PSY 293: RESEARCH DESIGN AND ANALYSIS I

SPRING 2016 JANUARY 25-MAY 6

LECTURE: TR 4-5:20pm **LABS:** (CA) TR 2:30-3:25pm

(CB) TR 8:30am-9:25am

LOCATION: Psychology 131 LOCATION: (CA) Psychology 302

(CB) Psychology 126

Instructor	OFFICE HOURS	OFFICE	EMAIL
Dr. Molly Metz	M 1-3PM or by appointment	Psychology 320	metzma2@miamioh.edu
TA	OFFICE HOURS	OFFICE	EMAIL

PREREQUISITES: STA 261 COURSE WEBSITE: Canvas, at https://miamioh.instructure.com

COURSE MATERIALS:

(**M**) Morling, B. (2015). *Research Methods in Psychology: Evaluating a World of Information* (2nd Ed.). New York: Norton. ISBN: 978-0-393-93693-3 (**required**)

(S) Salkind, N. J. (2013). *Statistics for People Who (Think They) Hate Statistics* (5th Ed.). Thousand Oaks, CA: Sage. ISBN: 978-1452277714 (**required**)

(APA) American Psychological Association (2010). *Publication Manual of the American Psychological Association (6th ed)*. Washington, DC: APA. (**recommended, but not required**)

Software: SPSS and Qualtrics.com accounts (see bottom of syllabus and lab instructor for details).

In addition, many course materials will be posted on the course website, including the syllabus, readings/handouts, lab materials, and links to external sources. Therefore, internet access is crucial to your performance in the class. Please make sure to check your email frequently for important announcements and reminders.

Finally, basic calculators (with square and square-root functions) are permitted when completing any and all assignments for this course, including exams. However, graphing calculators and calculators on cell phones, tablets, or laptops are not permitted.

LAB CA – If possible, bring personal laptops with you to lab every class. There are NO computers in this room, and a few are available from the main office, but as many assignments are to be completed on an individual basis, lab time will be maximized if everyone has access to an individual computer.

IMPORTANT: STA 261, PSY 293, and PSY 294 are required for psychology majors and must be completed before enrolling in 300 and 400 level courses. These courses partially fulfill CAS writing and Quantitative Literacy requirements

COURSE OVERVIEW & GOALS

By the end of this course, you will have a better understanding of the process of psychology as a science, from developing your own research questions and identifying the best methods to test them, through the communication of results. During this course you will gain insight into the scientific process as a whole – its advantages, difficulties, and limitations. As such, you will be able to better evaluate the knowledge science can provide, and integrate that knowledge into a broader worldview.

Specifically, the primary goal for this course is to prepare you as a consumer and producer of scientific knowledge by developing your ability to:

- A. Locate, evaluate, and summarize existing research literature.
- B. Identify remaining, important questions in the research literature on a given topic, and design studies that effectively address these questions.
- C. Compute (by hand and with statistical software) relevant descriptive and inferential statistics.
- D. Identify the assumptions and limitations inherent in the application of relevant descriptive and inferential statistics, and when to apply each.
- E. Identify specific research designs, their strengths and weaknesses, and when to apply each.
- F. Identify the ethical issues associated with the study of human behavior, in general, and with any specific research study, in particular.
- G. Identify key design principles in published research and your own, describe the rationale for their selection, and identify their potential limitations and biases.
- H. Communicate the results of empirical research to professional audiences in scientific genres.

COURSE STRUCTURE

A. CLASS MEETINGS

During our class meetings, we will introduce and discuss the important concepts of the course. We will also engage in activities and explore real-world applications related to these concepts. During this time, you are both encouraged and expected to ask questions to help clarify and expand on the material. Lecture will be just one small piece of our time together, so come to class prepared to engage with each other and the material. I *will* post lecture slides to the course Canvas site after each class period, but these slides will *not* include all of the information we go over, and therefore are not a substitute for attending class.

B. LAB SECTIONS

Lab sections provide a more intimate setting to gain additional hands on experience with the course material, as well as to receive more small-group instruction and additional assistance mastering course concepts. You are expected to attend all lab sections and to build relationships with your classmates and with your TA. The class meetings and lab are coordinated and complementary. Assignments and topical coverage span both, although each may provide a qualitatively different experience as well as different resources.

