

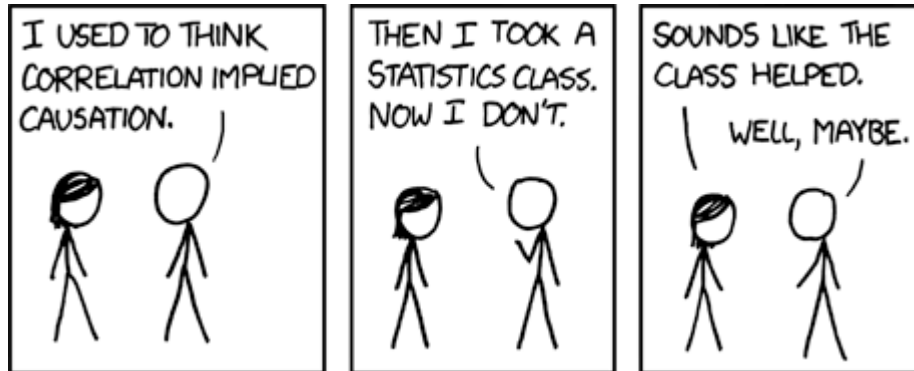


Psychology 204 & 204L – Fall 2015

Research Methods in the Behavioral Sciences & Lab

Lecture: Monday 1:00pm-3:45pm, Wednesday 1:00pm-2:15pm

Leatherby Library B14



**Instructor:** David Frederick, Ph.D., Assistant Professor in Health Psychology

**Correspondence:** enderflies1@aol.com (In emails, please put [course] [your name] and [topic] in the subject line. Example: [Psy 204] [Jenna Yoshiura] [Paper 1 Question])

**Office hours:** Mondays 7:00pm-9pm and Wednesdays 5:30pm-7pm in WOW Wings area (I encourage you to email me 24 hours in advance to guarantee an appointment).

**Office location:** 105 Crean Hall

**Undergraduate Mentors:** Yasmin Sandhu (yasmin@chapman.edu) & Proud Filossof (proud@chapman.edu)

**Text:**

Pelham, B. W., & Blanton, H. (2012). *Conducting research in psychology: Measuring the weight of smoke (4th edition)*. Belmont, CA: Wadsworth [Note: it is acceptable to use the 3rd edition]

Additional readings are posted online in blackboard.

**Overview of Course Content:** If you are planning to launch a new marketing campaign for your business, how do you know which message will be most effective? When your children do well on a test, should you praise them for their intelligence? You will continually encounter questions that can only be answered by consulting past research, or by conducting your own research studies. *In this course, you will learn to conduct experimental and quasi-experimental research in psychology.* You will also be routinely presented with claims about what "science" has discovered. For example, you will encounter claims that certain foods enhance memory and that video games make people more violent. *In this course, you will learn how to critically evaluate research claims.* This will be a skill that will serve you well no matter what field you decide to enter after graduation. *A further goal of this course is to learn how to convey your ideas and research findings in a clear, straightforward, and interesting ways.* One of the most important goals of research and science is to gain new information and convey that information to others. Although it may not always seem like research is supposed to be easy to understand, it is important for researchers to be able to explain their findings in straightforward ways that make sense to people and that, hopefully, interest them and teach them something new. The ability to convey your ideas in clear and appealing ways is a skill that is essential for many different fields (e.g., teaching, advertising, entertainment, law, journalism, etc.).

This course is quite challenging and intense. My view is that the purpose of college classes is to help you master the material so thoroughly that you could teach the material to your friends and family. Every lecture and reading has study guides or worksheets to go along with them. If you focus on mastering these guides, you are in great shape to excel on the exams. You will also conduct a research project and write up the results in APA style. To help you write the strongest research paper possible, the paper is broken up into smaller assignments throughout the semester. I am always available to help you master the content – never hesitate to contact me.

