

RESEARCH METHODS IN PSYCHOLOGY

PSY 300 - Winter 2019

Prof. Paul Curran, PhD

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Section 09, MWF 9:00-9:50am, ASH 2314

Section 15, MWF 10:00-10:50am, ASH 2314

Section 07, MWF 12:00-12:50pm, LOH 178

Computer classroom: TBD

Prerequisites: PSY 101 or HNR 234, STA 215 or STA 312, & WRT 150 (grade of C or better)

Office Hours: M 1:00-1:50, W 11:00-11:50

Office Location: Au Sable Hall 2115

Office Phone: 616 331 8514 (email is recommended)

I. Course Overview

Research methods are foundational to the study of psychology. The scientific method is what allows us to ask and answer questions about how the mind works, why humans behave the way they do, and how we can best structure society and the workplace to support human flourishing. Some students believe that studying research methods is boring and difficult. This needn't be the case, and this course is designed to be very hands-on, so that students can learn about research by doing research. Students in this course will learn how psychologists come to know the things they know. They will learn how to tell the difference between good and bad research designs. They will learn how to report on the results of research using APA style. Most important, this course will lay the groundwork for future study and research in psychology.

Through successful completion of this course, students should:

- Understand the fundamentals of scientific research
- Recognize the characteristics of published research (e.g., experiments vs. non-experiments)
- Describe the details of and summarize the essence of research articles
- Be able to critique their own and others' research for strengths, weaknesses, and opportunities for better research practices
- Have an understanding of basic statistical thinking and how to choose and use statistical tests as part of research
- Understand how to generate hypotheses as a part of scientific process
- Be able to design empirical studies to test hypotheses using an understanding of the tools psychological science, and consistent with the standards of psychological science
- Understand the fundamentals of APA style as applied to the reporting of research

- Be able to produce a full research paper in APA style, writing clearly in a scientific manner
- Become more comfortable presenting results of their work
- Become familiar with statistical software through hands-on use in data processing and analysis

II. About Your Instructor

- A. Contacting me.** The best way to contact me is via e-mail. I typically check e-mail throughout the day, but only during normal business hours (9 am - 5 pm). If you send me an email in the evening, you should not expect to get a response until the next business day.
- B. Office hours.** Office hours are listed above, but I am available to meet with you during other times, if you make an appointment with me by e-mail.
- C. My expertise.** I was trained as an industrial/organizational psychologist with a focus on quantitative methods. I earned a Ph.D. and a master's degree from Michigan State University and a bachelor of arts from Illinois Wesleyan University. I have conducted research in the areas of testing, psychological measurement, data quality and cleaning, motivation, feedback systems, perceptions of weather, and personality.

III. Required Reading

Required Text: *Research Methods in Psychology: Evaluating a World of Information* (2014; 2nd Edition) by Beth Morling, ISBN: 978-0-393-93693-3

Required Readings: Additional required readings will be posted on the course website.

Recommended:

1. *A Short Guide to Writing about Psychology, 3rd Edition* (2011) by Dana S. Dunn, ISBN: 978-0-205-75281-2
2. *Publication Manual of the American Psychological Association, 6th Edition*

IV. Course Objectives

This course is designed to help students develop their skills in the following areas:

- A. Psychological research, from start to finish.** In addition to those skills mentioned in the course overview (above), students will learn how to think like a psychological scientist. They will learn how to recognize a good research design from a poor one. They will learn how to select valid and reliable instruments for their

research. They will learn how to recognize confounds in research design. In short, they will learn everything they need to know to ask and answer questions using psychological research methods.

- B. Analytic writing.** Students will develop their capability to present an argument persuasively in written language. Research papers, like many other forms of writing, seek to pose a question and answer it. That is, they contain a central argument supported by evidence. Furthermore, they tell a story - taking the reader on a journey along a line of reasoning. In this course, students will begin to learn how to craft such arguments persuasively.

This course is designated SWS. Completion of WRT 150 with a grade of C or better (not C-) is a prerequisite. SWS credit will not be given to a student who completes this course before completing the prerequisite. SWS courses adhere to certain guidelines. Students turn in a total of at least 3000 words of writing. Part of that total may be essay exams, but a substantial amount of it is made up of essays, reports, or research papers. The instructor works with the students on revising drafts of papers, rather than simply grading the finished piece of writing. At least four hours of class time will be devoted to writing instruction. At least one third of the final grade in the course is based on the writing assignments. Students must complete the course with a grade of C or better in order to receive SWS credit.