C. READING

The textbooks are a supplement to the class meetings; some assigned chapters will review or expand on what we discuss in class, while others will expose you to important topics that we will *not* be discussing together. The statistics book will be especially helpful for review and practice

outside of class. To get the most out of class, please complete all readings *before coming to class*. You will be responsible for assigned chapters for regular reading quizzes, as well as for all exams.

ASSESSMENT

Because few students excel at (and feel comfortable with) all forms of evaluation, you will have the opportunity to demonstrate your grasp of the course material in a number of ways. Your final grade will be calculated based on your performance of several activities. Each component is described below.

A. RESEARCH-40% OF COURSE TOTAL

- a. WRITING You will be responsible for writing one complete APA-style research manuscript, using questions, methods, and data developed in lab groups. To help you develop the skills necessary to complete this paper, you will complete many short exercises, drafts, and revisions over the term, and receive feedback along the way. The projects will be collaborative, but it is essential that the papers are *written individually*. More detail about the structure and style of this paper will be reviewed in lecture/lab. The short exercises and drafts will comprise 15% of your course total; the final manuscript will comprise 15% of your course total.
- **b. GROUP PRESENTATION** During the last week of class, you and your group will present your research to your classmates. This 10-minute presentation will be delivered to the entire class, and will be followed by 5 minutes of questions. Each group member is responsible for speaking during the presentation, and grades will be composed of both group and individual components. More detail about the structure and style of this presentation will be reviewed in lecture/lab. **The presentation will comprise 10% of your course total.**

B. EXAMS – 30% OF COURSE TOTAL

There will be 3 non-cumulative midterm exams and 1 cumulative final exam. The exams will be multiple choice, short answer, and brief essay, and will cover information from both lecture and lab. These exams will be closed-book, closed-note, and completed individually.

On exam days, lateness will not be tolerated - you may not take the exam (and will earn a 0) if you arrive after the first exam has been turned in.

Your lowest midterm exam score will be dropped. If you miss one of the 3 exams for whatever reason, that is the score that will be dropped. There will be no additional makeup exam opportunities. Each midterm will count for 8% of your course total, and the final exam will count for 14% of your course total.

C. ACTIVE ENGAGEMENT – 30% OF COURSE TOTAL

Being present in class is a great first step toward success, but learning doesn't happen by passively absorbing rogue information from the atmosphere. In order to get the most out of this (or any) class, *active engagement* is key. This may include: participation in class discussion or activities, taking notes, or even just actually thinking about questions that are posed, even if you

don't speak up in class. This definitely does not include: reading the newspaper, doing other work, texting or engaging in side conversations, listening to your headphones, sleeping, etc.

Work completed in lab will account for 15% of your course total, reading quizzes will account for 10% of your total, with the remaining 5% of the grade comprised of in-class activities and homework. If you miss a class during which we complete a graded activity, you may not make it up.

FINAL GRADE CALCULATION

Final grades will be based on absolute points, rather than a curve – that is, it is completely possible for everyone to earn an A in this class (if they earn the points). **There will be no extra credit opportunities.**

All final grades will be rounded to the nearest full percent. Your grade will then be determined by the scale below. Per university policy, final grades are non-negotiable. Grade changes will be made *only* to correct for grading errors.

Research

Short Writing – 15%

Paper – 15%

Presentation – 10%

Exams

Midterm 1 - 8%

Midterm 2 - 8%

Final - 14%

Active Engagement

Lab Work - 15%

Reading Quizzes – 10%

Everything else – 5%

PERCENTAGE	GRADE
93 and above	A
90 – 92	A-
87 – 89	B +
83 – 86	В
80 – 82	В-
77 – 79	C +
73 – 76	C
70 – 72	C-
67 – 69	D+
60 – 66	D
59 and below	F

To compute your grade:

Final score = [(.15*short writing) + (.15*paper) + (.10*presentation)] + [(.08*midterm1) + (.08*midterm2) + (.14*final)] + [(.15*lab work) + (.10*reading quizzes) + (.5*everything else)]

Note: If computing your grade yourself, use percentages for assignment scores (e.g., 81), not decimals (e.g., .81) or raw points (e.g., 40.5 out of 50)

COURSE POLICIES

LATE WORK AND MAKE-UP POLICY

If participation in university-sponsored events (e.g., athletics) or observance of a religious holiday or other sanctioned event prevents your attendance, you must contact me prior to the relevant date, and you must have any appropriate documentation. If an assignment is due on that date, arrangements must be made to complete the assignment ahead of time.

