ADVANCED RESEARCH IN PSYCHOLOGY

PSY 400 – Fall 2017

Prof. Katie Corker

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Section 08, T/Th 10:00am-11:15am, 227 Lake Superior Hall
Prerequisites: PSY 101 or HNR 234, STA 215 or STA 312, PSY300

Office Hours: T/Th 11:30am-12:30pm, Weds 1-3pm
Appointments during Office Hours:
https://katiecorker.youcanbook.me/
Appointments at other times (email to request)

Office Location: 2128 Au Sable Hall
Office Phone: (616) 331-2932 (but email is recommended)

I. Course Overview

This course is designed to teach you, in a very hands-on and practical way, everything you need to know to conduct research in psychology. From conceptualizing a research question, to searching the psychological literature, designing a study, obtaining ethical approval, analyzing the data, and writing up/presenting results, you will learn the ins and outs of conducting research. Even for those students who do not intend to continue to graduate study, this course will provide access to a set of skills that you will be able to use in conducting high quality research on any topic in the future.

The way in which we will accomplish these goals is by actually conducting research. You will learn how to design and analyze a *between-subjects, factorial experiment*. In small groups, students will replicate and extend an existing experiment. Students will individually conduct a complete write-up of the project and present the results orally near the end of the term. You will find this course challenging! To perform well, you will need to actively engage in course activities, including assigned readings. There will be very little lecture in this course.

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 a personality and social psychologist with a specialization in quantitative methods. I earned a Ph.D. and a master's degree from Michigan State University and a bachelor of arts from the University of Northern Iowa. I have conducted research in the areas of motivation, goal setting, academic achievement, and the role of personality in influencing all of these variables. Much of my current research pertains to replicability in psychological research, what has been termed "meta-science" (the study of science and scientists).

III. Required Reading

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

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 distinguish 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.

C. **Quantitative reasoning.** Students will reinforce a basic grounding in statistics as used in psychological research. This course takes your knowledge of measures of central tendency, variability, correlation, simple null hypothesis significance testing (*t*-test, ANOVA), and effect sizes (*d*, *r*), and it extends them to include factorial ANOVA and multiple regression. Students will apply this knowledge to the interpretation of statistical reporting in the psychological research literature. This course also emphasizes understanding cumulative (meta-analytic) science.

D. **Graphical displays and interpretation.** Students will learn to interpret graphical displays of data, as well as produce graphical displays and figures for their research 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 understand and critique a variety of research designs and modal research practices in psychology.

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

V. Evaluation

A. Discussion questions. To facilitate class discussion and encourage engagement with the course readings, you will be asked to post discussion questions on Blackboard *by noon the day before class* on six occasions throughout the term. Each DQ post will be worth six points. There are no late submissions, but we do drop the lowest DQ score.

To prepare for each class discussion, students will complete the assigned reading and generate one well thought out discussion question per reading. These questions should not merely restate or summarize what was said in the reading, but should seek to delve deeper into the material, generating interesting discussion. Students should think about the kind of discussion their questions are likely to generate as they write. Here are some examples of good question stems (from the Stanford Center for Teaching and Learning):

Type	Questions beginning with:
Analysis	"Why..." "How would you explain..." "What is the importance of..." "What is the meaning of"
Compare and Contrast	"Compare..." "Contrast..." "What is the difference between..." "What is the similarity between..."
Cause and Effect	"What are the causes/ results of..." "What connection is there between..."
Clarification	"What is meant by..." "Explain how..."

B. Lab report. To examine factorial designs in more detail, students will complete a guided data analysis exercise, and submit an APA style method and results section to report the results of that data analysis.

C. Research report and presentation. As a class, we will replicate and extend four of the studies in the Many Labs 2 project. In small groups, students will identify the studies of interest, and they will work together

propose a test of a hypothesis based on that study. Data collection and analysis will take place in the context of these groups, but students will individually report and present their findings. A series of graded drafts will be submitted to help students to complete the project. Presentations will occur in groups, but will be individually evaluated. Evaluations may include a peer assessment component.

D. Class participation, group work, and in-class activities. A significant portion of this class will involve in-class activities, working in groups and teams, and participation. These activities must be completed as they are announced in class, and there are no late assignments or make-ups. Students who do not contribute to their group's project design and setup should expect to get little or no credit in this category.

E. Exams. There will be one midterm exam and one cumulative final exam. The purpose of the midterm 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.

F. 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; students who are habitually absent (> 2 classes missed) should expect limited access to office hours.

<u>There are no make-up presentations.</u> 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 one week before the exam to take the exam early.

