

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

Prerequisites: PSY 101 and Research Methods (PSY 300)

Instructor: Prof. Eaaron Henderson-King
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Office hours: **Tuesday 1:00-2:30 pm or by appt.**

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

Additional costs associated with the course: Each student should expect to spend \$10.00 on data collection.

Readings:

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

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

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](#)

Wilson J. H. & Joye, S. W. (2019). *Research Methods and Statistics: An Integrated Approach*. (Chapters 1, 3, 4, 8, 9, 11, 12 and 14) [Bookstore](#)

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 challenging 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 any 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 drop the course.

The course is set up 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 may watch them as frequently as you like. It is important to **take detailed notes on all videos.**

Class Meetings

After group assignments have been finalized, on some days half of the groups will meet with me in class on Tuesdays while the other half will meet on Thursdays. The groups that meet with me in class on a given day 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 outside of class 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. Note that there will also be days where the entire class will meet for the full session.

Class Participation

You are required to attend class and actively participate. You may, over the course of the semester, miss three classes without losing points. Thus, missing four or more classes will adversely affect your participation grade. **If you miss an excessive number of classes (which will be based on my judgment) a full grade will be deducted from your overall semester grade. Thus, if your grade is a “C”, you will receive a “D” for the course.** You are also required to actively participate in both class and group discussions. Participation in these areas will be assessed by your group members and by me.

Things to Note

- a) If you are sick, please 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, so that it covers your nose and mouth.
- 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.

d) Substandard work will receive a grade that reflects the quality of the work in question.

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.

Assignments

There will be three low stakes assignments, four reading 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. Use your student sign-on information to access the system and then navigate to SPSS.

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

When using STATLAB make sure that you save all of your files to a drive that you can access outside of STATLAB. DO NOT SAVE THEM TO THE TEMPORARY DRIVE – THEY WILL DISAPPEAR IF YOU DO.

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

1) SPSS recode assignment (see page 14)

2) SPSS correlational assignment (see page 14)

3) 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. You should be able to do this by simply copying the commands in the syntax file and then pasting them into your 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.

SEE PAGE 18 FOR ADDITIONAL INFORMATION ON THIS ASSIGNMENT

B. Reading Assignments –

Applying Crano and Brewer and Wilson and Joye chapters to the group project – Over the course of the semester you will complete four chapter summaries. The first two will be from Crano and Brewer while the second two will be from Wilson and Joye.

Crano and Brewer – For the two Crano and Brewer chapters you will write a **two-paragraph** discussion of each chapter. The discussion **must** address how elements of the chapter can be incorporated into some aspect of your group project.

Wilson and Joye -- For the two Wilson and Joye chapters you will write a **two-paragraph** discussion. One paragraph must address how elements of the chapter can be incorporated into some aspect of your group project. The second paragraph will discuss what you learned about writing the method and results section of an APA style paper.

C. Submission of Experimental Material –

The final draft of your experimental material must be submitted by October 18th. It should reflect your having thoughtfully, and thoroughly, considered the hypotheses you are testing, the stimulus materials that you will use to manipulate the independent variables, the manner in which you will assess the dependent variables, the cover story that you will give the participants, as well as your consent form and your debriefing.

D. Major Assignment

There will be one major paper. The final paper should range from **8-10 pages** in length (of text) and should include **no less than 15 references**.

You will design and conduct a study that examines two to three factors (variables/constructs) that may influence people's perceived attractiveness of themselves and/or others. The study will be an experimental design, NOT a survey design.

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. Given the fact that this is 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. Additional Information About the Introductory Paragraph (different from the literature review)

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.

C. 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 items?

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 next?
- 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.

Additional Information About the Method Section

These are some very valuable resource materials that you *should/must* use in writing your Method section. The following video is very informative and discuss much of what I will communicate about writing a method section and the websites give you additional written documentation as to the structure of a method section.

Video on Method Section

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

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>

D. Annotated Bibliography

The annotated bibliography should consist of no less than 6 articles for which 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

Exams

There will be two mid-term exams. The midterms will be comprised of a 25-point application section that 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 or tablet**. Once you have started the multiple-choice portion you will have 20 minutes to complete it.

Quizzes – The quizzes will also be completed online 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 review sheets will be worth up to 3 extra credit points. You should use these reviews to assist in your studying.

	<i>Grading</i>
Class Participation	-- 30 points
Two Exams	-- 80 points (40-points each)
Four Quizzes	-- 40 points (10-points each)
Two SPSS video assignments	-- 20 points (10-points each)

Analysis of Variance Assignment	-- 20 points
Applying Crano & Brewer and Wilson & Joye chapter)	-- 40 points (10-points for each chapter)
Introductory Paragraph	-- 20 points
Annotated Bibliography	-- 10 points
Introduction and Method Section	-- 30 points
Submission of Experimental Materials	-- 30 points
Group Presentation 1	-- 20 points
Group Presentation 2	-- 30 points
Group Evaluation 1	-- 20 points
Group Evaluation 2	-- 30 points
Final Paper	-- 100 points

Total Points	-- 520 points

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>.