Unless otherwise stated, all assignments are due **at the beginning of class** (unless otherwise noted for electronic assignments). Late assignments will only be accepted in the case of extraordinary circumstances and appropriate documentation, and may involve point deductions. Please alert me to these extraordinary circumstances by email within 12 hours of the missed class, and we will set up a time to discuss these on a case-by-case basis.

Without appropriate circumstances and documentation, early exams or exam make-ups will not be granted.

However, I recognize that sometimes life happens; therefore, I have built some flexibility into the course to allow for illness, other obligations, and bad days. First, the lowest of your 3 midterm exam grades will be dropped at the end of the semester, no questions asked (so if you miss a class, that zero will be dropped). In addition, I will build a 5% cushion into your engagement grade; that is, your engagement grade will be computed by dividing the total number of points you earn by 95% of the total available points.

GRADE DISPUTE POLICY

24/7 Policy: You must wait for at least 24 hours following the return of an assignment before bringing a grade concern to me; use this time to reflect upon your performance and grade. Additionally, grade concerns must be brought to my attention within 7 days of the return of the assignment. Please write a short paragraph detailing your grade concern, including a copy or scan of the original assignment, if relevant, and email it to me. Only reasonable and well-justified concerns will be considered, and all decisions are final.

TECHNOLOGY POLICIES

CELL-PHONE POLICY

Out of respect for me and your classmates, your phones should be off (or on silent) and put away at all times. In particular, please refrain from texting during class—the view from the front of the room is excellent, and no matter how sneaky you think you are being, I assure you, you are not.

That being said: You are adults and know your priorities better than I possibly could. As such, if you have a call or text that is *important enough to miss class for*, by all means, please step outside to take care of it. HOWEVER – if the call or text is *not* important enough to miss class for, then please be respectful and save it for after class.

LAPTOP POLICY

Research indicates that taking notes by hand results in significantly better retention of conceptual information than taking notes on a laptop (see Mueller & Oppenheimer, 2014), even when students are engaged in the material (i.e., are not also checking their email or Facebook feed). Further, laptop use can be distracting in various ways to the entire class. Because my goal is to maximize the likelihood of a favorable learning environment, I **strongly** recommend that you not use laptops in class (*exception: labs for section CA*). However, laptops will be permitted on a probationary basis; should the use of laptops be taken advantage of or prove distracting to other students, I will revisit this policy then.

STUDENT RESOURCES

Center for Psychological Inquiry (CPI): The CPI is a resource for psychology students to facilitate their learning and engagement with psychology. The CPI serves many functions, from a quiet study space, access to SPSS software, access to textbooks and the APA manual, graduate school preparation and advice, tutoring, writing feedback, and homework help. Visit the Center on the first floor of Psychology for operating hours and more information, or visit the website at http://miamioh.edu/cas/academics/departments/psychological-inquiry/index.html.

Howe Writing Center (HWC): "Miami's goal is to provide the best undergraduate experience in the nation by promoting a vibrant learning and discovery environment that produces extraordinary graduates. A central part of that environment and of student success is learning to write and to write well." – President David Hodge, from the HWC website. The Howe Writing Center, located in King Library, serves all members of the Miami community by providing support at all stages of the writing process. To make an appointment, contact HWC at (513) 529-6100 or visit their website at http://miamioh.edu/howe/.

Student Disability Services (SDS): Miami University is committed to ensuring equal access to students with disabilities. Miami's Office of Student Disability Services (SDS) assists students with determining eligibility for services and accommodation planning. Students who are entitled to disability-related academic adjustments, auxiliary aids, etc., must register with SDS to receive accommodations in university courses. Please understand that formal communication from SDS must be presented prior to the coordination of accommodations for this course. For more information, students may contact SDS at (513) 529-1541 or visit their website at http://miamioh.edu/student-life/sds/.