2. Excused absence for illness/emergency: 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.

G. Extra credit. Students may complete article critiques for extra credit, worth up to 5 points each. Additionally, students may identify research methods concepts in popular culture or the news, and then write a one page reflection explaining the concept and its relation to the event in question. <u>These Cultural Applications are to be submitted on Blackboard no later than 7 days after the news story or event in question</u>. Reflections are worth up to 5 points each. Students may earn no more than 20 points of extra credit through any combination of extra credit possibilities. <u>All extra credit is due, via Blackboard, no later than 11:59 pm on 12/7/17.</u>

H. 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. Each student is allotted up to **3 grace days**, to be used at your discretion, throughout the term. Each 24 hour period an assignment is late counts as one grace day. *There are no grace days for discussion questions (DQs may not be late).* **Work that is submitted late and beyond the allotment of grace days FOR ANY REASON receives a two full letter grade (20%) deduction (e.g., a paper that earns an 80% is worth a 60% if 0-24 hours late; a paper that earns an 80% is worth a 40% 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.)

I. Point breakdown by category.

ASSIGNMENT	POINTS	% OF TOTAL
Discussion Qs	6*5 = 30	6%
Factorial Lab	40	8%
In-Class Activities	30	6%

Proposal (Group)	30	6%
Annotated Refs	15 * 2 = 30	6%
Drafts (3x)	15 * 3 = 45	9%
Peer review	15	3%
Final draft	100	20%
Final presentation	30	6%
Exams (2x)	75 * 2 = 150	30%
Extra Credit	Up to 20 pts.	4%

VI. Grading Scale

GRADE	POINTS	PERCENT
A	463-500	93%-100%
A-	448-462	90%-92%
B+	433-447	87%-89%
B	413-432	83%-86%
B-	398-412	80%-82%
C+	383-397	77%-79%
C	363-382	73%-76%
C-	348-362	70%-72%
D+	333-347	67%-69%
D	313-298	60%-66%
F	<297	<60%

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 penalties for academic dishonesty range from zero on that assignment to failure in the 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. 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.

X. Course Calendar

All DQs, HW, & written work due at noon the day before class.

Wk.	Date	Topic	Reading/Homework/Due
1	8/29	Introduction & Syllabus	-
	8/31	Review: Scales of Measurement Basics of Factorial Design	**Review:** Morling, Ch. 12 *Drop by 9/1 for 100% refund*
2	9/5	*Labor Day Holiday*	
	9/7	Introducing Many Labs 2 & Form Groups	**Read:** ML2 Proposal **Due:** ML2 Worksheet
3	9/12	Article Discussion & Validities Review	**Read:** Schooler & Engstler-Schooler, 1990 **Due:** DQ1
	9/14	Group 1 & Group 2 Articles	**Read:** TBD **Due:** DQ2
4	9/19	Group 3 & Group 4 Articles	**Read:** TBD **Due:** DQ3
	9/21	Theory & Hypothesis Generation ***Groups meet with me***	**Read:** Petty, 2006 or Leong, Schmitt, & Lyons (2014); **Due:** DQ4
5	9/26	Logic of Hypothesis Testing	**Due:** Proposal

		& Factorial Designs	
	9/28	Logic of Hypothesis Testing & Factorial Designs	-
6	10/3	Factorial Lab	**Due:** Annotated refs, 5 sources **Meet:** Henry 113
	10/5	Factorial Lab	**Meet:** Henry 113
7	10/10	Ethics & IRB	**Due:** Annotated refs, 5 sources **Review:** Belmont Report
	10/12	Study Design & Programming	**Due:** Factorial Lab
8	10/17	**MIDTERM EXAM**	-
	10/19	Introduction to Literature Reviews	**Due:** Draft of methods
9	10/24	Reliability and Measurement	**Read:** Cozby & Bates, Ch. 5
	10/26	Measurement and regression exercises	**Due:** Draft of intro **Meet:** Henry 113
10	10/31	Data Analysis	**Meet:** Henry 113
	11/2	Data Analysis	**Meet:** Henry 113
11	11/7	Peer Review of Intros	**Bring** two paper copies of intro to class
	11/9	Data Analysis	**Meet:** Henry 113
12	11/14	Data Analysis	**Meet:** Henry 113
	11/16	Groups Meet with Instructor	**Due:** Draft of results
13	11/21	Cumulative Science & Meta-Analysis	**Read:** Schooler RRR **Due:** DQ5
	11/23	Thanksgiving Holiday	
14	11/28	Final Presentations	-
	11/30	Final Presentations	**Due:** Final draft of research report
15	12/5	Problems & Solutions	**Read:** Nosek, Spies, & Motyl, 2012 **Due:** DQ6
	12/7	Catch Up	-
16	Weds. 12/13	CUMULATIVE FINAL EXAM	**FINAL EXAM** (8a-10a) Lake Superior 227