\*Note: Cartoon used with permission from <http://skcd.com/>

## **Weekly Readings & Assessment Due Dates**

### **Week 1: August 31, & September 2**

**Monday**

**Wednesday:** Readings: *Haiken* \* [Dr. Oz's 10 most controversial weight loss supplements](#)  
*Sepah* \* [What we can learn from the Dr. Oz saga.](#)  
*Friedman* \* [Lies, damned lies, and medical science](#)  
*Shermer* \* I am therefore I think

### **Week 2: September 7 & 9**

**Monday: (no class)** Readings: *Shermer* \* The most precious thing we have  
*Shermer* \* How thinking goes wrong

**Wednesday:** Readings: *Kenrick* \* Social Psychology, Goals in Interaction

### **Week 3: September 14 & 16**

**Monday:** **Assignments:** **Team 1 Activity: Shermer/Friedman Readings**

Readings: *Stanovich* \* How to think straight about psychology  
*Lyubansky* \* Prejudice lessons from the Xavier Institute

**Wednesday:** Readings: *Pelham & Blanton* \* #7: Experience carefully planned: Experimental research

### **Week 4: September 21 & 23**

**Monday:** **Assignments:** **Team 2 Activity: Lyubansky/Stanovich readings**

**Assignments:** **Group: Project Topic and Theory Paragraph**

Readings: *Pelham & Blanton* \* #4: Moving from notions to numbers

**Wednesday:** **Assignments:** **Email me 10+ articles as group**

Readings: *Frederick* \* Research methods cheat sheet (return to this periodically)

### **Week 5: September 28 & 30**

**Monday:** **Assignments:** **Team 3 Activity Pelham Blanton Chapter 4**

Readings: *Harlow* \* Discovering love

**Wednesday:** **Assignments:** **Group: Bullet Point Project Summary Due end of class**

**Assignments:** **Extra Credit Study Guide (lecture + reading)**

### **Week 6: October 5 & 7**

**Monday:** **Assignments:** **Exam 1**

**Wednesday:** **Assignments:** **Group: Begin Data Collection on or before this date**

Readings: *Bem* \* Writing the empirical article

*Frederick* \* Guidelines for Paper

### **Week 7: October 12 & 14**

**Monday:** **Assignments:** **Team 4 Activity**

Readings: *Pelham & Blanton* \* #6: Nonexperimental research designs

**Wednesday:** Readings: *Students* \* Example student APA papers from past classes  
*Frederick* \* Examples of good introductions to research papers

### Week 8: October 19 & 21

**Monday:** **Assignments:** Paper: Title Page + Opening Paragraphs + Introduction Outline  
Readings: *Pelham & Blanton* \* #8: Experience carefully exploited: Quasi-experimental  
*Frederick* \* *Research methods cheat sheet (return to this periodically)*

**Wednesday:** **Assignments:** Team 5 Activity  
**Assignments:** Extra Credit Study Guide (lecture + reading)  
Readings: *Shire* \* [Does pornography cause brain shrinkage?](#)  
*Sharp* \* [Critically examining scientific findings in the news](#) + video

### Week 9: October 26 & 28

**Monday:** **Assignments:** Exam 2

**Wednesday:** **Assignments:** Group: Email me Data File from Study by Friday 5pm Oct 30  
Readings: *Frederick* \* Guidelines for Paper  
*Neuroskeptic* \* [The nine circles of scientific hell](#)  
*Neuroskeptic* \* [Publication bias in animal research](#)

### Week 10: November 2 & 4

**Monday:** **Assignments:** Email me 4+ new .pdf articles individually  
Readings: *Pelham & Blanton* \* #9: Choosing the right research design  
*Neuroskeptic* \* Exercise and Depression Revisited

**Wednesday:** **Assignments:** Paper: Title Page + Abstract + Intro + Methods [Final draft quality]

### Week 11: November 9 & 11

**Monday:** Readings: *Nelson* \* [Maybe people actually enjoy being alone with their thoughts](#)  
*Simonsohn* \* [We cannot afford to study effect size in the lab.](#)