Student Counseling Services: If you are experiencing any difficulties meeting class requirements, or any difficulties in your personal life, please contact Student Counseling Service. Miami's Student Counseling Service provides primary, secondary, and tertiary level interventions in an effort to achieve and/or maintain a mentally healthy status for each student and to create a learning environment that facilitates and supports that status. Services include both individual and group counseling, workshops on special topics (like stress management, romantic relationships), substance use treatment, ADHD screening, and more. For more information, please call (513) 529-4634 or visit their website at http://miamioh.edu/student-life/student-counseling-service/index.html.

Campus Learning Centers: If you do not feel comfortable visiting a counselor but still would like to talk to someone about how best to succeed in your classes, consider visiting the Rinella Learning Center (Main Campus) or the Office of Learning Assistance (Hamilton Campus). These offices offer a wide range of academic support, from one-time consultations and workshops to sustained individual or group tutoring or supplemental instruction. For more information (Main Campus), call (513) 529-8741 or visit their website at http://miamioh.edu/student-life/rinella-learning-center/index.html. For more information (Hamilton Campus), call (513) 785-3139 or visit their website at http://www.regionals.miamioh.edu/ola/

SPSS: http://www.lib.miamioh.edu/computing You may need access to SPSS outside of lab time to analyze data for worksheets or projects at some point throughout the semester. SPSS is on the computers in the CPI (Psy 130), in the CIM lab in King Library, and in the Best Library. Follow the above link for more information. Further, the university offers a year-long free download of SPSS to students: https://software.miamioh.edu/store/

Qualtrics: http://community.miamioh.edu/qualtrics/ Research projects will be programmed and distributed on Qualtrics. Please set up an account during the first week of class through the above link, if you do not already have an account. Direct all questions about Qualtrics to your lab instructor.

SOME FINAL WORDS

A WORD ABOUT ACADEMIC INTEGRITY

Academic Integrity is at the heart of the mission and values of Miami University and is an expectation of all students. Maintaining academic integrity is a reflection of your character and a means to ensuring that you are achieving the outcomes of this course and that your grades accurately reflect your learning and understanding of the course material. In addition, your performance in the next course in this series depends heavily on your ability to truly learn this material and take it with you.

Academic misconduct will not be tolerated in any form. Academic misconduct includes, but is not limited to:

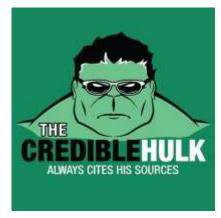
- Submitting the work of another (whether in part or in whole) as your own. This includes putting your name on group work that you did not contribute to.
- Possessing prohibited materials during an in-class quiz or examination.
- Providing or receiving assistance from another student unless explicitly permitted to do so by the instructor.

Plagiarism occurs when someone misrepresents the work of another as his or her own. Plagiarism may consist of using the ideas, sentences, paragraphs, or the whole text of another without appropriate acknowledgement, but it also includes employing or allowing another person to write or alter work that a student then submits as his or her own. Although some assignments or projects in this class will be completed in groups, all writing must be the work of the student whose name is on the assignment, and that student alone. If you are at all uncertain about what constitutes plagiarism, please see your TA or the instructor – do not risk your grade or integrity! I also encourage you to meet with me if you suspect that another student in the course has engaged in academic misconduct.

Any suspected instances of academic dishonesty will be handled under Miami University's Academic Integrity policy found in Part 1, Chapter 5 of the Student Handbook. Please review the policy at the link below, and note that lack of knowledge or understanding of the appropriate academic conduct is not an excuse for committing academic dishonesty.

http://blogs.miamioh.edu/miamipolicies/?p=1994

Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Terms and Conditions of Use posted on the Turnitin.com site.

