

PSY220A: Research Design & Statistics

Winter 2023 Course Syllabus

Lecture	MWF 1:20-2:30pm	Hendrix Hall Conference Room
Lab	T 10:00-11:45pm	Classics Hall 202

COURSE INSTRUCTOR INFORMATION

Mary Saczawa

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Phone (call or text): (812) 307-5509

Office Hours: Tuesdays and Thursdays 12:00-2:00 or by appointment

COURSE DESCRIPTION

This course is a broad introduction to scientific research methods. The main purpose of this course is to make you a more critical thinker in part by showing you how research is done and also by engaging you in the process of research itself. By the end of this course, you should be able to conceptualize a research problem and develop a number of complementary designs, measurement, and data collection approaches to bring evidence to bear on the problem. Students will become acquainted with computer-based analysis techniques and standard laboratory research. Writing will be emphasized. A journal format paper and a poster describing an original research project will be required.

COURSE MATERIALS

Research Methods in Psychology: Evaluating a World of Information (2nd ed.) by Beth Morling

ISBN: 978-0-393-93693-3

Publication Manual of the American Psychological Association (6th ed.)

ISBN: 978-1-4338-0561-5

Jamovi, R, or SPSS (whichever you prefer)

R (<https://www.r-project.org/>) is an open-source stats software that allows you to do complex analyses but isn't super user-friendly. If you know how to code at all or if you're interested in becoming A Statistician™, R might be right for you. You can also use R Studio (<https://www.rstudio.com/>) to have some point-and-click functionality.

Jamovi (<https://www.jamovi.org/>) is another open-source stats software that uses R as its code base, but it has much less of a learning curve because it is all point-and-click. You don't have as much freedom as you do with R, but it's much easier to use as a beginner.

SPSS is the most beginner-friendly and the most powerful in terms of what analyses you will be able to do right out of the gate, but you do have to pay for it. It's REALLY expensive if you pay the sticker price, but students can get a 6-month subscription for only \$35 or 12-month for \$58 via OnTheHub (<https://onthehub.com/spss/>).

COURSE WEBPAGE

This course will rely heavily on material posted in Moodle (<https://moodle.hanover.edu>) including lecture slides, articles, and written assignments. There is also a Q&A board where you can ask questions about concepts, assignments, or the course in general. You are also expected to check your **Hanover email account** regularly. Regardless of whether or not you read the emails, you are responsible for their content.

COURSE COMPONENTS

ONLINE ASSESSMENTS (30%)

The purpose of this course is to prepare you to do actual research. Whether that is as a full-time researcher or just in your upper-level psychology courses, you need to understand the basic concepts and rules of research. To this effect, you will have four open-book, open-notes assessments to take during the semester that will allow you to measure how well you are learning and applying the concepts in this course. You can retake these assessments as many times as you want up until the due date. Questions will be pulled from a test bank, so you will likely get new questions each time. But if you want to take each one 10 times until you get a perfect score, you are welcome to do so!

ARTICLE DAYS (20%)

Learning facts about research is boring. Talking about actual research studies that use various methods is much more interesting. For each Article Day (see schedule below), you will be given two or three articles to read, which we will discuss in class. By midnight the night before, you should post a couple comments or questions you had related to the assigned material. Each student will lead the discussion once during the semester (along with one or two classmates). Discussion leaders will provide a brief summary of the articles and lead the in-class discussion based on the questions and comments your classmates posted online.

Grading for Article Days will be based on your engagement with the material. This may mean making several comments on the articles in Perusall or contributing extensively to the in-class discussion, but ideally you will do both. If you miss class on an article day, you should complete the alternative assignment online.

RESEARCH PROJECT (50%)

Again, learning facts about research is boring. Far more exciting and useful is applying those facts by testing your very own research questions. As part of this class, you will develop, propose, conduct, and report on a research study of your own design. You will have assignments throughout the semester designed to help you with this goal, culminating in a 5-8-page (double-spaced) research paper due at the end of the semester as well as a poster presentation in the Science Center. Each of the assignments are designed to build up to the final paper, so if you complete all of them and make edits along the way, you will have already written the final paper.