**Wednesday:** **Assignments:** Extra Credit Study Guide (lecture + reading)  
Readings: *Frederick* \* Research methods cheat sheet (return to this periodically)

### Week 12: November 16 & 18

**Monday:** **Assignments:** Exam 3

**Wednesday:** Readings: *Frederick* \* Guidelines for paper [read it again!]  
*Students* \* Example student APA papers from past classes [read it again!]  
*Frederick* \* [Reporting statistics guide](#) and APA style guide for references

### Week 13: November 23 & 25

**THANKSGIVING BREAK – NO CLASS**

### Week 14: November 30 & December 2

**Monday:** **Assignments:** Paper: Title Page + Abstract + Intro/Methods + Results [Final draft quality]

**Wednesday:** Readings: *Gladwell* \* The Warren Harding Error

### Week 15: December 7 & 9

**Monday:** **Assignments:** FULL PAPER due at beginning of class (single spaced)

**Wednesday: Assignments: Present Posters**  
Readings: *Frederick* \* Example posters posted online

**Week 16 Finals Week: December 14**

**Monday: Assignments: Final Exam Monday 10:45am-1:15pm**

Assignments

A 94-100    A- 90-93.99    B+ 87-89.99    B 84-86.99    B- 80-83.99    C+ 77-79.99  
C 74-76.99    C- 70-73.99    D+ 67-69.99    D 64-66.99    D- 60-63.99    F < 60.00

Typical grade distribution (+/- 5%): A (25%), B (35%), C (30%), D/F (10%); class GPA typically 2.9-3.0/4.0

**Complete and submit your assignments on time.** It is your responsibility to make sure you are in class to complete and hand in assignments, and to hear any and all information and announcements. Late assignments: minus 10% if not handed in at beginning of class, minus 20% after class, minus 30% next day, and 0 afterwards. If you are having any issues, please discuss them with me before the due date.

**1. EXAMS (60%)**

The exams test your knowledge of the *lectures* (70% of exam) and *readings* (30% of exam). You will be tested on materials from the readings that I do not cover in lecture. Please note, sometimes you will be presented an idea during lecture and then you will encounter it again weeks later in the readings (e.g., experimental methods). This is to give you exposure to the material in two different time periods to help you better learn and remember the concepts. You will be given a *study guide* for both the lectures and the readings. The exam questions are based directly on the study guide. Be prepared to describe each concept or study on the study guide carefully, and to provide the correct term when the concept is described or illustrated through a brief scenario or story. The exam questions are very straightforward, but require mastery of the material in order to excel because they are entirely short answer questions. It is very possible to score a 100 (typically 2-5 people do) and it is very possible to fail if you have not prepared because all of the answers are based on recall rather than recognition (as in a multiple choice test). Exam scores from past classes have typically ranged from 70-83 with large standard deviations (15).

- a. Exam 1 (20%: Week 6: Mon, October 5)    b. Exam 2 (20%: Week 9: Mon, October 25)  
c. Exam 3 (20%: Week 13: Mon, Nov. 16)    d. Exam 4 (+0-2% EC: Week 16: Mon, Dec. 14, 1045am)

**2. GROUP ACTIVITIES DEMONSTRATING CLASS CONCEPT (10%):**

**2a. Group Activity Demonstrating Class Concept:** Your group will design and lead a 20-40 minute interactive activity based on the readings or concepts in class. This should be *80-90% an activity* that involves the class, *only 10-20% a presentation*. You could lead students through an experiment, do a demonstration that illustrates a research concept, lead debate or discussion, skit, send people outside to interview students for 15 minutes and report on their findings, present a study and have people critique or redesign it, perform a song, or an exercise meant to demonstrate a concept such as statistical interactions. Please feel free to meet me in office hours or for dinner the week before to brainstorm ideas.

