

PSY 400: Advanced Research Methods - Fall 2022

Wolfgang Friedlmeier

MAC A2165

Section 04

MWF 9-9:50 am

Section 02

1-1:50 pm

Section 01

2-2:50pm

Instructor

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Office Hours

Monday 10 to 11 am

Wednesday 3 to 4 pm

Friday 11:30 to 12:30

Virtual Office Hours: by appointment

Meeting ID: 406 828 8089

Passcode: 3UYDhZ or 490450

Literature

Stangor, C. (2015, 5th ed.). *Research methods for the behavioral sciences*. New York: Houghton Mifflin Company. ISBN: 9780840031976

American Psychological Association (2009). *Publication Manual of the American Psychological Association* (Sixth Edition). Washington, D.C.: APA.

Online Experimental Design

<https://www.gvsu.edu/it/gvsu-qualtrics-survey-software-225.htm>

Course Overview

The aim of this course is to apply knowledge about research methods in psychology by designing an empirical study, collecting data, and writing a paper. Theoretical and ethical issues, measurement, reliability and validity of methods, experimental, quasi-experimental, and survey research designs, biases in experimentation, and univariate and multivariate data analysis will be discussed in class.

The course is designed to accomplish three main objectives: (1) Designing an empirical study in psychology. (2) Getting deeper insight into the research process, and (3) Increasing the overall knowledge about research in psychology.

Learning Outcomes

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.

This course is subject to the GVSU policies listed at

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

Prerequisites

PSY 101, STA 215, and PSY 300

A good understanding of basic statistics is a must as the application of correlation and ANOVAs will be requested during the course.

General Information

Withdrawal. The deadline for withdrawing from the class is **October 28, 5 p.m.**, through one of the Student Assistance Centers.

Special Needs. If there is 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.

Academic Integrity. 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 223.01] 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 contact the instructor so we can eliminate that uncertainty. **Plagiarism or cheating will result in an F for the course.**

Support for Writing. Fred Meijer Center for Writing and Michigan Authors

Web: <https://www.gvsu.edu/wc/>

Contact: virtualwc@mail.gvsu.edu (616-331-2922)

Location: Lake Ontario Hall, Room 120 (Allendale)

The Fred Meijer Center for Writing provides writing assistance to all GVSU students, on any type of project and at any stage of the process. The Writing Center employs both undergraduate and graduate writing consultants from across majors and disciplines. Consultants are trained to help writers brainstorm, organize, or develop their ideas; and they can help writers edit their own work and document sources correctly. The Center's services are free and students can work with an idea, assignment prompt, or draft of their paper. Students can virtually drop in or schedule an appointment; both appointments and drop-ins are available during all service hours: (Mon-Thurs 9am-11pm, Friday 9am-3pm, Sunday 2pm-11pm). Due to COVID-19, all writing center services are available online. Limited in-person consulting may be available; please check the Writing Center's website for up-to-date information. All service options (drop-ins, appointments, email support) can be accessed via the Writing Center's online scheduling system – Book It. We look forward to working with you!

LIBRARY Support: Each department has a designated librarian to support your research needs. Christine Malmsten is your liaison librarian for Psychology. Her email is malmstec@gvsu.edu and her office is in Mary Idema Pew Library (Allendale), room 240. You are welcome to make an appointment with her. The psychology library subject guide (<http://libguides.gvsu.edu/psych>) contains links to all of the psychology databases and other specific resources for psychology students.

STATS Support: The **Statistics Tutoring Center** is a place for students in many levels of stats classes to get help. Our central location is in Mackinac Hall on the Allendale campus, but we will also have tutors available in the Eberhard Center on the PEW campus. Tutoring is primarily done by GVSU undergraduates and is **FREE** to any GVSU student. You can bring questions about your calculator, on methods and concepts, on specific problems, or on whatever you like. Don't have a question just yet? You can work on your stats homework and, if you have a question, help is at hand! Feel free to call us at **616-331-8969** if you have any questions. **All tutoring in the Stats Center is FREE with no appointment needed.** More info here: <https://www.gvsu.edu/tutoring/stats/>

GENERAL Support: Student Academic Success Center (SASC) – see <http://www.gvsu.edu/sasc/academic-skills-services-105.htm>. Students who would like additional help in developing strategies for better time management, writing, study or examination skills should contact the Advising Resource Centre (200 STU).

COUNSELING Center: Did you know that GVSU provides free counseling to any student? Check their website for more info: <https://www.gvsu.edu/counsel/>

ACADEMIC ADVISING: Questions about your major, your courses, or your graduation? Psychology majors have two options: (1) an appointment with a professional CLAS advisor, or (2) an appointment with their major advisor (a faculty member). Your advisor is listed on Banner, and you can also contact CLAS advising here: <https://www.gvsu.edu/clasadvising/>

Grade Distribution

A	94 - 100%	A-	90 - 94%		
B+	87 - 90%	B	83 - 87%	B-	80 - 83%
C+	77 - 80%	C	73 - 77%	C-	70 - 73%
D+	66 - 70%	D	60 - 66%		
F	60% and lower				

Assignments and Research Paper

You will be required to work on a research paper by carrying out your own study (small group projects). Two oral presentations are required. The final research paper will be written in APA style.

Quizzes

There will be 4 online quizzes with 10 points each. The quiz will test the content of the related topic that was discussed earlier. You will have about seven days after the announcement to answer and submit the questions. The answer time will be limited to 30 minutes. Three of the four quizzes will go into your final grade. If you miss the deadline of the quiz, 0 points will be in your record for the respective quiz.

