

PSY400 – Advanced Research Methods, Winter 2019

Section 07: T/Th, 2:30-3:45pm, 2310 ASH

Professor: Dr. Ellen Shupe
Office: 2218 ASH
Phone: 331-2905
E-mail: shuppee@gvsu.edu

Office Hours: T 1:30-2:30 & 4-5pm
Th 1:30-2:30pm

Required Readings:

Required readings for the course will be posted on Blackboard and/or available online. A complete list of sources is provided later the syllabus.

Course Content:

This course provides a survey of advanced research methods in psychology, with an emphasis on developing, conducting, and reporting original research. Because psychological science is a diverse discipline with a number of theoretical viewpoints and methodological approaches, a course such as this can be taught from a variety of perspectives. This particular section of the course focuses on methods used in the study of social relations and on issues related to the “front end” of the research process, such as the choice of research strategies and measures, and the logic of research. Although we will also cover data management tools and statistical analyses, the primary course goals are to provide an examination of conceptual issues involved in psychological research and to foster critical thinking and research-related skills. Note that PSY400 is demanding on a number of levels. You will be responsible for understanding and applying content discussed in readings and in classes, in addition to working with other members of research groups to plan, design, implement, and present research projects. Thus, you should be prepared to spend a significant amount of time on work related to the course.

Class Policies:

Academic integrity. As in other courses at GVSU, you are expected to do your own work in PSY400 and to not plagiarize or cheat in any way. This includes 1) taking or receiving help from others during exams or quizzes; 2) attempting to pass off someone else’s work as your own; 3) using ideas, sentences, or phrases from a source without proper citation; 4) copying part or all of another student’s answers on assignments; 5) completing part or all of an assignment for another student; and 6) submitting part or all of an assignment that has been previously graded or is being submitted concurrently for another course without authorization from Prof. Shupe. If you are unsure if a specific action constitutes a breach of academic integrity, please contact Prof. Shupe for clarification. Cheating and plagiarism will likely result in a zero on the relevant exam, quiz, or assignment, reported to the Chair of the Psychology Department, and documented in your student record.

The use of electronic devices during class. For some designated class sessions, you will need to have a laptop or tablet that can support SPSS and word processing software, to use for work related to PSY400. If you do not have a laptop, Prof. Shupe will make one available for you to use during class. Because research suggests the use of technological devices in the classroom often interferes with learning, laptops, surface computers, tablets, cell phones, and other devices will not be allowed during other (non-designated) class sessions. If you feel the use of a tablet or other device is

necessary for your learning, please discuss the situation with Prof. Shupe, so she can work with you to make the appropriate arrangements.

Other GVSU policies. In addition to the policies described above, you will be expected to comply with all course-related policies at GVSU (see <http://www.gvsu.edu/coursepolicies/> for a complete listing).

Learning Objectives:

Topics covered in the course and methods of evaluation are designed to help students develop learning objectives including (but not limited to) the following:

- An understanding of experiments, quasi-experiments, surveys, and other research strategies used in psychological research, including the logic on which they are based, their strengths and weaknesses, and the types of research hypotheses & questions they are best suited to address
- An understanding of important ethical issues in psychological research and the ability to explain arguments for and against the use of deception in research
- An understanding of different types of reliability and validity, including ways to increase them, and other issues related to measurement in psychological research
- An understanding of confounds and the ability to recognize potential confounds and prevent them and/or minimize their effects
- An understanding of the NHST approach to hypothesis testing, its limitations, & hypothesis testing procedures used in addition to NHST
- An understanding of different types of replication and the importance of replication in psychological science
- The ability to find and describe relevant empirical and theoretical reports from the psychological literature, and to integrate them into a research paper
- The ability to work in a research group to design and conduct an empirical study consistent with the standards of psychological science
- An understanding of the logic behind common descriptive and inferential statistics
- The ability to calculate and interpret common descriptive statistics, tables, and graphs, using SPSS
- The ability to determine appropriate univariate or multivariate tests to use to analyze different sets of data and to address different research questions
- The ability to calculate inferential statistics using SPSS and to interpret results
- Critical thinking skills, especially as related to understanding one's own research and research reported by others
- The ability to write a well-developed APA-style report, and to develop and deliver an effective oral presentation, describing the group-based experiment

Course Requirements:

Semester grades will be based on exams, quizzes, an APA-style research report, and assignments related to the experiment.