In order to make this class as realistic as possible, we're also going to include a peer-review component to this project (I know, I know). When researchers publish their work, they have to go through the peer-review process. You submit your paper, and two or three other experts in that field read through the paper to make sure the study was well-done and the paper was well-written. There are typically several rounds of revisions that go on before the paper is accepted for publication. Just like in the "real world", you will be assigned to read your classmates' submissions throughout the semester and to provide them with feedback they can use to improve that part of their paper. Peer-reviews should be completed within one week of the original submission deadline. You are encouraged to make revisions to your own paper and to respond to your reviewers' comments. And just like with the assessments, you can resubmit it to be reviewed and regraded again as many times as you like (though I will be the only reviewer after the first round).

Grading for all of the research project assignments will be on scale similar to that used in peer-reviewing: No or incomplete submission (F), Major Revisions (C), Minor Revisions (B), or Accepted (A). Peer review will be graded on a complete/incomplete basis.

GRADING SCALE

A = 100 – 94%; A- = 90 – 93.9%; B+ = 87 – 89.9%; B = 83 – 86.9%; B- = 80 – 82.9%; C+ = 77 – 79.9%; C = 73– 76.9%; C- = 70 – 72.9%; D+ = 67 – 69.9%; D = 63 – 66.9%; D- = 60 – 62.9%; F = <60.0%

COURSE POLICIES

ATTENDANCE

Attendance will not be taken in this class, but it is strongly encouraged. Research is a highly collaborative project, and your presence (both physical and mental) is vital for that. If you miss class, you should get a copy of the notes from a classmate, but I am happy to meet with you to review any missed material. Attendance in lab and on article days is particularly important.

LATE ASSIGNMENTS

In order for the peer-review process to work, it's exceptionally important for you to get your assignments and peer-review feedback turned in by the deadline. If you know that you are not going to get your submission in within 12 hours of the deadline, please email me as soon as possible.

STUDENTS IN DISTRESS

Your success in this course and throughout your college career depends heavily on your personal health and wellbeing. Stress is a common part of the college experience, and it often can be compounded by unexpected life changes outside the classroom. Your other professors and I strongly encourage you to take care of yourself throughout the term before the demands of midterms and finals reach their peak. Before circumstances and conditions become overwhelming, come speak with me about any difficulty you may be having that may affect your academic performance. Please know as well that there are several support services on campus available to assist you, as needed. You can make appointments with Health Services by calling x-6102. Appointments for Counseling Services can be made online at any time through [MyHanover](#).

HANOVER COLLEGE POLICIES

HONOR CODE

As stated in the Hanover College Principles, students, faculty, staff, and trustees of Hanover College seek to promote academic, personal, and moral growth within a safe, challenging, and responsive community. This includes a commitment to academic integrity. Violations of academic integrity have a broad impact on the College and will result in College review and action.

Academic dishonesty includes any action with the intent to deceive in order to obtain an unfair advantage, as well as any act of aiding and abetting academic dishonesty. The Hanover College statement on academic dishonesty may be found in the Catalog and in the Student Handbook. Any given instance of academic dishonesty is dealt with by the instructor of the course in which it occurs. All instances of academic dishonesty are reported to the chair of the Student Academic Assistance Committee, and repeated instances of academic dishonesty will subject a student to additional penalties up to and including dismissal from the College as outlined in the College Catalog.

NONDISCRIMINATION

Hanover College is committed to providing equal access to its educational programs, activities, and facilities to all otherwise qualified students without discrimination on the basis of race, national origin, color, creed, religion, sex, age, disability, veteran status, sexual orientation, gender identity, or any other category protected by applicable state or federal law. An Equal Opportunity employer, the College also affirms its commitment to nondiscrimination in its employment policies and practices. In compliance with Title IX (20 U.S.C Sec. 1681 et seq.) Hanover College prohibits sex discrimination, including sexual harassment. For student related disability discrimination concerns, contact the Gladish Center for Teaching and Learning at 812-866-6840. For other discrimination complaints, including any arising under Title IX, contact the Title IX Coordinator at 812-866-6740 or the Deputy Title IX Coordinator at 812-866-7097.

HEALTH AND SAFETY REQUIREMENTS

All students, faculty and staff must adhere to current safety protocols established by the College. These are subject to change depending on present conditions and guidance from local and national health officials. In classrooms and offices, these requirements may include and are not limited to face coverings and social distancing. Frequent hand washing and general good hygiene should be observed at all times.

