

Advanced Research in Psychology
(PSY. 400, Sections 3, 5, 8)
Tuesdays (8:30–9:45 am, 10:00 – 11:15 am and 11:30 – 12:45 pm)
Mackinac A2165

Prerequisites: Psy. 101 and Research Methods (Psy. 300)

Instructor: Prof. Eaaron Henderson-King
Office: 2206 ASH, phone: 331-2938
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Office hours: **Tuesday 1:30-2:30 pm or by appt.**

Office Hours: All office hours will be held online rather than face-to-face.

Costs associated with the course – Each student should expect to spend \$10.00 on data collection.

Readings:

- a) Crano & Brewer (2002). *Principles and Methods of Social Research* (Chapters 4-7). [Blackboard](#)
- b) Dillman, Smyth, & Christian (2009). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (Chapters 4, 5, and 7). [Blackboard](#)
- c) Fife-Schaw, C. (2008). Principles of Statistical Inference (Chapter 19). In Breakwell, G.M, Hammond, S., Fife-Schaw, C. & Smith, J.A. (Eds.) *Research Methods in Psychology* (3rd edition). [Blackboard](#)
- d) Wilson J. H. & Joye, S. W. (2019). *Research Methods and Statistics: An Integrated Approach*.

Overview: The purpose of this course is to introduce you to the experimental aspects of social psychology. It is expected that you already have some knowledge of psychology, research methods and statistics. Although I will review each of these areas throughout the term, the review will not be extensive. The course will be most useful for those who are interested in psychology as a career and research in general; however, it will also be useful for those who simply want to hone their critical thinking skills.

While the course is interesting, it also difficult and time consuming. You must be open to critically assessing your own work, the past research in the field of social psychology, and the work of your peers. You must also be able to think on your own, and work in an environment where there is more freedom than in most of your previous courses. **It is also *ESSENTIAL* that you are able to meet with your group members outside of class. If you cannot fulfill this expectation, you should seriously consider dropping the course.**

The course is setup in a flipped classroom format. You will watch various modules and YouTube videos on topics for each week and then we will talk about the material and your projects during class time. This will give you the flexibility of moving through the course at a pace that is comfortable for you, and allow us to discuss various aspects of the material that has been posted online. It also affords you the ability to stay relatively up to date on the course material if you become ill during the course of the semester. The lecture modules that will range between 10 – 20 minutes and videos that I have gathered that do a very nice job of discussing concepts that are central to the course. These videos will also vary in length with some being as short as 5-minutes and others being as long as 60 minutes (broken into three 20-minute segments). I have chosen videos in which the person has explained the concept under consideration in a very clear and thorough way. You watch them as frequently as you like. **Take detailed notes on all videos.**

Class Meetings

After group assignments have been finalized half of the groups will meet in class on Tuesdays while the other half will meet on Thursdays. The groups that meet with me in class will discuss the course content as well as their group projects. The groups that are NOT meeting with me will sign-in to class and then meet to discuss and work on their group project. Thus, everyone is expected to attend class but what you will be doing will depend on the group you are in and the day of the week.

Things to Note

- a) If you are sick, or feeling slightly ill, don't come to class or interact face-to-face with your classmates. Simply watch the videos for that week and then contact your group members to find out what transpired during class.
- b) Wear your mask in the classroom and it should be over your nose and mouth. If you don't want to follow the policy then simply don't come to class -- although attendance is mandatory, thus not attending will affect your grade.
- c) Do not plagiarize anything. At this point in your academic career, you should know what plagiarism is and what constitutes plagiarism. If you do not, look it up. While you may work with other students to understand the various assignments, what you submit for grading must be your own writing (with the exception of the final project). Plagiarism will, at best, result in an "F" on the assignment. However, I will determine whether more severe consequences are called for.
- d) Substandard work will receive a grade that reflects that reality.
- e) I cannot, and will not, come up with something for you to do to improve your grade if you are not doing "well" or as well as you expected at the end of the semester. There will be various opportunities for extra credit points throughout the semester. These are your chances to enhance your final grade.
- f) If you are not doing well by the middle of the semester, **seriously consider dropping the class**. There is very little evidence that students who are not completing assignments, completing assignments with grades that are in the D-F range, and/or who are doing poorly because of negative life events midway

through the semester improve their scores to a significant degree by the end of the term. While improving is certainly possible Covid-19 and remote learning (which is highly likely this semester) only makes the likelihood of such improvement extremely unlikely.