- DUE DATE:**            Team 1 (Week 3: Mon, Sep 14<sup>th</sup>)    Team 2 (Week 4: Mon, Sep 21<sup>st</sup>)  
                                 Team 3 (Week 5: Mon, Sep 28<sup>th</sup>)    Team 4 (Week 7: Mon, Oct 12<sup>th</sup>)  
                                 Team 5 (Week 8: Wed, Oct 21<sup>st</sup>)

*Email your FINAL .ppt presentation/activity materials + description by Friday 12pm the week prior to your presentation date.*

- 2b. Poster Presentation:** Your team will present a poster describing the results of your experiment.  
**DUE DATE: Week 15: Wed, Dec 9<sup>th</sup>**

### 3. GROUP RESEARCH PROJECT AND INDIVIDUAL APA RESEARCH REPORT (30%).

The primary project in the course will be the development, conduct, and presentation of a group project. Because it's much more fun to collect data on questions that interest you than on topics that your instructor forces upon you, you will do a research project in an area that is of interest to you. Your final paper will be an APA-style research report based on the findings of your group project. You will need to come up with a hypothesis that tests a theory or that tests between two different theories. You will design an experiment and then collect and analyze some data on the topic. Your project must be an original true experiment with two fully crossed independent variables (e.g., at least a 2 X 2 ANOVA). You can collect the data online, in our classroom, or by asking students on campus to participate. Bonus points for a study that integrates two theories, has a behavioral measure as a dependent variable, or is otherwise creative. You will have significant class time to plan and conduct your study. Your grade on the project will be based on creativity, rigor of the experimental methods, theoretical significance, quality of the writing, and strict adherence to APA style. Your contribution to the project will be graded by your group as well as by your instructor.

- a. **Group: Project Topic and Theory Paragraph (Week 4: Mon, Sep 21).** One paragraph describing theory and topic guiding your project, and possible hypotheses.
- b. **Group: Email me 10+ Articles (Week 4: Wed, Sep 23)**
- c. **Group: Bullet Point Project Summary (Week 5: Wed, Sep 30)** 1.5 page bullet point list with: A) theory tested B) hypothesis C) prediction D) independent variables E) dependent variables; F) study design; G) how you plan to collect the data + H) all study materials (e.g., survey measures)
- d. **Group: Begin Data Collection (Week 6: Wed, Oct 7)**
- e. **Group: Email me Data File from Study (Week 9: Friday 5pm, Oct 30)**

*Grading scheme: Minus 5% off final overall grade for each of above not completed thoroughly or on time.*

Although you did the project as a group, you will each write an *independent* paper on the project. You will prepare a concise APA style paper describing your study with the following components that conform *precisely* to the following page limits: Title page (1 page), abstract (1 page up to 150-200 words), introduction (2.50-2.99 pages), method (1.0-2.0 pages), results (.75-2.0 pages), discussion (1.75-1.99 pages), references (10-20 journal references; 1 page), one table and one figure (2 pages). Must be single-spaced, 12-point font, Times New Roman, 1-inch margins. If it is shorter than the requirements for each section, lengthen it. If it is longer than the requirements, shorten it. Everyone has exact same amount of space.

- a. **Paper: Title Page, opening paragraphs, Introduction Outline (Week 8: Mon, Oct. 20)**  
Opening 1-2 paragraphs with hook/theory/thesis/roadmap + detailed bullet point outline of introduction (broken up with bolded headers)
- b. **Email me 4+ new articles you are including in your paper (Week 10: Mon, Nov 2)**
- c. **Paper: Title Page, Intro, Methods (a-c = 5%) (Week 10: Wed, Nov 4)**
- d. **Paper: Title Page, Abstract, Intro, Methods, Results (5%) (Week 14: Mon, Nov 30)**
- e. **Full Paper: Title, Abstract, Intro, Methods, Results, Refs, Fig. (20%) (Week 15: Mon, Dec 7)**

### 4. ATTENDANCE (Up to -100% off of final grade)

**Attendance:** Throughout the semester, we will do many activities and have many discussions as a class. Enthusiastic and creative participation is expected, and attendance is required. You can miss two class sessions for any reason (illness, injury, party, job interview, travel, death in family). There is no need to justify or explain the absence. After two missed classes, *each* missed lecture or lab translates into **minus 5.0 points** off your overall final grade. **Cell phone/Email/Facebook = Absence:** Texting, emailing, facebooking, twittering, ESPNing without prior permission during class constitutes an absence for the class (**minus 5.0 points**).