If you develop COVID-19 symptoms and/or if you have been exposed to illness by contact with someone who has tested positive or been presumed positive, do not come to class. Contact Health Services (812-866-7082) or PantherHealth via phone or email. As in any situation that keeps you from attending class, contact your instructor as soon as possible about your absence.

For complete and updated information about all health and safety requirements, consult the College's COVID-19 Information website.

DISABILITIES

Hanover College offers accessibility services to students with documented physical, visual, hearing, learning, or psychiatric disabilities. Any Hanover student is eligible for special services or accommodations if: 1) The student self-identifies that he or she has a disability and needs accommodation; 2) The student provides appropriate and verifiable documentation of the disability; and 3) The student provides notification in a timely fashion. For accessibility services, Email Accessibility Services or call 812-866-6844. The Accessibility Services (AS) office is in the Gladish Center for Teaching and Learning on the first floor of Duggan Library.

9-Jan	Welcome & Course Overview		Brainstorm
11-Jan	Psychology is a SCIENCE	Ch. 1	research questions
13-Jan	Why do I have to take this stupid class?	Ch. 2	
16-Jan	MLK Day—No Classes		Lit Search Activity
18-Jan	ChatGPT is not a peer-reviewed source	Ch. 2	
20-Jan	Less “Eureka!”, more “Huh. That’s weird.”	Ch. 3	
Sunday, January 22: Research questions due			
23-Jan	How do I answer the question?	Ch. 3	Annotated
25-Jan	“Ethics”	Ch. 4	bibliography
27-Jan	Ethics 2: Electric shock boogaloo	Ch. 4	
Friday, January 27: Complete Assessment 1			
Sunday, January 29: CITI training due			
30-Jan	Rotten Tomatoes has a horrible scoring system	Ch. 5	Method section,
1-Feb	The SAT only predicts the first year of college	Ch. 5	pilot your study
3-Feb	Psychology: The science of college students	Ch. 7	
Sunday, February 5: Method section due			
6-Feb	On a scale of 1-10, how bad great is this class?	Ch. 6	IRB, Consent forms
8-Feb	<i>Survey Articles</i>	Articles	
10-Feb	Socially-acceptable voyeurism	Ch. 6	
13-Feb	<i>Observational Articles</i>	Articles	Writing the intro
15-Feb	Correlation ≠ causation	Ch. 8 & 9	
17-Feb	<i>Correlational Articles</i>	Articles	
Sunday, February 19: Introduction due			
20-Feb	It’s been Agatha all along	Ch. 9	Data Collection
22-Feb	<i>Mediation & Moderation Articles</i>	Articles	
24-Feb	Us vs. Them	Ch. 10 & 11	
Friday, February 24: Complete Assessment 2			
February 27-March 3: Winter Break			
6-Mar	<i>Between-Subjects Articles</i>	Articles	Data Collection
8-Mar	Us vs. Us	Ch. 10 & 11	
10-Mar	<i>Within-Subjects Articles</i>	Articles	
13-Mar	New Year, New Me!	Ch. 9 & 12	Making datasets
15-Mar	<i>Developmental Articles</i>	Articles	
17-Mar	No Class		
Sunday, March 19: Preliminary dataset due			
20-Mar	When the plural of anecdote <i>is</i> data	Ch. 13	Stats consults
22-Mar	<i>Small-n Articles</i>	Articles	
24-Mar	I don’t even remember *taking* statistics	Descriptive Stats	
Friday, March 24: Complete Assessment 3			
27-Mar	Everyone is mean	Descriptive Stats	Stats consults
29-Mar	<i>r</i> you ready to rumble?!	Descriptive Stats	
31-Mar	Statistically-significant others	Inferential Stats	
Sunday, April 2: Results section due			
3-Apr	Do Hanover students represent everyone?	Ch. 14	Making a poster
5-Apr	More than just “my sample was small”	Ch. 14	
7-Apr	What’s so great about APA format?	Appendix	
Sunday, April 9: Discussion due			
10-Apr	FTW & FML		
12-Apr	Practice poster session		
14-Apr	Poster Session		
Sunday, April 16: Final paper due			
Friday, April 21: Complete Assessment 4			