Assignments

There will be **two** low stakes assignments, four quizzes, two exams and **one major** assignment over the course of the semester.

Below is the link to GVSU Winlab. This allows you to use your home computer to access the GVSU systems and STATLAB.

<https://winlab.gvsu.edu/index.pl>

Use your student sign-on information to access the system and then navigate to SPSS.

Low Stakes Assignments – Using SPSS (THE SPSS VIDEOS TO ASSIST YOU IN COMPLETING THE ASSIGNMENTS ARE ON PAGES 13-14)

1) **Analysis of Variance Assignment** -- I will give you a set of raw data that you will have to input into SPSS, create indices for the variables (if needed), assess the internal reliability of the indices (if needed), and then conduct a 2 x 2 Analysis of Variance. If needed, conduct the simple effect analyses as well.

a) Copy the commands showing how you created each index, and assessed internal reliability for each in the SPSS syntax file you created into a Word document.

b) Then, in the same Word document, briefly summarize the results of the Analysis of Variance. State what they indicate. Use APA style.

SEE MY LECTURE NOTES ON ANALYSIS OF VARIANCE FOR THE BASIC STRUCTURE ON REPORTING THE RESULTS OF AN ANALYSIS OF VARIANCE.

2) **Correlational and Regression Analysis Assignment** – I will give you a set of raw data that you will have to input into SPSS, create indices for the variables (if needed), assess the internal reliability of the indices (if needed), and then conduct the appropriate correlational analyses and regression analyses.

a) Copy the commands showing how you created each index, and assessed internal reliability for each in the SPSS syntax file you created into a Word document.

b) Then, in the same Word document, briefly summarize the results of the correlational analyses. State what they indicate. Use APA style.

c) Then, in the same Word document, briefly summarize the results of the regression analyses. State what they indicate. Use APA style.

SEE PAGE 18 FOR ADDITIONAL INFORMATION ON THIS ASSIGNMENT

Major Assignment

There will be one major paper. The final paper should range from **8-10 pages** in length and should include **no less than 15 references**. All of the assignments are expected to be **well-written and thoughtful**.

Due to the unpredictability of the semester, I will have you design and conduct a study in one of the following two areas either: a) examine two to three factors (variables/constructs) that may influence people's concerns regarding the pandemic or b) examine two to three factors (variables/constructs) that may influence the types of attributions people make for police brutality.

Each group will be responsible for coming up with its own study, conducting the research, data analysis and interpretation, and presenting the work to the class at the end of the semester (if possible). Given the fact that this is only a lab class, each project must be feasible.

The first draft, which comprises the Introduction and Method sections (as well as a Title page and Reference page), will be a group paper. Each group member **MUST** make a **SUBSTANTIAL** contribution to the paper, and that contribution must be clearly seen in the paper which will be worked on *in Google Docs* (**NOTE THAT THIS IS A REQUIREMENT**), and to which I will be given access. Please note that merely typing the reference section, for example, does **NOT** constitute a significant contribution.

The final paper which consists of the title page, abstract, a revised introduction, a revised method section, results and discussion sections can be written **EITHER** individually, in smaller groups, or with the original group.

A. Format/Structure of Paper

I. Introductory Paragraph (**No more than half a page**)

- a. general problem
- b. what has previous research examined
- c. what is missing and why important to take into account
- d. Purpose of study is to examine X, Y, on Z (example)

II. Literature review (**One and a half to two pages**)

- a. relevant literature on X
- b. relevant literature on Y

NOTE a. and b. can be combined when appropriate

III. Overview of study followed by hypothesis(es)

IV. Method (**One and a half to two pages**)

1. Participants

- 2. Materials
- 3. Procedure
- V Results (**No more than one and a half pages**)
- VI Discussion (**No less than one page and no more than two pages**)
- VII References (how many? Enough to show the reader that you have a good grasp of the literature.)

