methods in Popular Media</li> <li>• TH: Description &amp; Correlation</li> </ul>

			<ul style="list-style-type: none"> <li>• TH: Ch 12: Understanding Research Results: Description &amp; Correlation</li> </ul>	<ul style="list-style-type: none"> <li>• TH: Describing Correlation Coefficients <b>(All Due before class 4/21)</b></li> </ul>
<b>12</b>	4/21 4/23	Chapter 13	<ul style="list-style-type: none"> <li>• T: Final Research Proposal Paper</li> <li>• T: Research Project Presentations &amp; Graphs</li> <li>• TH: Ch 13: Understanding Research Results: Statistical Inference</li> <li>• TH: Using the Correct Statistical Tests</li> </ul>	<ul style="list-style-type: none"> <li>• T: Statistical Inference</li> <li>• T: Statistical Decisions</li> <li>• TH: Work on Research Presentations</li> <li>• TH: Experimenting with a Data Set <b>(In-Class Only)</b></li> <li>• TH: Using the Correct Statistical Test Activity <b>(All Due before class 4/28)</b></li> </ul>
<b>13</b>	4/28 4/30	Chapter 14	<ul style="list-style-type: none"> <li>• T: Ch 14: Generalizing Results</li> <li>• T: Research Strengths and Weaknesses and Confounding Variables</li> </ul>	<ul style="list-style-type: none"> <li>• T: Generalizations Activity</li> <li>• T: Is it a Correlation or is it an Experiment Activity <b>(All Due before class 5/5)</b></li> <li>• TH: Work on Research Presentations</li> </ul>
<b>14</b>	5/5 5/7			<ul style="list-style-type: none"> <li>• TH: Work on Research Presentations</li> <li>• <b>TH: Research Presentations</b></li> </ul>
<b>15</b>	5/12 5/14		<ul style="list-style-type: none"> <li>• TH: Summary and Review for Final Exam</li> </ul>	<ul style="list-style-type: none"> <li>• <b>T &amp; TH: Research Presentations</b></li> <li>• <b>F: FINAL RESEARCH PAPER #2C</b> <b>(Due Fri 5/15)</b></li> </ul>
<b>16</b>	5/19 5/21		<ul style="list-style-type: none"> <li>• <b>T: Final Exam</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Group Research Project Peer Evaluations</b></li> </ul>

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