

Introduction to Experimental Methods (PSYC A280)
Orange Coast College
Spring 2021

Lecture/Lab ZOOM Meetings (Section #41935)
Monday and Wednesday, 5:00 PM – 6:00 PM

Faculty: Lora Connor

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

Office Hours: **Wednesdays ~ 6:00 PM – 6:30 PM**

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. (2021). *Methods in behavioral research* (14th ed.). Boston: McGraw-Hill (ISBN: 9781260205589)
- Recommended: 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.

–This syllabus is subject to change or revision due to the need to make course adjustments based on the instructor’s judgement. This syllabus (and any changes to it) should be seen as a roadmap to help students attain academic success and maximize their potential.

Course Requirements and Assignments

Exams: There are 3 exams taken online. Tests will consist of multiple-choice items and short essay questions. They 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.**

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 Lit Review Project: Practicing Literature Review & Sourcing Topics: Students will form Groups of ~ 2 to 3 individuals to practice literature review & sourcing topics. Students will choose from various topics, find peer review articles and other valid sources to argue and support their theories. Groups will create PowerPoint presentations to present to the class. Projects will be scored on the strength of the sources they use to support their theories.

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: Stroop Experiment, APA Format Paper
- Papers #2: Research APA Format Paper (**A.** Research Proposal (Rough Draft), **B.** Research Proposal (Final Draft) & **C.** Final Research Paper)

The Research Proposal Paper (Rough Draft & Final Draft) will include a Title Page, Abstract, Introduction section with Literature Review, Method section, Statistics 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 Statistics section updated to the Results section and the Possible Outcomes section changed to the Discussion section. Although students will collaborate and work together in groups to complete research projects, **students will write their 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 the following week after they have been assigned on Sunday midnight, although some due dates vary. **Due dates can be found on Canvas in the Assignments section.** Late papers & assignments are dropped 1 full grade (i.e., 10%) for each day they are late, **except the APA RESEARCH PAPER #2 A, B, & C. No late submissions will be accepted for this paper.**

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Attendance and Participation: Zoom meetings will be held at **5:00 PM** every Mon & Wed. **Attendance to Zoom meetings is mandatory and DOES COUNT TOWARD YOUR PARTICIPATION GRADE.** Lectures, question and answer sessions, and hands-on instruction will be given during these meetings to assist students with the more advanced lab work and assignments. Attendance is automatically recorded by the Zoom software and will be used for participation points. Excellent attendance is essential in Psychology 280, as the lectures contain important material and lab work learning new skills in research and statistics which students may find difficult without assistance.

Academic Honesty: Cheating and/or plagiarism will result in an "F" grade, as well as disciplinary action from the Dean of Students Office. Work is checked for plagiarism.

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.

Coursework	Points	Subtotals	% of Total Grade
Labs Assignments	325		
LABS TOTAL		325	33%
APA Paper #1: Stroop Experiment	75		
Research Proposal APA Paper #2A	75		
Research Proposal APA Paper #2B	50		
Research Final APA Paper #2C	50		
RESERCH PAPERS TOTAL		250	25%
Literature Review & Sourcing Topics	50		
Final Research Presentation	50		
PRESENTATIONS TOTAL		100	10%
Exam 1	75		
Exam 2	75		
Exam 3	75		
EXAMS TOTAL		225	23%
Participation	100		
PARTICIPATION		100	10%
GRAND TOTAL		1000	100%

A 900-1000	B 800-899	C 700-799	D 600-699	F 0-599
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FEBRUARY 2021