- C. Quantitative reasoning.** Students will review a basic grounding in statistics as used in psychological research. This course focuses on measures of central tendency, variability, correlation, and simple null hypothesis significance testing (t -test, ANOVA). Students will apply this knowledge to the interpretation of statistical reporting in the psychological research literature.

- D. Graphical displays and interpretation.** Students will learn to interpret graphical displays of data, as well as produce graphical displays and figures for their lab reports.

- E. Oral presentation and civil discourse.** Oral communication is a critical skill for success in your life at GVSU and beyond. Students in this course will work to improve their formal presentation skills, as well as hone their ability to speak candidly and civilly when discussing psychological research. Upon completing this course, students should be able to verbally explain the design of a research study, emphasizing what makes the study important and interesting as well as elaborating on strengths and weaknesses in the study's design.

It is the instructor's goal that students become proficient in each of these key areas. Evaluations are designed to assess the extent to which proficiency in these areas has been attained.

V. Evaluation

- A. Research article critiques.** To gain familiarity with the psychological research literature, students will write critiques of psychological research articles. There will also be a corresponding in-class discussion of the articles.
- B. Lab reports.** To train in both conducting and reporting research, students will complete multiple lab reports. Students will report on study methods and results, and they will construct tables and figures.
- C. Research project and presentation.** In research teams, students will work together to propose a research question and investigate this question using data. They will write a full APA style report. We will work as a class to revise these papers through a series of drafts. In the last week of the course, students will present their research in their teams.
- D. Exams.** There will be three midterm exams and one cumulative final exam. The purpose of midterms is to give early feedback on your understanding of course material and make sure you are keeping up with the material. Exams will be a mix of multiple choice and short-answer format. The dates of the exams are firm - I will not change them on you at the last minute.
- E. Attendance.** I expect that you will attend all classes and participate actively. If you are absent from class, it is your responsibility to make up any missed material by consulting a classmate. Only then may you make an appointment to meet with me to ask follow up questions. Students *must* come to office hours prepared; specific questions are much more likely to be helpful than general ones.

There are no make-up lectures except in rare circumstances. There are no make-up exams, except in the following cases:

1. Excused absence for approved extracurricular/ religious holiday: Students should make arrangements with me at least two weeks before the exam to take the exam early.
2. Excused absence for illness: Students with documented illness or injury should (1) notify me immediately and provide documentation, and (2) make arrangements to take the exam at the soonest possible opportunity, but no later than one week following the scheduled exam. I reserve the right to give the exam in an alternative form.

While attendance does not have a specific listed grade component below, it is crucial that you attend class in order to get

anything from this experience. In keeping with this, excessive absences will carry consequences for your grade.

If you miss more than 5 classes throughout the semester, you will lose a letter grade from your final grade (10 percentage points). If you miss more than 7 classes, you will lose two letter grades (20 percentage points). If you miss 10 classes, you will automatically fail the class.

- F. Homework.** This component of the course will be a combination of small assignments given out over the course of the semester, both for completion during and/or after class. These are almost exclusively assignments to be completed on blackboard, so make sure to check blackboard frequently!
- G. In class assignments.** Occasionally throughout the semester we will spend class working on worksheets or other assignments that relate to readings and/or prior lectures. I will try to keep you updated to these as they appear in the class schedule.
- H. Other papers.** To help tie some of the concepts of class to topics that are most interesting to students, two papers will focus on general topics of research in psychology. These papers will be short and based on chapters from this free and open-source introductory psychology textbook: <http://noba.to/6mgaxw9z>
- I. Quizzes.** Short Blackboard quizzes will be used to incentivize students to do the readings and attend class. These quizzes will be taken on Blackboard and explained in more detail in class. There will generally be a quiz at the end of each week that did not contain an exam.
- J. Participation.** Students get the most out of class when they are engaged in that class. As a professor I will try to keep class as engaging as possible, but I can only do so much. Half of the responsibility for staying engaged is on you, the student.

I do not have points explicitly assigned for participation, but doing well on many of the elements of this course comes down to this simple idea: the more you pay attention, the better you'll do on every assignment.

This is more than being in a seat in the room where I'm lecturing. This involves staying awake and listening to the content that I'm providing to you. HINT: If you find a machine that contains a connection to the storehouse of all human knowledge (the internet) distracting, it might help to take notes on paper (or turn off your internet connection during class).

- K. Extra credit.** There is no fixed extra credit for the class, though opportunities may arise throughout the semester. These

opportunities will be discussed if and when they arise, but will not be a large component of the grade if they do. A standard extra credit assignment may be expected to be a 1% boost to your final grade.

- L. Late policy.** Unless otherwise noted above, the late policy for written work is as follows. Work may be submitted early, via Blackboard, for any assignment. The deadline for all assignments, unless otherwise specified, is 11:59pm on the day prior to class.