Semester Schedule

Week 1 (8-30 to 9-1)

Introduction & Research Methods Review

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

Module 2 – Basic Assumptions of Scientific Approach

War on Science segment

<https://www.youtube.com/watch?v=Do-3WCKhdI0>

Plot to Overturn the Election

<https://www.youtube.com/watch?v=90O-q7dgS-I>

Module 3 – Developing Research Ideas

Readings:

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

Wilson and Joye (Chapter 1 and 3)

Week 2 (9-6 to 9-8)

Group Assignments (Tuesday)

Experimental Design

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>

Readings:

Wilson and Joye (Chapters 4, 8, and 12)

Crano & Brewer (2002). *Principles and Methods of Social Research* (Chapters 4-6).
[Blackboard](#)

Quiz 1 – Modules 1-3 and Fife-Schaw (Chapter 19)

Week 3 (9-13 to 9-15)

9-13 Groups 1 and 2 meet in class; Groups 3 and 4 sign-in and meet outside

9-15 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 4-6).
[Blackboard](#)

Quiz 2 – Modules 4-5

Reading Application 1 Due -- Crano and Brewer Chapter 4

9-15 -- SPSS Homework 1 Due

Week 4 (9-20 to 9-22)

Module 6 – Power Analyses

Experimental Design (continued)

Power Analysis Video:

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

9-22 -- SPSS Homework 2 Due

9-23 -- Introductory Paragraph and Annotated Bibliography Due

Week 5 (9-27 to 9-29)

Questionnaire Design

Module 7 – Questionnaire Design

Module 8 – 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](#)

Reading Application 2 Due -- Crano and Brewer Chapter 5

Week 6 (10-4 to 10-6)

Quiz 3 – Modules 7 and 8 (NOT DILLMAN et al., these chapters will be on EXAM 2)

First Group Presentation

10-4 – Groups 1 and 2

10-6 – Groups 3 and 4

10-7 – Introduction and Method sections due

Week 7 (10-11 to 10-13)

Exam 1 – Modules 1-8 AND ALL READINGS**Application section of Exam 1 Due 10-14**

Week 8 (10-18 to 10-20)

Module 9 – t-tests

Module 10 – Using SPSS (these will be a series of videos)

Reading:

Wilson and Joye (Chapters 10)

Submission of final draft of materials (10-18)

Week 9 (10-27)

Reading Application 3 W & J Ch. 10 10-29 submitted on BB

Week 10 (11-1 to 11-3)

Module 11 – One-way Analysis of Variance

Module 12 – Factorial Analysis of Variance

Readings:

Wilson and Joye (Chapters 11 and 14)

Really Helpful Videos: One-Way ANOVA

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

Really Helpful Videos: Two-Way ANOVA by HAND

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

Reading Application 4 W & J Ch. 14**11- 4 submitted on BB**

Week 11 (11-8 to 11-10)

Survey Design

Module 13 – Overview

Module 14 – Sampling

Analysis of Variance Assignment 1 Due 11-10

Week 12 (11-15 to 11-17)

Module 15 – Correlational Analysis

Module 16 – Regression Analysis

11-15-- Quiz 4 --- Modules 13 and 14

Week 13 (11-22)

Exam 2 – Experimental Design through Regression Analysis AND ALL READINGS

Week 14 (11-29 to 12-1)

Group Presentations preparation

Week 15 (12-6 to 12-8)

Group Presentations

12-6 Groups 3 and 4

12-8 Groups 1 and 2

Final Paper Due 12-10

Due Dates for all Assignments and Exams:

<u>Assignment</u>	<u>Due Date</u>
Quiz 1	9-5 (Online)
Quiz 2	9-12 (Online)
SPSS video assignment 1	9-15 submitted on BB
Reading Application 1 C & B Ch. 4	9-16 submitted on BB
SPSS video assignment 2	9-22 submitted on BB
Introductory Paragraph	9-23 submitted on BB (Word Document)
Annotated Bibliography	9-23 submitted on BB (Word Document)
Reading Application 2 C & B Ch. 5	9-29 submitted on BB
Quiz 3	10-3 (Online)
Group Presentation 1	10-4 and 10-6
Introduction and Method Section	10-7 submitted on BB (Word Document)
Exam 1	10-10 (Multiple Choice (MC) in class
Exam 1 Take-home portion	10-14 submitted on BB
Submission of Materials	10-18 submitted on BB (Word Document)
Reading Application 3 W & J Ch. 10	10-29 submitted on BB
Reading Application 4 W & J Ch. 14	11-4 submitted on BB
Analysis of Variance Assignment	11-10 submitted on BB
Quiz 4	11-15 (Online)
Exam 2 Take-home portion	11-20 submitted on BB
Exam 2	11-22 (MC Online)
Group Presentation II	12-6 and 12-8
Final Project	12-10 (Word Document)

SPSS Homework Assignments

SPSS Homework 1 – Using the SPSS videos on recoding and transforming variables (2 and 3 on page 16)

Using the “PSY 400 Homework” dataset

a) recode CONDITION into two different variables each with two levels: Gender of Model: female (1) and male (2) and Attractiveness of Model: Average (1) and Above Average (2).

b) recode Subjgender (Subject Gender) and Poliorient (Political Orientation) into two new variables with codes of 0 and 1 for each level.

c) For the items pertaining to self-esteem, media exposure, and teasing

1) reverse score any items that necessary

2) assess the internal reliability of the items that are assessing self-esteem, media exposure, and teasing (report the Cronbach alpha for each)

3) create a mean index for each of the three constructs (self-esteem, media exposure, and teasing)

SPSS Homework 2 – After watching the video on conducting correlational analyses in SPSS conduct the analyses using the three mean indices you have created in **SPSS Homework 1** and write-up the results in APA style. Include a separate page with a correlation matrix that is presented in APA style (NOT a cut and paste from you SPSS output). Chapter 7 of Wilson and Joye will be very helpful here, and see the example of the results section on page 151 of the chapter. Also, see the Table Layout and Basic Components of Tables in the APA publication manual.

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