B. Method Section Content

1) The method section for an EXPERIMENTAL DESIGN should take the following format (although it can differ as a function of the type of experiment you are proposing to conduct).

a) Participants and Design

- 1) How many subjects would you use
- 2) Where were they from (university students, community in Northern California, etc.)
- 3) Give relevant demographic (for example, how many females and males, race/ethnicity, age and age range, etc.)
- 4) Paid or volunteers
- 5) Design

b) Materials (there will be times when you can combine the materials and procedure sections)

1) If you would use materials to manipulate the independent variables then you would discuss these first. For example, “Participants read one of two news stories that appeared in a student newspaper in which either a male or a female undergraduate (gender of target) either cheated on an exam or studied extremely hard in order to pass an exam.” You would give more detail as to the content of the story.

2) you would then discuss the dependent variable or variables of interest. Did you choose a multiple response measure as opposed to a single response measure? Why? If you used a multiple response measure did you use one that was unidimensional or multidimensional? How were the items scaled (i.e., nominal, ordinal, interval or ratio) and what are the implications of using such a scale? What about open-ended vs close-ended?

c) Procedure

- 1) Were the subjects run individually, in groups, on-line?
- 2) What were they told the study was about?
- 3) What did they complete first?
- 4) What did they complete second?
- 5) Were they debriefed after completing the study?

See Buck, Plant, Ratcliff, Zielaskowski, Boerner (2013) for one example of how to approach each of these sections. This manuscript will be in the course documents section of Blackboard.

C. Annotated Bibliography

The annotated bibliography should consist of no less than 6 articles that you have completed a summary between 100 – 200-words in length. The following link will bring you to Purdue Owl, it has an example of an APA style annotated bibliography (the example that says “Sample APA Annotation”). You should also explicitly state which section(s) of the introduction each article will be referenced in.

https://owl.purdue.edu/owl/general_writing/common_writing_assignments/annotated_bibliographies/annotated_bibliography_samples.html

D. Additional Information About the Introductory Paragraph

The introductory paragraph should start by discussing the general issue. It should then TRANSITION into a very succinct discussion of the status of the research in the area at this point and WHAT IS LACKING in this work and why what is missing is important. It should then move to explicitly communicating the purpose of the study. In stating the purpose, you should be clear as to the constructs that you are examining and these should be connected to what you said was LACKING in the field – that is, you are telling the reader what you are adding to our understanding of the phenomenon. See van den Berg, Paxton, Keery, Wall, Guo, & Neumak-Sztainer (2007) for one example of how to approach the introductory paragraph.

E. Additional Information About the Method Section

These are some very valuable resource materials that you *should/must* use in writing your Method section. The video, maps onto much of what I will communicate about writing a method section and the website gives you written documentation as to the structure.

Really Essential Information About Writing a Method Section

<https://www.verywellmind.com/how-to-write-a-method-section-2795726>

<https://belmont.edu/nursing/pdf/APA/2014SampleAPAResearch.pdf>

<https://papersowl.com/blog/how-to-write-the-methods-section-of-a-research-paper>

Video on Method Section

https://www.youtube.com/watch?v=eaoF_58hyO4

Exams

There will be two mid-term exams. The midterms will be comprised of a 25-point application section in which you will have a week to complete, and a multiple-choice section consisting of 15 items. The multiple-choice section **will be completed in class on your computer, cell phone or pad**. Once you have started the multiple-choice portion you will have 20 minutes to complete it.

Quizzes – The quizzes will also be completed on a personal computer during class time and will consist of 10 multiple-choice items.

Review Sheet (EXTRA CREDIT) – For each exam, students can submit a thoughtful review sheet that covers the material for that exam. It should consist of key points, summaries, and concepts that you deem important. The review sheet can take any form that you would like (e.g., multiple-choice questions, crossword puzzle, note-cards, text, etc.). These reviews sheets will be worth up to 3 extra credit points. You should use these reviews to assist in your studying.

Grading

Exam 1	-- 40 points
Exam 2	-- 40 points
Quiz 1	-- 10 points
Quiz 2	-- 10 points
Quiz 3	-- 10 points
Quiz 4	-- 10 points
Correlational & Regression Assignment	-- 20 points
Analysis of Variance Assignment	-- 20 points
Introductory Paragraph	-- 10 points
Annotated Bibliography	-- 10 points
Group Presentation 1	-- 20 points
Group Presentation 2	-- 30 points
Group Evaluation 1	-- 20 points
Group Evaluation 2	-- 20 points
Final Assignment	-- 100 points

Total Points	-- 370 points

Due Dates for all Assignments and Exams:

Assignment	Due Date
Quiz 1	9-7 (In class)
Quiz 2	9-14 (In class)
Introductory Paragraph	9-16
Annotated Bibliography	9-16
Group Presentation 1	9-28 and 9-30
Exam 1	10-12 (Multiple Choice (MC) in class)
Quiz 3	10-27 (In class)
Analysis of Variance Assignment	10-28
Correlation and Regression Homework	11-23
Quiz 4	11-16 (In class)
Exam 2	11-23 (MC in class)
Final Project	12-7
Group Presentation II	12-7 and 12-9

Grade Distribution:

A -- 100 -94%	A- -- 93.9-90%
B+ -- 89.9-87%	B -- 86.9-83%
B- -- 82.9-80%	C+ -- 79.9-77%
C -- 76.9-73%	C- -- 72.9-70%
D+ -- 69.9-67%	D -- 66.9-63%
D- -- 62.9-60%	F -- 59.9%-->

Course Objectives

Upon completion of this course, students will be able to:

- 1) Explain research methods issues including ethical issues, measurement, reliability and validity of methods, experimental and survey research designs, biases in experimentation, and univariate and multivariate data analysis
- 2) demonstrate the ability to design and conduct an empirical study in psychology.
- 3) Have clear sense of what some of the essential elements of writing a research paper are.
- 4) be able to understand why critical thinking and the objective analysis of issues and phenomena are important in the life of the citizen.

University Notice

This course is subject to the GVSU policies listed at <http://www.gvsu.edu/coursepolicies>.

The Semester

Week 1 (8-31 to 9-2)

Introduction & Research Methods Review

Module 1 -- The Scientific Method in Context – Ways of knowing

Readings:

Fife-Schaw (Chapter 19) [Blackboard reading](#)

Chapter 1 (Wilson & Joye)

Module 2 – Basic Assumptions of Scientific Approach

War on Science segment

<https://www.youtube.com/watch?v=Do-3WCKhd10>

Module 3 – Developing Research Ideas

Week 2 (9-7 to 9-9)

Group Assignments (Tuesday)

Experimental Design

Readings:

Crano & Brewer (2002). *Principles and Methods of Social Research* (Chapters 4-7).
[Blackboard](#)

Module 4 – Overview

Module 5 – Four Basic Building Blocks of Experimental Design

- Assigning Subjects to Conditions
- Pre-test – Post-test vs Post-test Only
- One-Way vs Factorial Design
- Between Groups vs Within Groups vs Mixed factors Designs
- Main Effects and Interactions

Really Helpful Videos: Main Effects and Interactions (Both are good but I like the second one a bit better than the first

<https://www.youtube.com/watch?v=OE46w0RqmQA>

<https://www.youtube.com/watch?v=GGvuacZb-AQ>

Quiz 1 – Modules 1-3, Fife-Schaw (Chapter 19); Wilson & Joye (Chapter 1)

Week 3 (9-14 to 9-16)

9-14 Groups 1 and 2 meet in class; Groups 3 and 4 sign-in and meet outside

9-16 Groups 3 and 4 meet in class; Groups 1 and 2 sign-in and meet outside

Experimental Design (continued)

Readings:

Crano & Brewer (2002). *Principles and Methods of Social Research* (Chapters 4-7).
[Blackboard](#)

Module 4 – Overview

Module 5 – Four Basic Building Blocks of Experimental Design

- Assigning Subjects to Conditions
- Pre-test – Post-test vs Post-test Only
- One-Way vs Factorial Design
- Between Groups vs Within Groups vs Mixed factors Designs

– Main Effects and Interactions

Really Helpful Videos: Main Effects and Interactions (Both are good but I like the second one a bit better than the first

<https://www.youtube.com/watch?v=OE46w0RqmQA>

<https://www.youtube.com/watch?v=GGvuacZb-AQ>

Quiz 2 – Modules 4-5

Week 4 (9-21 to 9-23)

Module 6 – Power Analyses

Readings:

Chapter 10 (Wilson & Joye)

Really Helpful Videos:

This one is good but at times a bit goofy --

https://www.youtube.com/watch?v=VX_M3tIyiYk

Module 7 – t-tests

9-21 -- Introductory Paragraph and Annotated Bibliography Due

Week 5 (9-28 to 9-30)