### 5. RESEARCH PARTICIPATION EXTRA CREDIT (+0 to 2.25% to final grade)

In addition to learning about research studies, you will also have the opportunity to participate in studies as well to experience how research studies are conducted. You can earn +.75% for each study you participate in,

### 6. EXAM EXTRA CREDIT: Hand in completed **lecture+reading** study guides one week before exam



- a. **Extra Credit Study Guide Exam 1 (+3.0% on exam) (Week 5 Wed, Sep 30)**
- b. **Extra Credit Study Guide Exam 2 (+3.0% on exam) (Week 8 Wed, Oct 21)**
- c. **Extra Credit Study Guide Exam 3 (+3.0% on exam) (Week 11 Wed, Nov 11)**

### Course Policies and Information

1. **Academic honesty:** Your writing should come from *you*. While you may draw from other sources to help formulate or support your work, you **must always cite these sources** and tie them into your own ideas and theses. Plagiarism is a serious offense, and may result in students failing the course or being expelled from the university. Guidelines on citing references will be provided in class.
2. **Student Learning Outcomes and Course Objectives.** This course will develop your:
  - 1) *Research Skills*
    - a. Derive hypotheses from theories, and predictions from hypotheses
    - b. Understand the logic behind experimental and correlational study designs
    - c. Understand the challenges in identifying causal links between two factors
    - d. Identify mediators, moderators, and boundary conditions of effects
    - e. Understand common problems in designing and implementing surveys
    - f. Understand the logic of t-tests, between and within subjects ANOVAs, correlations, partial correlations, and possibly regression, and conduct these tests in SPSS
    - g. Understand common problems in designing and implementing surveys
  - 2) *Writing and Oral Communication Skills*
    - a. Clearly convey how the existing research literature justifies your hypothesis and prediction
    - b. Present and discuss ideas more effectively in class
    - c. Create an activity to convey research methods content
    - d. Identify the writing format of the American Psychological Association (APA)
    - e. Recognize when writing is and is not in conformance with APA format
    - f. Demonstrate ability to write in APA format
    - g. Operationally define a formal hypothesis and produce a written thesis/research report that applies knowledge of critical reasoning, accurately interpret behavioral science and related sources, and communicates in writing a balanced account and definitive conclusion of whether hypothesis is supported.
  - 3) *Critical Reasoning*
    - a. Demonstrate ability to construct and critically analyze complex arguments, and distinguish good reasoning from bad.
    - b. Evaluate lay and professional literature related to psychological issues and distinguish appropriate and valid information from specious and flawed information.
    - c. Organize and construct a formal critique of a major psychological issue.
3. **Chapman University's Academic Integrity Policy.** Chapman is a community of scholars which emphasizes the mutual responsibility of all members to seek knowledge honestly and in good faith. Students are responsible for doing their own work, and dishonesty of any kind will not be tolerated anywhere in the university.
4. **Chapman University's Students with Disabilities Policy.** In compliance with ADA guidelines, students who have any condition, either permanent or temporary, that might affect their ability to perform in this class are encouraged to contact the Disability Services Office. The Disability Services Office will work with the appropriate faculty member who is asked to provide the accommodations for a student based on the documentation and the individual student needs. The granting of any accommodation will not be retroactive and cannot jeopardize the academic standards or integrity of the course.
5. **Equity and Diversity.** Chapman University is committed to ensuring equality and valuing diversity.

Students and professors are reminded to show respect at all times as outlined in Chapman's Harassment and Discrimination Policy: <http://tinyurl.com/CUHarassment-Discrimination>. Any violations of this policy should be discussed with the professor, the Dean of Students and/or otherwise reported in accordance with this policy.