

PSY220A: Research Design & Statistics

Fall 2022 Course Syllabus

Lecture	TR 8:00-9:45	Science Center 145
Lab	R 2:15-4:00pm	Science Center 148

COURSE INSTRUCTOR INFORMATION

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Office Hours: Wednesdays 10:00am – 5:00pm 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 written assignments, pre-lecture videos, quizzes, and lecture slides. 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.

(UN)GRADING

This semester, I will be using a relatively new (but actually very old) method that is referred to as "ungrading". In short, I will not be providing grades for any of your written work all semester. Instead, your classmates and I will be giving you lots of individualized feedback on your performance. At the midterm and at the end of the semester, I will ask you to assign yourself a grade based on your performance. I reserve the right to overrule your grade, but I will only do so in an extreme case.

Final grade examples:

Exceeds expectations: You were actively engaged with the material. You were prepared for class every day, contributed to the discussions and activities, and did well on the online assessments. You conducted a well-designed research study and presented the results effectively both verbally and in writing. You submitted all of the assignments on time and provided valuable feedback on your peers' submissions. Your work showed significant improvement during the course of the semester. (letter equivalent: A)

Meets expectations: You were actively engaged with the material. You were prepared for class most days and contributed, but maybe you half-assed the online assessments. You conducted a thorough research study and presented the results both verbally and in writing, but maybe your presentation or paper were not your best work. You submitted all of your assignments and provided feedback on your peers' submissions. Your work improved over the course of the semester, but you still have some room to grow. (letter equivalent: B)

Bare minimum: You were present in class most days, but you were often unprepared or unengaged. You completed a research study, but your presentation and paper were lacking. You failed to submit all of the assignments or did not provide feedback on your peers' submissions. You learned the basic concepts of the course, but you did not show evidence of applying the concepts or of growing your research skill set. (letter equivalent: C)

Fails to meet expectations: You were regularly absent from class, either physically or mentally, and you either did not complete the online assessments or did poorly on them. If you did complete a research study, you did not present your results. You did not complete assignments and did not provide feedback to your peers. (letter equivalent: F)

COURSE COMPONENTS

ONLINE ASSESSMENTS

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 should complete the first two assessments before midnight on October 7 (midterm grades are due Oct 10) and the last two before 5pm on December 9 (the last day of finals), though each assessment will have a recommended "due date". You can retake these assessments as many times as you would like until you get the grade you want. 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

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.

RESEARCH PROJECT

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. 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 again as many times as you like (though I will be the only reviewer after the second round).

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.

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.

Date	Lecture Topics	Reading	Lab
30-Aug	Why do I have to take this stupid class?	Ch. 1	Brainstorm
1-Sep	"I wonder why that happens"	Ch. 2	research questions
6-Sep	How do I answer this question?	Ch. 3	Searching the
8-Sep	Psychology: The science of college students	Ch. 7	Literature
Sunday, September 11: Research questions due			
13-Sep	"Ethics"	Ch. 4	Annotated
15-Sep	Ethics 2: Electric shock boogaloo	Ch. 4	bibliography
Friday, September 16: Complete Assessment 1			
Sunday, September 18: CITI training due			
20-Sep	But how do I <i>*actually*</i> answer this question?	Ch. 5	Method section,
22-Sep	On a scale of 1-10, how bad great is this class?	pp. 153-165, articles	pilot your study
Sunday, September 25: Method section due			
27-Sep	Socially-acceptable voyeurism	pp. 166-174, articles	IRB, Consent forms
29-Sep	Correlation \neq causation	Ch. 8, pp. 248-262	
4-Oct	Fall Break—No Class		Writing the intro
6-Oct	It's been Agatha all along	pp. 263-269, articles	
Friday, October 7: Complete Assessment 2			
11-Oct	Us vs. Them	pp. 277-295, articles	No lab
13-Oct	Us vs. Us	pp. 295-311, 243-248, articles	
Sunday, October 16: Introduction due			
18-Oct	Everything but the kitchen sink	Ch. 12, articles	Making datasets
20-Oct	Who chooses 8am classes?!	pp. 401-418, articles	
Sunday, October 23: Preliminary dataset due			
25-Oct	When the plural of anecdote <i>is</i> data	pp. 418-431, articles	Stats consults
27-Oct	I don't even remember <i>*taking*</i> statistics		
Friday, October 28: Complete Assessment 3			
1-Nov	Everyone is mean	pp. 467-480	Stats consults
3-Nov	<i>r</i> you ready to rumble?!	pp. 480-488	
8-Nov	Statistically-significant others	pp. 491-521	Making a poster
10-Nov	Words are confusing. Pictures are pretty.		
Sunday, November 13: Results section due			
15-Nov	Do Hanover students represent everyone?	Ch. 14	Practice poster
17-Nov	More than just "my sample was small"	Ch. 11	session
22-Nov	Catch-up day		No lab
24-Nov	Thanksgiving Break—No Class		
Sunday, November 27: Discussion due			
29-Nov	What's so great about APA format?		Poster session
1-Dec	Where to go from here?		
Sunday, December 4: Final paper due			
Friday, December 9: Complete Assessment 4			