Exams & quizzes

There will be two 40-point exams covering topics discussed in the readings and in class. The format of the exams will be free response (i.e., short answer and essay). There will also be eight quizzes

covering topics discussed in the readings.* The quizzes will be worth 5 points, and the lowest quiz grade will be dropped at the end of the semester. Make-up exams and quizzes will be allowed only in the case of a documented emergency or in the case of extenuating circumstances, as determined by Prof. Shupe.

Experimental project & report

Students will work in small groups to plan, design, and conduct a randomized experiment or a quasi-experiment. The project will require groups to develop ideas for original experiments based on strong empirical and theoretical rationale; create (or identify) the stimuli, protocol, and measures; collect data and conduct data analyses; and interpret the results. Although groups will be able to choose their research topic, the experiment must be ethical, include at least two manipulated independent variables, and, as indicated above, be consistent with relevant theoretical and empirical literature.

Each group member will be required to submit their own written report describing the group's experiment. The report must be based on at least five sources, including at least three peer-reviewed, primary sources. It must also be written in current APA style, with a title page, abstract, introduction section, method section, results section, discussion section, and references. There is no page requirement, but most reports will be 10 to 14 pages in length. Although it is not mandatory, students are encouraged to submit drafts of their reports to Prof. Shupe for feedback. The report will be worth 40 points and will be evaluated based on APA format, writing quality (e.g., grammar, clarity, organization, and coherence), and appropriateness and comprehensiveness of content.

In addition to the written report, each group member will be required to turn in the SPSS output for the group's experiment, with their interpretations of the results (worth 8 points). Late reports and SPSS output/interpretations will be accepted up to three days after the deadline; except in the case of an emergency, 10% of the total possible points will be deducted for each day the proposal is late. Any detected plagiarism will result in a grade of 0 and possible failure in the course.

Assignments related to experimental project

Groups will be required to submit a brief proposal of their experiment (worth 10 points) and the proposed procedure, including all materials (e.g., vignettes and questionnaires, worth 10 points). In addition, groups will be required to give a 10-minute oral presentation of their experiment to the class and to submit presentation materials (worth 10 points). Instructions and rubrics for the assignments and presentation will be posted on Blackboard. Late assignments will be accepted up to three days after the deadline; except in the case of a documented emergency, 10% of the total possible points will be deducted for each day assignments are late. Any detected plagiarism will result in a grade of 0 and possible failure in the course.

Individual contribution grade

Each student will be given a grade reflecting his or her individual contribution to the group project and presentation. It will be worth 10 points and will be based on a self-evaluation, evaluations provided by other group members, and an evaluation provided by Prof. Shupe.

***Additional assignments and quizzes**

The number of quizzes may be adjusted and/or assignments may be added, at the discretion of Prof. Shupe. The adjustments would result in a net loss or gain of no more than 20 points.

Grade Determination:

Semester grades will be determined using the rubric below.

<u>Grade</u>	<u>Percentages</u>
A	92.5-100%
A-	90-92%
B+	87.5-89.5%
B	82.5-87%
B-	80-82%
C+	77.5-79.5%
C	72.5-77%
C-	70-72%
D+	67.5-69.5%
D	60-67%
F	0-59.5%

Tentative Schedule

Date	Topics	Readings, Quizzes, & Exams	Guidelines for Project
1/8	Introduction to course		
1/10	Research concepts; Reviewing the lit.	• Price et al. (2015), pp. 2-5 • PJCLC (2017), Sects. 2.1 & 2.5 Quiz	
1/15	Theories & rationale; Group/Project work	• Price et al. (2015), Ch. 4 Quiz	Review literature; Develop ideas/plan
1/17	Measurement: Overview & Levels	• PJCLC (2017), Sect. 4.1	
1/22	Measurement: Reliability & Validity; Group/Project work	• PJCLC (2017), Sect. 4.2 Quiz	Review literature; Develop ideas & plan
1/24	Experimental research: Logic & designs	• PJCLC (2017), Sects. 5.1 & 5.2	
1/29	Validity & Experimentation	• PJCLC (2017), Sects. 5.3 & 5.4	Review literature; Work on brief proposal
1/31	The lab setting; Group/Project work	• Mook (1983), pp. 379-382 Quiz	
2/5	Complex designs	• Price et al. (2015), Ch. 8	Work on introduction Brief proposal due, 2/5
2/7	Complex designs	• Price et al. (2015), Ch. 8	
2/12		Exam 1	Develop procedure & materials
2/14	Nonexperimental research	• Price et al. (2015), pp. 128-138	

