

## **Psychology 400**

### **Advanced Research Methods in Psychology**

**Fall 2020**

**Instructor:** Dr. Christine Smith

**Office Hours:** 2-3 M & W or by appointment.

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**This course is subject to the GVSU policies listed at**

<http://www.gvsu.edu/coursepolicies/>

The format of this course is fully face to face. We will continue to meet in-person, in the absence of any new orders from the university or the state of Michigan. It is not possible for me to offer this course fully remotely to some of you while also continuing to teach in person to the remaining students. If circumstances make it impossible for you to attend in person, we will consider a variety of options including (1) dropping the course with a “W” (withdrawal), which does not affect your GPA and allows you to take the course at another time when you are able, (2) remote completion (my ability to offer this option will depend on how much of the course has been completed as well as what percentage of the class requires this support), and (3) grade of incomplete (granted only at the end of the semester to students who are unable to complete the course due to unexpected emergency circumstances). With very few exceptions, lecture content and coursework will be carried out within our classroom. Your success in this course depends upon your ability to attend every single class session. Under the current circumstances, some students may need temporary remote accommodations to be able to finish the course. Please contact me at your earliest convenience if you anticipate needing to miss multiple class sessions due to illness, injury, or other circumstances.

- 1) Masks: It is expected that students will follow GVSU policy regarding wearing masks during class. Please be certain that your mask is secured over both your nose and your mouth. Please, no food or drink in the classroom (as long as masks are required). Students who do not follow masking rules will be asked to leave class.
- 2) Symptomatic illness: Please do not come to class if you are ill (with symptoms) or have tested positive for COVID. If you will have to miss

class due to illness, please contact me as soon as possible to make alternative arrangements.

It is very important that you do not fall behind with your reading or with the lecture content as this will reduce the ability to solidify your understanding of the material during our active learning face-to-face sessions. During the course you will have the opportunity to complete multiple application activities, only some of which will be graded. Here again, it is very important to complete all of the application activities as they will give you insight into how well you understand the material. Completing the “practice” activities and receiving my feedback will also increase your ability to perform well on the graded assignments. I am sincerely committed to delivering a high-quality course in the most flexible manner possible. Please do not hesitate to reach out to me at any point if there is something I can do to help you complete this course successfully.

### **Required Readings and Computer Software:**

All reading material for this class will be shared with you as PDF documents posted to BB.

Writing assignments should follow APA style. At the link below, you will find several extremely helpful summaries of the most commonly used components of APA style. There is no need to purchase an APA style manual.

**<https://apastyle.apa.org/instructional-aids/handouts-guides>**

All students must have access to SPSS on their computers. There are two ways you can achieve this: 1) you may download the program directly onto your computer <https://www.gvsu.edu/it/how-to-download-and-install-spss-224.htm>, or 2) you may use GVSU’s virtual computer lab. If you have a windows computer you can go to the virtual lab here <https://winlab.gvsu.edu>, and if you have a Mac computer you can get to the lab here (however, you will need a VPN) <https://maclab.gvsu.edu>. If you need to set up pulse secure you can find instructions to do so here <https://www.gvsu.edu/it/downloading-installing-and-setting-up-pulse-secure-222.htm>

During the first week of class, please choose one of these methods and give it a test run to ensure that you do indeed have access.

You will also be using the online survey platform Qualtrics to collect the data for your project. You can access Qualtrics here: <https://www.gvsu.edu/it/gvsu-qualtrics-survey-software-225.htm> with your

GVSU login information. I have also posted an extremely helpful Qualtrics user's guide to BB.

### **Course Content and Objectives:**

Objectives: Upon completion of this course, students will be able to:

- 1) Explain research methods issues including ethical issues, measurement, reliability and validity of methods, experimental, quasi-experimental and survey research designs, biases in experimentation, and univariate and multivariate data analysis
- 2) demonstrate the ability to design and conduct an empirical study in psychology.
- 3) Write a research paper describing a psychology experiment.
- 4) discuss their study in critical ways by recognizing limits and problems.

The aim of this course is to cover advanced research design and data analysis with emphasis upon the concepts of **interaction**. Students (working in small groups) will experience the entire research process in that they will design, carry out, analyze, write up, and orally present a replication/extension study. The study must include a theoretically meaningful hypothesized interaction between independent variables and at least one independent variable must be manipulated experimentally. Students will gain experience working with the statistical package SPSS and Qualtrics. In addition to carrying out the research project, students will read, analyze, and critique several published research articles related to internal and external validity. I will teach the content of the course primarily through our discussions of these research articles/example studies, therefore, it is extremely important that you engage the course materials in a timely fashion.