Module 8 – One-way Analysis of Variance

Really Helpful Videos: One-Way ANOVA

https://www.youtube.com/watch?v=q48uKU_KWas

First Group Presentation

9-28 – Tuesday Groups

9-30 – Thursday Groups

Week 6 (10-5 to 10-7)

Module 9 – Factorial Analysis of Variance

Readings:

Ch. 14 Wilson & Joye

Really Helpful Videos: Two-Way ANOVA by HAND

<https://www.youtube.com/watch?v=cNIIIn9bConY>

Week 7 (10-12 to 10-14)

Exam 1 – Modules 1-9 AND ALL READINGS

Week 8 (10-19 to 10-21)

Survey Design

Module 10 – Overview

Module 11 – Sampling

Week 9 (10-26 to 10-28)

Dillman, Smyth, & Christian (2009). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (Chapters 4, 5 and 7). [Blackboard](#)

Analysis of Variance Assignment Due 10-28

10-27 -- Quiz 3 --- Modules 10 and 11

Survey Design (Continued)

Module 12 – Questionnaire Design

Week 10 (11-2 to 11-4)

Module 12a – Questionnaire Structure and Item Wording

Readings:

Dillman, Smyth, & Christian (2009). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (Chapters 4, 5 and 7). [Blackboard](#)

Week 11 (11-9 to 11-11)

Module 12a – Questionnaire Structure and Item Wording (Continued)

Readings:

Dillman, Smyth, & Christian (2009). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (Chapters 4, 5 and 7). [Blackboard](#)

Week 12 (11-16 to 11-18)

Quiz 4 – Modules 12 and 12a (NOT DILLMAN et al., these chapters will be on EXAM 2)

Module 12b – Using SPSS (**these will be a series of videos**)

Module 12c – Correlational Analysis

Week 13 (11-23)

Module 12d – Regression Analysis

11-23 SPSS Correlation and Regression Assignment Due

Exam 2 – Modules 10-12d AND ALL READINGS

Week 14 (11-30 to 12-2)

Group Presentations preparation

Week 15 (12-7 to 12-9)

Major Assignment Due 12-7

Group Presentations

12-7 Groups 1 and 2

12-9 Groups 3 and 4

SPSS VIDEOS

1) Introduction to SPSS

https://www.youtube.com/watch?v=27pOf3_Kq3s

2) Recoding Variables in SPSS

<https://www.youtube.com/watch?v=K-eY-AXIERA>

3) Transforming variables to create a mean index (as well as Cronbach alpha)

In this video she shows you how to do a recode.

a. <https://www.youtube.com/watch?v=fnWG1C61oSk>

In this video she shows you how to obtain the Cronbach alpha

b. <https://www.youtube.com/watch?v=pJT9Ch93XSg>

4) Correlational Analyses in SPSS

<https://www.youtube.com/watch?v=rR99bpl0rKM>

5) Regression Analyses

a) Bivariate Regression (Gives you the foundation of regression)

<https://www.youtube.com/watch?v=1Md18jjKJCO>

b) Multivariate Regression (Gives you an understanding of Multiple Regression)

Part 1: Brandon Foltz Stats 101

<https://www.youtube.com/watch?v=dQNpSa-bq4M>

Part 2: Brandon Foltz Stats 101

https://www.youtube.com/watch?v=wPJ1_Z8b0wk

Part 3: Brandon Foltz Stats 101

<https://www.youtube.com/watch?v=px72eCYPuvc>

Multiple Regression using SPSS (Stepwise example but much of what he talks about applies to when we put all of the predictors in at the same time)

Part 1: How2Stats

<https://www.youtube.com/watch?v=IWYENu0kCYE>

Part2: How2Stats

https://www.youtube.com/watch?v=oi_oWh_4d78

Part3: How2Stats

<https://www.youtube.com/watch?v=IUtYadNLV3s>

Part4: How2Stats

<https://www.youtube.com/watch?v=pIgUOIHwRkK>

Part 5:

<https://www.youtube.com/watch?v=UiJ4G3rLIXA>

6) Analysis of Variance (ANOVA)**a) One-way**

https://www.youtube.com/watch?v=q48uKU_KWas

b) Two-way

This is a really good one!!! It shows you how to conduct the simple effect analyses when you have an interaction.

<https://www.youtube.com/watch?v=0MoCt14isz0>

This one does not tell you how to conduct the simple effects analyses, but it is also good.

https://www.youtube.com/watch?v=q4IJtIzgg_Y