SUBJECT _____ Subject _____ PERIOD _____ Period _____

	MONDAY (ZOOM)	TUESDAY	WEDNESDAY (ZOOM)	THURSDAY	FRIDAY	SAT/SUN (DUE DATES)
1	1 Readings: Chapter 1 FIRST CLASS: Lecture (L): Welcome message, Class overview, instructions	2	3 L: Ch 1-Scientific Understanding of Behavior •Ch 1 Exercise (Due 2/7) Research Project Approval Form (Due 3/3)	4	5	6/7 •Ch 1 Exercise (Due 2/7)
WEEK	notes ZOOM Meeting 5:00pm ~ 6:00pm		notes ZOOM Meeting 5:00pm ~ 6:00pm			
2	8 Readings: Chapter 2 L: Ch2-Where to Start: The Process of Research Discussion: Research Project Approval Form • Ch 2 Exercise (Due 2/14) Research Group Assignments	9	10 L: Introducing Internet Library & Research L: Literature Review & Sourcing Topics •Library Exercise: In- Class (Due 2/14) •Literature Review & Sourcing Topics (Due 2/22-24 & 3/1-3)	11	12	13/14 •Library Exercise: In-Class •Ch 2 Exercise (All Due 2/14)
WEEK	notes ZOOM Meeting 5:00pm ~ 6:00pm		notes ZOOM Meeting 5:00pm ~ 6:00pm			
3	15 No Class: President's Day	16	17 L: APA Format & Evaluating Sources Cummins Article-APA Format Activity (IN- CLASS; Due 2/21)	18	19	20/21 • Cummins Article- APA Format Activity (IN-CLASS; Due 2/21)
WEEK	notes		notes ZOOM Meeting 5:00pm ~ 6:00pm			
4	22 Readings: Chapter 3; Chapter 4; Appendix-A L: Ch3: Ethics in Behavioral Research L: Informed Consent • Informed Consent (Due 3/7) • PRESENTATIONS: Lit Review & Sourcing (2/22- 24)	23	24 L: Ch4: Fundamental Research Issues • Ch 4: Exercise (Due 2/28) • PRESENTATIONS: Lit Review & Sourcing (Due 2/22-24)	25	26	27/28 • Ch 4: Exercise (Due 2/28) • PRESENTATIONS: Lit Review & Sourcing (Due 2/22-24 & 3/1-3)
WEEK	notes ZOOM Meeting 5:00pm ~ 6:00pm		notes ZOOM Meeting 5:00pm ~ 6:00pm			

MARCH 2021

SUBJECT _____ Subject _____ PERIOD _____ Period _____

	MONDAY (ZOOM)	TUESDAY	WEDNESDAY (ZOOM)	THURSDAY	FRIDAY	SAT/SUN (DUE DATES)
5 WEEK	<p>1</p> <p>Readings: Chapter 5 L: Ch5: Measurement Concepts</p> <ul style="list-style-type: none"> • Ch 5 Exercise (Due 3/7) • PRESENTATIONS: Lit Review & Sourcing (Due 3/1-3) <p>ZOOM Meeting 5:00pm ~ 6:00pm</p>	2	<p>3</p> <p>L: EXAM REVIEW</p> <p>PRESENTATIONS: Lit Review & Sourcing (Due 3/1-3)</p> <p>ZOOM Meeting 5:00pm ~ 6:00pm</p>	4	5	<p>6/7</p> <ul style="list-style-type: none"> • Ch 5: Exercise (Due 3/7) • PRESENTATIONS: Lit Review & Sourcing (Due 2/22-24 & 3/1-3) • Informed Consent (Due 3/7) • Research Project Approval Form (IN-CLASS; Due 3/3)
6 WEEK	<p>8</p> <ul style="list-style-type: none"> • EXAM #1 	9	<p>10</p> <p>L: Stroop Experiment L: Review-Writing a Research Proposal</p> <ul style="list-style-type: none"> • Stroop Exp APA Format Paper & Worksheet (IN-CLASS; Due 3/14) <p>ZOOM Meeting 5:00pm ~ 6:00pm</p>	11	12	<p>13/14</p> <ul style="list-style-type: none"> • Stroop Exp APA Format Paper #1 & Worksheet (IN-CLASS; All Due 3/14)
7 WEEK	<p>15</p> <p>Readings:</p> <ul style="list-style-type: none"> • Chapter 6 • Chapter 7 <p>Observational Lab required reading L: Ch6: Observational Methods</p> <ul style="list-style-type: none"> • Ch6 Exercise • Observational Lab (Due 3/21) <p>ZOOM Meeting 5:00pm ~ 6:00pm</p>	16	<p>17</p> <p>L: Ch7: Asking People about themselves: Survey Research L: Closed vs. Open-Ended Questions (IN-CLASS Only)</p> <ul style="list-style-type: none"> • Ch7 Exercise (Due 3/21) <p>ZOOM Meeting 5:00pm ~ 6:00pm</p>	18	19	<p>20/21</p> <ul style="list-style-type: none"> • Ch6 Exercise • Observational Lab (Due 3/21) • Ch7 Exercise
8 WEEK	<p>22</p> <p>L: Class Survey & Evaluating Data in Excel & SPSS</p> <ul style="list-style-type: none"> • Class Survey Activity (IN-CLASS Only) • Data Entry, Import & Analysis: Out-of-Class (Due 3/28) <p>ZOOM Meeting 5:00pm ~ 6:00pm</p>	23	<p>24</p> <p>Experimenting with a Data Set in SPSS (IN-CLASS Only)</p> <p>ZOOM Meeting 5:00pm ~ 6:00pm</p>	25	26	<p>27/28</p> <ul style="list-style-type: none"> • Class Survey Activity (IN-CLASS Only) • Data Entry, Import, & Analysis: Out-of-Class • Experimenting with a Data Set in SPSS (IN-CLASS Only) • (All Due 3/28)
WEEK	29	30	31			