### **Course Requirements and Grade Determination:**

Your final semester grade will be based on classroom assignments, several brief comprehension quizzes (following lecture content), a research proposal, a formal written report of your completed original research project, and an oral presentation your final project. Detailed descriptions are provided below.

**Class Assignments:** Over the course of the semester we will read and discuss published journal articles, instructional chapters/papers, and critique several studies. Several application activities based upon these readings will be assigned. All work to be graded must be submitted to BB. **Students are strongly encouraged to complete all graded work by the posted deadline. Extensions of deadlines can be obtained but ought to be sought before the deadline passes.**

**Research Project:** All students will work collaboratively (in small groups) on a replication/extension project. The project must be based upon sound theoretical and empirical rationale, have two independent variables, one of which can be manipulated, and include a hypothesized interaction.

**Proposal:** Each research team will submit a written APA style research proposal describing their project during the first half of the course. The proposal should include references to **at least 15 scholarly journal articles/book chapters** (I will provide a small collection of relevant papers to get you started). A helpful guide to writing this proposal will be posted to BB.

**Completed Project:** All students will submit a formal APA style paper describing the results of their research project. Additionally, group members will co-present to the class the findings of their research. This presentation should be approximately 12 minutes in length and include an overview of the area studied, the methodologies used, results obtained, and a discussion of implications. Presentations should be made in PowerPoint. Additional guidelines for the paper and presentation are posted to BB.

**Grading:** The course assignments and their point values are listed below

Graded application activities	100 points
Comprehension Quizzes	100 points
Proposal (group submitted)	40 points
Final Paper (individually submitted)	100 points
Final Presentation	50 points

#### Grade Distribution:

A	100-94%	A-	93.99-90%	B+	89.99-87%
B	86.99-84%	B-	83.99-80%	C+	79.99-77%
C	76.99-74%	C-	73.99-70%	D+	69.99-67%
D	66.99-60%				
F	59% and lower				

#### Course Schedule and Due Dates

**Each week of class will have its own folder with content that should be completed by week's end. In each folder you will find a much more detailed schedule, however, the following provides a nice summary roadmap to the course.**

**Week 1****August 30-September 3****Introduction to the Course and the importance of scientific replication.**

In the first week I will provide an overview of the course along with some review material from Psychology 300. We will discuss the importance of scientific replication and you will have the opportunity to work through some application problems related to replication.

**Due on Friday: Your completed research topic sheet with topic rankings.**

**Week 2****September 6-10****Threats to experiments: Internal validity issues**

This week, you will be assigned to your research topic and your collaborative research team. You will have class time to get to know your research team members and you will all be given some additional readings related to your chosen topic. I will lecture on internal validity

**Week 3****September 13-17****Internal Validity & Interactions**

This week we will do various internal validity application activities and in lecture I will extend the simple experimental design and focus on the issue of interaction.

**Comprehension Quiz # 1 Friday**

**Week 4****September 20-24****Interactions and External Validity**

This week we will continue discussing the concept of interaction and we will also explore the importance of external validity. Moderator variables might be incorporated into your research to explore external validity. We will work through the interaction activities that have been assigned in week 3.

**Due on Friday: Internal Validity Assignment**

**Week 5****September 27-October 1****Project Design Consultations**

This week, I will meet with each group to discuss your developing projects.

**Comprehension Quiz # 2 Friday**

**Week 6****October 4-8****Using Qualtrics to Collect Data**

This week, lecture will address using Qualtrics.

**Due on Friday: Interpreting and describing an interaction**

**Week 7****October 11-15****Data Analysis Techniques**

In addition to learning about data analysis techniques, I will consult with groups on Monday. On Wednesday and Friday, groups should meet to solidify their designs/stimulus materials and work to create them in Qualtrics. The goal is to launch all Qualtrics projects by the end of week 8.

**Week 8****October 18-22****SPSS and Data Analysis Techniques**

This week we will continue to discuss/interpret data and we will work through several examples in class. On Friday each group should choose one member to submit your research proposal to BB.

Due Friday: Research proposal

Comprehension Quiz # 3 Friday

**Week 9****October 25-29****(Monday is Fall Break) SPSS and Data Analysis Techniques**

We will work through various examples where you should be able to solidify your ability to interpret SPSS printout and describe the observed effects.

Due on Friday: Data Analysis I

**Weeks 10-12****November 1-19****Data Analysis: Individual/Group Meetings/Consultations**

During these weeks, students will sign up to consult with me individually regarding research findings and to discuss issues related to oral presentations of findings.

Due on Friday the 12th: Data Analysis II

**Week 13****November 22**

We will meet on Monday only.

Comprehension Quiz # 4

**Weeks 14-15****November 29-December 10 Formal Presentations of Research Findings**

Final (individual) paper is due on December 3<sup>rd</sup> @ 5:00 pm.