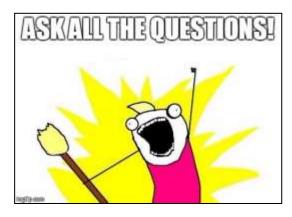


ADVICE FOR COURSE SUCCESS

It is important for all students to realize that there will be a distribution of grades in this class that reflects your mastery of some very technical and often-challenging concepts. Complete mastery of all concepts will earn an "A," good but imperfect knowledge earns a "B," average or adequate knowledge will earn a "C," and poorer knowledge will receive grades of "D" or "F." By these criteria, the majority of grades should (and likely will) be "B/C" grades. Remember that your grade in this course is not a reflection of your general ability or your character.

This is a difficult, but not impossible course; it is my hope that you will find this class challenging but rewarding in terms of the knowledge you will walk away with. If you anticipate having difficulty (or when you are), I strongly urge you to do the following:

- Attend every lecture, and take good notes. While attendance will not be graded, per se, the ability to truly learn and use the material in this class is strongly related to attendance.
- Review lecture notes on the day of the lecture (before you go to bed). If you need clarification on anything, ask in the next lecture, lab, or office hours. Don't wait until right before the exams!
- Manage your time wisely. This is an intense course with many moving pieces. Familiarize yourself with the syllabus, put important dates in your calendars now, and space out your work there is just too much to do it at the last minute
- Use the resources available to you that includes your course materials (especially this syllabus), the lab instructor, me, and the many amazing services offered on campus.
- Discuss the material with another student. Form a study group. Go to office hours. Ask the TA questions. Ask me questions. ASK QUESTIONS.



ADVICE FROM FORMER 293 STUDENTS

On studying...

Even if the information is coming easily to you, make sure you still pay attention and study hard because just because you understand it doesn't mean you'll remember it on the exam. Also, make sure you read the book.

One topic of advice I would give to future 293 students is to read the book- it is not like a normal textbook and that was lovely. The book is an easy read and really supported the notes we took in class. It also provided examples that I was able to remember and apply going into exams.

On the paper...

Write each draft as if it were the final copy. If you give good effort initially, and take the comments and revisions seriously, the paper will basically be done by the time you turn it in (and make finals week much easier!)

Also definitely don't BS the rough drafts for your paper because they are what you end up having to use for your final and it just makes you have to do twice the work.

Also pick a subject for your semester long study that really interests you. You will find it much more motivating to make it as good as possible, and will find it that much more rewarding when it's all done.

On class periods...

Handwrite your notes. This has been shown in studies to help with retention of information, but it also allows you to add notes in the margins. It also helps you with making sure you're taking notes based on the lecture instead of just the powerpoint because you can access the powerpoint online at any time. Finally, it allows you to make all kinds of drawings, which are super helpful in visualizing information and help with overall understanding, especially in this course.

If I were to offer advice to future PSY 293 students, I would say to listen to Dr. Metz and don't use laptops. Pay attention in class. I did this and I could tell that just by really paying attention it helped a lot with cutting back my study time. I always pay attention in classes, but the pace at which Dr. Metz went made me have to really pay attention and go back that night and add to my notes and things like that. I think that this really helped me understand things so when it came time to study for exams I already felt prepared and I wasn't staying up all night trying to relearn everything.

Dedicate your time to not only the research project work but also to the classroom assignments and worksheets. Personally, these practice assignments were what helped everything really click with me so that I could succeed in the course.

On asking questions...

Advice that I have for students in the future is to know that Dr. Metz and Justin are both open to questions at all times. If you have questions, about course material they are willing to spend the extra time with you to work on material.

Ask questions whenever you have them. Sometimes material is covered quickly, but Dr. Metz is always willing to take time to go over parts that students have questions over.

On value...

I would advise future PSY 293 students to take this class seriously because they can get a lot out of this course. I found this class to be very intriguing and became very invested in my research project. Through this course, I gained a great deal of respect and love for psychology research and if future students put in the time and effort, they will surely find a great appreciation for psychology research as well.

For future PSY293 students I would suggest that they find a way to relate course content to everyday life or their intended career path. This course offers many great skills that will be needed later in life.

This has really been a great class--one of those college courses that will actually benefit us in daily life and will be of much use (consistently) in the future.

My advice to PSY 293 students is don't be discouraged if you are not "good" at this class. You may not be going into research for your whole career! Do the best you can but know just because you may not be great at this doesn't mean Psychology is not for you.