Work that is submitted past the deadline FOR ANY REASON receives a one full letter grade (10%) deduction per day late (e.g., a paper that earns an A is worth a B if 0-24 hours late; a paper that earns an A is worth a C if 24-48 hours late).

Furthermore, no work may be submitted after the official close of the semester without an approved course extension. (Such extensions are granted in only the most extreme, and documented, circumstances.)

M. Point breakdown by category.

ASSIGNMENT	POINTS	% OF TOTAL
Critiques (3x)	10 + 10 + 10	6%
Lab Report 1 (3x)	10 + 10 + 10	6%
Lab Report 2	25	5%
Lab Report 3	30	6%
FP Drafts (2x)	10 + 10	4%
Final Paper/Ratings	35	7%
Presentation	15	3%
Homework	15	3%
In-class assignments	20	4%
Other papers	20	4%
Blackboard Quizzes	40	8%
Midterm Exams (3x)	40 + 40 + 40	24%
Final Exam	100	20%

VI. Grading Scale

GRADE	PERCENT
A	94%-100%
A-	90%-93%
B+	87%-89%
B	84%-86%
B-	80%-83%
C+	77%-79%
C	74%-76%
C-	70%-73%
D	66%-69%
F	≤ 65%

THESE ARE FIRM CUT-OFFS. I round up to the nearest percent (e.g., 86.5% rounds up to 87% and equals a B+, but 86.4% rounds down to 86% and equals a B). The point categories listed above reflect this rounding. DO NOT attempt to negotiate grades with me. It is your responsibility to make sure your grade ends up where you want it to be. I have provided ample extra credit opportunities for students who wish to improve their grades. Students who want to improve their *learning* (and therefore their grades) should see me *early* in the class for assistance. I will *not* negotiate grades with you, but I will do everything in my power to help you put in the necessary work to be as successful as you desire.

VII. Disability Accommodation

Any student in this class who has special needs because of a learning, physical, or other disability, please contact me and Disability Support Services (DSS) at (616) 331-2490. Furthermore, if you have a disability and think you will need assistance evacuating this classroom and/or building in an emergency, please make me aware so that the university and I can develop a plan to assist you. It is the student's responsibility to request assistance from DSS.

VIII. Academic Honesty

Unless otherwise noted, all work for this course should be independently completed. Students should take special care to provide proper citation of sources when submitting written work. Adopting words, passages, or ideas without citation is plagiarism and will be treated as such per GVSU guidelines. Furthermore, students should not self-plagiarize, that is, reuse their own work from another course.

The following are statements provided by the university and can be found in the Student Code, Sections, 223.00 and 223.01.

"Students will do original work and will not take or receive the efforts of another person on any test or assignment, use unauthorized resources on quizzes or tests, plagiarize, or give/sell other students papers or assignments not authorized by the instructor. You are responsible for making yourself aware of and for understanding the policies and procedures that pertain to academic integrity. To that end, be sure to familiarize yourself with the GVSU Student Code (Section 223.00 and 223.01) related to academic integrity. Furthermore, be sure to reference sources at all times. If you are uncertain about such an issue prior to submission of an assignment, project, or test, please see me so we can eliminate that uncertainty.

No student shall knowingly plagiarize or copy the work of another person and submit it as his/her own. Offering the work of someone else as one's own is plagiarism. Any ideas or material taken from another source for either written or oral presentation must be fully acknowledged. The language or ideas taken from another may range from isolated formulas,

sentences, or paragraphs to entire articles copied from the internet, books, periodicals, speeches, or from the writing of other students. The offering of materials assembled or collected by others in the form of projects or collections without acknowledgement also is considered plagiarism. In short, any student who fails to give credit in written or oral work for the ideas or materials that have been taken from another is guilty of plagiarism."

IX. The Writing Center

The Fred Meijer Center for Writing, with locations at the Allendale and Pew/Downtown Grand Rapids campuses, is a peer service available to assist you with writing for any of your classes. Writing consultants, who are fellow GVSU students, are trained to help you with all stages of your writing process, from brainstorming to organizing to editing your papers. Simply bring an idea, prompt, or draft of your paper along with the assignment sheet to any of the Center's locations. Also, through your Gmail account, you have access to online consultations through Google Docs. The Center's services are free and you can drop in and work with a consultant or make an appointment, either through our website or by calling the Center (331-2922). Peer support is available for research and speech/presentation through the Knowledge Market, where the Writing Center partners with the Speech Lab and the Peer Research Center. Additional information about the Knowledge Market and Writing Center services and locations can be found on our website.