2/19	Complex correlations; Self-report measures	• PJCLC (2017), Sect. 6.3 • M&R pp. 169-186	Bring materials for peer review, 2/19
2/21	Self-report measures	• PJCLC (2017), Sect. 4.3 • M&R, pp. 192-194 Quiz	Procedure and materials due, 2/21
2/26	Descriptives	• Price et al. (2015), pp. 230-248	Work on introduction; Collect data
2/28	Statistical inference; NHST & its limits	• Price et al. (2015), pp. 260-266; pp. 282-289	
	Spring break		
3/12	Group/Project Work		Collect data
3/14	Common inferential tests	• Price et al. (2015), pp. 267-281	
3/19	Common inferential tests	• Price et al. (2015), pp. 267-281	Work on method; Analyze data
3/21	Ethics in research; The use of deception	• Morling pp. 94-105 • Kimmel et al. (2011) Quiz	
3/26	Replication & Generalizability	• Stangor pp. 265-268 • Open Science Collab (2012) • OSC (2015), p. 943 only Quiz	Analyze data; Work on results
3/28	Communication in Science	• Nosek & Bar Anan (2012) Quiz	
4/2	Group/Project work		Work on results & discussion; SPSS output due, 4/2
4/4	Review for exam; Group consultations		
4/9		Exam 2	Work on discussion & abstract
4/11	Group/Project work		

4/16	Group/Project work		Finish report; Work on presentation Report due, 4/18
4/18	Group/Project work		
T, 4/23, 4-5:50	Presentations		Presentation slides due at 12n, 4/22

Sources

Most commonly used sources:

Price et al. (2015)

Price, P.C., Jhangiani, R., & Chiang, I.A. (2015). *Research methods in psychology: Second Canadian edition*.

<https://opentextbc.ca/researchmethods/>

PJCLC (2017)

Price, P.C., Jhangiani, R., Chiang, I.A., Leighton, D.C., & Cuttler, C. (2017). *Research methods in psychology: Third American edition*.

<https://opentext.wsu.edu/carriecuttler/>

Other sources:

Bordons, K.S. & Abbott, B.B. (2018). *Research design and methods: A process approach* (10th Ed.). New York, NY: McGraw Hill.

Kimmel, A.J., Smith, N.C., & Klein, J.G. (2011). Ethical decision making and research deception in the behavioral sciences: An application of social contract theory. *Ethics & Behavior*, 21, 222-251. doi: 10.1080/10508422.2011.570166

Marayuma, G. & Ryan, C.S. (2014). *Research methods in social relations* (8th Ed.). Malden, MA: John Wiley & Sons, Ltd.

Mook, D.G. (1983). In defense of external invalidity. *American Psychologist*, 38, 379-387.

Morling, B. (2017). *Research methods in psychology: Evaluating a world of information* (3rd Ed.). New York: Norton.

Nosek, B.A. & Bar Anan, Y. (2012). Scientific utopia: I. Opening scientific communication. *Psychological Inquiry*, 23, 217-243.

Open Science Collaboration (2012). An open, large-scale, collaborative effort to estimate the reproducibility of psychological science. *Perspectives in Psychological Science*, 7, 657–660.

Open Science Collaboration (2015). Estimating the reproducibility of psychological science. *Science*, 349. doi: 10.1126/science.aac4716

Passer, M. (2013). *Research methods: Concepts and connections* (1st Ed.). New York, NY: Worth.

Shaughnessy, J.J., Zechmeister, E.B., & Zechmeister, J.S. (2015). *Research methods in psychology* (10th ed.). Boston, MA: McGraw-Hill.

Stangor, C. (2015). *Research methods for the behavioral sciences* (5th Ed.). Belmont, CA: Wadsworth.

Wilson, J.H. (2005). *Essential statistics*. Upper Saddle River, NJ: Pearson Education.