EMAILING YOUR INSTRUCTORS: If you have any questions at all, please don't hesitate to email me or your TA. When emailing us (or any instructors), please use a descriptive subject line, a greeting, complete and grammatically correct sentences, and a signature with your full name (in other words, think of email as professional communication). In addition, please include "PSY293" in the subject line. I will try to respond to all emails within 2 business days. Finally, I may not respond to emails between the hours of 8pm and 8am, so please keep this in mind when deciding whether to resend the message.

MAKE STUDY BUDDIES! RECORD THE CONTACT INFO FOR 2 NEW FRIENDS HERE:

NAME:	 	 	
EMAIL:	 		
PHONE:	 	 	
NAME:	 	 	
EMAIL:	 	 	
DHONE:			

CLASS CALENDAR - SPRING 2016

Tentative schedule; I reserve the right to adjust this timeline based on course progress

WEEK	DAY	DATE	Торіс	READING	PROJECT PROGRESS			
1	Т	1/26	M. Z					
	R	1/28	NO LECTURE –	No Lecture – Go to Lab				
2	Т	2/2	Introductions-Overview					
	R	2/4	PSYCHOLOGY AS A WAY OF THINKING	М: Сн. 1-3				
3	Т	2/9	ETHICS IN PSYCHOLOGY RESEARCH	М: Сн. 4				
	R	2/11	VARIABLES & MEASUREMENT	М: Сн. 5	Annotated Bibliography Due Sunday 2/14 9pm			
4	Т	2/16	RELIABILITY & VALIDITY	S: CH. 6				
	R	2/18	STATISTICS INTRO/REVIEW	S: CH. 1				
5	Т	2/23	Midterm 1					
	R	2/25	DESCRIPTIVE STATISTICS: FREQUENCY DISTRIBUTIONS	S: CH. 4	PROJECT RATIONALE AND SUMMARY DUE FRIDAY 2/26 9PM			
6	Т	3/1	DESCRIPTIVE STATISTICS: CENTRAL TENDENCY & VARIABILITY	S: CH. 2-3				
	R	3/3	DESCRIPTIVE METHODS: SURVEY WRITING AND DESIGN	M: CH. 6 (P157- 167)				
7	Т	3/8	DESCRIPTIVE METHODS: OBSERVATIONAL RESEARCH	M: CH. 6 (P168- 172)				
	R	3/10	SAMPLING	М: Сн. 7	INTRO DRAFT 1 DUE SUNDAY 3/13 9PM			

8	Т	3/15	DESCRIPTIVE STATISTICS: Z-SCORES AND THE NORMAL CURVE	S: CH. 8	IRB APPLICATION DUE WEDNESDAY 3/16 9PM		
	R	3/17	Hypothesis Testing	S: CH. 7			
9	Т	3/22	No Course CDDD	IC PREATA			
	R	3/24	No CLASS - SPRING BREAK!				
10	Т	3/29	CATCH-UP/REVIEW				
	R	3/31	MIDTERM 2		Finalized Surveys Due for Approval Friday 4/1 9pm		
11	Т	4/5	Hypothesis Testing with Chi-Square	S: Сн. 17	DATA COLLECTION IN T LAB		
	R	4/7	CORRELATIONAL (ASSOCIATION) CLAIMS	М: Сн. 8	EXPANDED INTRO AND METHOD DUE IN R LAB		
12	Т	4/12	Hypothesis Testing with Correlation	S: Сн. 15			
	R	4/14	Multivariate Correlation	М: Сн. 9	DATA COLLECTION ONGOING		
13	Т	4/19	CATCH-UP/REVIEW		DATA ANALYSIS!		
	R	4/21	MIDTERM 3		RESULTS DRAFT DUE SUNDAY 4/24 9PM		
14	Т	4/26	DISCUSSING RESEARCH: INTEGRATION, REPLICATION, & GENERALIZABILITY	М: Сн. 14			
	R	4/28	DISCUSSING RESEARCH, CONTINUED	TBA			
15	Т	5/3	GROUP PRESENTATIONS				
	R	5/5	GROUP PRESENTATIONS		Final Paper Due Sunday 5/8 8pm		
FINALS	Т	5/10	FINAL EXAM 3-5PM				