X. Writing in an SWS class

This class is an SWS class, which brings with it a number of requirements as part of that designation. You will write a lot in this class. The minimum number of words required for writing in an SWS class is 3,000. While very few if any of the assignments in this class will have set word count minimums, you can be assured you will end up writing well over 3,000 words.

This writing will take place through a number of assignments, largely your four lab reports and three article critiques. As well, you will write several drafts as part of your final paper. Throughout this writing you will be given feedback on how to improve your writing as well as a number of hours of in class instruction on how to write every aspect of an APA style paper, from constructing arguments in an introduction to reporting results in a results section.

Writing is a major goal of this class, and I will generally make you write more than you may be accustomed to writing. I will also make you write things you may not have written in the past (e.g. APA style research papers). This is a difficult class by design, but know that I am here to help you get through it - please use me as a resource to help you get as much out of this class as possible.

XI. Our Social Contract

In order for this course to function optimally, we both have parts to play, and when we each do our part, everyone benefits.

As professor, I promise to always do my very best to select interesting and thought-provoking course material. I will prepare course materials to the best of my abilities, and I will make decisions about the course according to the learning goals I have outlined here. I will act fairly - holding every student to the same high standard and providing equal opportunities for success.

As student, you promise to prepare diligently for class, to always contribute to the best of your abilities, to never cheat or act dishonestly, and to treat your classmates and me with the highest respect. You will do your best to attend class and be on time. You will not ask me to grant you special privileges that aren't available to the rest of your classmates, in order that I may adhere to my promise to be fair and just to all of you.

XII. Course Calendar

Wk.	Date	Topics	Reading/Homework/Due
1	1/7	Introduction Research Questions & Research Methods Three Claims, Four Validities	
	1/9		Read: Morling Ch. 1
	1/11		Read: Morling Ch. 3
2	1/14	Ethics in research	Read: Morling Ch. 4
	1/16	Searching the Psychological Literature APA Style	Read: Morling Ch. 2
	1/18		Due: Interest paper 1 Meet: CC
3	1/21	NO CLASS	MLK Day
	1/23	Ethics Reading & Critiquing Psychological Research 1	Read: ARTICLE TBD
	1/25		Due: Critique #1 (BB)
4	1/28	Writing Lab Methods, Results Tables, Figures	Due: Lab 1a (BB)
	1/30		-
	2/1	EXAM 1: APA Style & Ch. 1-4	EXAM 1
5	2/4	Experimental Designs	Read: Morling Ch. 10-12
	2/6	Lab 2	Meet: CC
	2/8		Meet: CC
6	2/11	Lab 2	Meet: CC Due: Lab 1b (BB)
	2/13	Form Groups & Intro to Research Project	Read: ARTICLE TBD

	2/15		Due: Critique #2 (BB)
7	2/18	Measurement & Scale Development	Read: Morling Ch. 5-6 Due: Lab 2
	2/20	Surveys & Sampling	Read: Morling Ch. 7
	2/22		Due: Group topics
8	2/25	Reading & Critiquing Psychological Research 2	Due: Interest paper 2 Read: Morling Ch. 8
	2/27	Correlational Designs	Read: Morling Ch. 9
	2/29		Due: Draft hypotheses
-	3/4	NO CLASSES	SPRING BREAK
	3/6		
	3/8		
9	3/11	Lab 3	Due: Draft of measures Meet: CC
	3/13		Meet: CC
	3/15		Meet: CC
10	3/18	EXAM 2: Ch. 5-12	EXAM 2
	3/20	Writing Lab	Due: Lab 3
	3/22	Introduction, Discussion	Due: Group hypotheses
11	3/25	Literature reviews	Read: ARTICLE TBD Due: Critique #3 (BB)
	3/27	Other Designs	Read: Morling Ch. 13 Due: Measures
	3/29		Due: Rough draft (Intro and Methods)
12	4/1	Data Analysis	Meet: CC
	4/3		Meet: CC
	4/5		Meet: CC
14	4/8	Writing Lab	Read: Morling Ch. 14
	4/10	The Real World & Replicability	Due: Lab 1c (BB)
	4/12	Peer Review	Due: 4 Paper Copies Full Rough Draft
15	4/15	Exam 3: Ch. 13-14, Labs, & Stats	EXAM 3
	4/17	Final Presentations	
	4/19		Due: Final Paper (BB)
16		CUMULATIVE FINAL EXAM	FINAL EXAM*

* For final exam times check here: <https://www.gvsu.edu/registrar/academiccalendar.htm>

Reminder: As with every course, this course is subject to the GVSU policies listed at:
<http://www.gvsu.edu/coursepolicies/>