Culminating Experience

There will be short exams in form of quizzes during the course of the semester. There will be a final exam with multiple choice questions.

Section 4: **Wednesday, December 14, from 8 to 9:50 am.**

Section 2: **Monday, December 12, from 12 to 1:50 pm.**

Section 1: **Wednesday, December 14, from 2 to 3:50 pm.**

Evaluation and Grading

Your final grade in this class will be based upon the following achievements:

Assignment 1: Present Research Article	20 points
Assignment 2: Submission of References (APA style)	20 points
Assignment 3: Research Proposal	50 points
Assignment 4: Exact Procedure and Design (IRB)	40 points
Assignment 5: Peer Review	30 points
Assignment 6: Data Collection	20 points

Assignment 7: Presentation of Project	40 points
Assignment 8: Final Paper	60 points
Group Evaluation	30 points
Quizzes (3 quizzes count)	30 points
Active Contribution	20 points
Final Exam	40 points
Total	400 points

Note. This is a preliminary list of assignments and grading that may still be subjected to change.

Semester Schedule

Date	Topic	Specific tasks
Week 1	Introduction and overview	
8/29	Introduction	
8/31	Project examples, groups and assignments	Read Stangor-Appendix A
9/2	Structure of the research paper (Appendix A) project examples continued Use PsycInfo for lit search	AS1, AS2 Read two articles
Week 2	Research Designs	
9/5	Labor Day	
Step 1: Theoretical Background and Hypotheses		
9/7	Central topic for all research groups (discussion about articles)	Read Stangor – Ch. 2 AS3
9/9	Hypotheses and empirical part (ch. 2)	Read Stangor – ch. 10 Study exercises
Week 3	Research Designs and Internal Validity	
9/12	Experimental designs: one-way designs (ch. 10)	Read Stangor – ch. 11 Study exercises
9/14	Experimental designs: two-way designs (ch. 11) Interaction effects	Quiz 1: Research designs Check qualtrics
9/16	Use of Qualtrics, APA rules and Article presentation	
Week 4	Presentation of relevant articles	
9/19	Research papers – group 1 and 2	DEADLINE: AS1
9/21	Research papers – group 3 and 4	DEADLINE: AS1
9/23	Research papers – group 5 and 6	DEADLINE: AS1 DEADLINE: AS2 Read Stangor – ch. 13
Step 2: Theoretical Background, Hypotheses, Design, Empirical Testing		
Week 5	Internal Validity – Finalizing Project Proposals	
9/26	Internal validity 1 (ch. 13)	Study exercises
9/28	Internal validity 2 (ch. 13)	Study exercises
9/30	Internal Validity 3 (ch. 12) IRB - Guidelines for ethical issues (ch. 3)	Quiz 2 AS4: IRB proposal

Week 6	Presentation of proposals and IRB	
10/3	Group 6 and 5	DEADLINE: AS3a
10/5	Group 2 and 1	DEADLINE: AS3a
10/7	Group 4 and 3	DEADLINE: AS3a
		DEADLINE: AS3b

Step 3: Methods – Sample, Procedure, Materials

Week 7	IRB proposal, peer review, and writing	
10/10	Paper writing; issues about ethics for project	
	Peer-review process; paper writing	AS5: Peer-Review
10/12	Finalize your IRB proposal	DEADLINE: AS 4
10/14	APA style	Study exercises
Week 8	Finalizing of projects and ANOVA	
10/17	Finalizing projects to run study 1	
10/19	Finalizing projects to run study 2	Read Stangor – ch. 10/11
10/21	ANOVA – Overview	Read Stangor – ch. 10/11
		Study exercises

Step 4: Data Collection

Week 9	Analysis of Variance	
10/24	Fall Break	
10/26	ANOVA - exercises	AS6, Quiz 3
		DEADLINE: AS5
10/28	SPSS: 1-way ANOVA (Appendix D)	
Week 10	ANOVA (between design and repeated measures)	
10/31	SPSS: 2-way ANOVA (Appendix D)	
11/2	SPSS: Between and repeated	
11/4	SPSS: ANOVA: Tables and Figures	

Step 5: Data Preparations and Analyses

Week 11	ANOVA - Interpretation of results	
11/7	SPSS: ANOVA: Interpretation of results	Deadline AS6
11/9	SPSS: ANOVA with repeated measures	
11/11	SPSS: AS6 task	
Week 12	APA style	
11/14	SPSS: Groupwork for project	
11/16	SPSS: 3-way ANOVA	
11/18	SPSS: Data analysis of project data	
Week 13	Thanksgiving Break	
11/21	Paper structure and paper presentation rules, APA style	
11/23	Thanksgiving Break	
11/25	Thanksgiving Break	

Step 6: Data Analyses and Interpretation

Week 14 Project Analysis (Meetings with separate groups)

11/28	Project analysis: Group 3 and Group 4	Quiz 4
11/30	Project analysis: Group 1 and Group 2	
12/2	Project analysis: Group 6 and Group 5	

Step 7: Finalizing the Project Paper

Week 15 Group presentations

12/5	Paper presentation: Group 1 and 2	DEADLINE: AS7
12/7	Paper presentation: Group 6 and 5	DEADLINE: AS7
12/9	Paper presentation: Group 3 and 4	DEADLINE: AS7
		DEADLINE: AS 8

Week 16 Final Exam

12/12	Section 2: Final Exam from 12 to 1:50 pm
12/14	Section 1: Final Exam from 8 to 9:50 am
12/14	Section 4: Final Exam from 2 to 3:50 pm