APRIL 2021

SUBJECT _____ Subject _____ PERIOD _____ Period _____

MONDAY
(ZOOM)


TUESDAY

WEDNESDAY
(ZOOM)

THURSDAY

FRIDAY

SAT/SUN
(DUE DATES)

	1	2	3/4			
WEEK						
9	<p>5</p> <p>Readings:</p> <ul style="list-style-type: none"> • Chapter 8 • Chapter 9 <p>L: Ch8: Experimental Design</p> <ul style="list-style-type: none"> • Ch8 Exercise (Due 4/11) 	6	<p>7</p> <p>L: Q & A for APA Format Paper</p> <p>L: Ch9: Conducting Experiments</p> <ul style="list-style-type: none"> • Ch9 Exercise • Online Experiments (Due 4/11) 	8	9	<p>10/11</p> <ul style="list-style-type: none"> • Ch8 Exercise • Ch9 Exercise • Online Experiments (Due 4/11) • APA Research PROPOSAL PAPER (Rough Draft) #2A (Due 4/11, no late submissions)
WEEK	notes	ZOOM Meeting 5:00pm ~ 6:00pm	ZOOM Meeting 5:00pm ~ 6:00pm			
10	<p>12</p> <p>Readings:</p> <ul style="list-style-type: none"> • Chapter 10 <p>L: Ch10: Complex Experimental Designs</p> <ul style="list-style-type: none"> • Ch10 Exercise (IN-CLASS; All Due 4/18) 	13	<p>14</p> <p>L: EXAM REVIEW</p>	15	16	<p>17/18</p> <ul style="list-style-type: none"> • Ch10 Exercise (IN-CLASS; All Due 4/18)
WEEK	notes	ZOOM Meeting 5:00pm ~ 6:00pm	ZOOM Meeting 5:00pm ~ 6:00pm			
11	<p>19</p> <p>Readings:</p> <ul style="list-style-type: none"> • Chapter 11 <p>EXAM #2</p>	20	<p>21</p> <p>L: Ch11: Single-Case, Quasi-Experimental, and Developmental Research</p> <p>L: Review-Writing a Research Proposal</p> <ul style="list-style-type: none"> • Ch11 Exercise (Due 4/25) 	22	23	<p>24/25</p> <ul style="list-style-type: none"> • Ch11 Exercise • APA Research PROPOSAL PAPER (Final Draft) #2B (All Due 4/25)
WEEK	notes		ZOOM Meeting 5:00pm ~ 6:00pm			
12	<p>26</p> <p>Readings:</p> <ul style="list-style-type: none"> • Chapter 12 <p>Appendix-C</p> <p>L: Ch12: Understanding Research Results: Description & Correlation</p> <p>Research Project Presentations & Graphs</p> <ul style="list-style-type: none"> • Ch12a Exercise • Ch12b Exercise (Due 5/2) 	27	28	29	30	<ul style="list-style-type: none"> • Ch12a Exercises • Ch12b Exercise (All Due 5/2)
WEEK	notes	ZOOM Meeting 5:00pm ~ 6:00pm	ZOOM Meeting 5:00pm ~ 6:00pm			

MAY2021

SUBJECT _____ Subject _____ PERIOD _____ Period _____

	MONDAY (ZOOM)	TUESDAY	WEDNESDAY (ZOOM)	THURSDAY	FRIDAY	SAT/SUN (DUE DATES)
WEEK 12						1/2
WEEK 13	3 Readings: Chapter 13 Chapter 14 L: Ch13: Understanding Research Results: Statistical Inference L: Chapter 14 Generalizing Results • Ch13a Exercise • Ch13b Exercise • Ch14: Exercise (Due 5/9)	4	5 L: Research Strengths, Weaknesses & Confounding Variables L: Q & A for APA Research Final Paper & Research Presentations • Is it Correlation or an Experiment • Choosing the Correct Statistical Tests (Due 5/9)	6	7	8/9 • Ch13a Exercise • Ch13b Exercise • Ch14: Exercise • Choosing the Correct Statistical Tests • Is it Correlation or an Experiment (All Due 5/9)
WEEK 14	10 • Research Presentations	11	12 • Evaluating Research Methods in Popular Media • Research Presentations (Due 5/16)	13	14	15/16 • Evaluating Research Methods in Popular Media • APA Research FINAL PAPER #2C (Due 5/16)
WEEK 15	17 Research Presentations	18	19 Research Presentations	20	21	22/23 Research Presentations (Due 5/17-19)
WEEK 16	24 FINAL EXAM	25	26 Peer Reviews	27	28	29/30 Peer Reviews (Due 5/26)
WEEK	31					