

# Grand Valley State University

## Psychology 400: Advanced Research Methods in Psychology



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Co-Director: [Social Cognition Research Laboratory](#)

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\*During busier parts of the semester there *may* be delay between your email and my response. This delay should not be more than 5 days for any email with a regular title and not more than 48 hours for any email with “Important” in the title. If you find yourself waiting longer than the aforementioned times, please send me a quick reminder email to make sure it was received.

Course Time and Location:

PSY 400 (01): 11:30 - 12:45	AuSable Hall 1117
PSY 400 (02): 1:00 - 2:15	Mackinac Hall A1111
PSY 400 (05): 4:00 - 5:15	AuSable Hall 2310

**Office Hours (via Zoom)**

Mondays: 12:30 – 1:30 p.m.

OR by appointment - Please provide your availability to meet in an email

<https://gvsu-edu.zoom.us/j/99213725167?pwd=bkl3Mm5UUFNwaWtxVHhBQ2hoMUViUT09>

**Course Description:** Experimental and survey methods in psychology. Topics covered include philosophy of science; theory development; measurement; reliability and validity of methods; experimental, quasi-experimental, and survey research designs; biases in experimentation; univariate and multivariate data analysis; and research ethics.

**Course 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.

**Course Prerequisites: PSY 101, STA 215, WRT 150 and PSY 300.** You may not take any of these prerequisite courses concurrently with PSY 400.

**Top Hat Learning System and Text Book (\$80):**

One key aspect of this course is that we will be using a multimedia textbook which *necessitates that you have a reliable, high-speed internet connection*. This format of text allows greater flexibility in selecting the content of your readings and to augment learning concepts with the use of videos and internet resources. One important limitation of this format is that a physical copy of the text is not available.

Please visit: [app.tophat.com/register/](http://app.tophat.com/register/)

**Course JOIN CODE: 497014**

Freberg et al. (2020) *Research Methods in Psychological Science: A Top Hat Interactive Text* Toronto, ON: Top Hat Monocle. ISBN: 9781774946190

If you have any difficulties connecting please contact Top Hat via their online customer chat (best) or by email: [support@tophat.com](mailto:support@tophat.com)

**Supplemental Texts:**

American Psychological Association (2020). *Publication Manual of the American Psychological Association: the official guide to APA style*. (7<sup>th</sup> ed). Washington, DC

Navarro, D. J. and Foxcroft, D. R. *Learning Statistics with JAMOVI: A tutorial for psychology students and other beginners*. Creative commons CC BY-SA 4.0

Research articles, supplemental readings and my lecture notes will be posted on Top Hat.

**Grade Evaluation:**

	Description	Weight
Top Hat Embedded Questions	Multiple Choice	10%
CITI Ethics Certification	Online Course	5%
Assessment 1	Multiple Choice/Short Answer	12.5%

Research Question, Design and Hypotheses	Proposal for research	10%
Survey Item Design Exercise	Assignment	5%
Lab 1	JAMOVI / Measures of Central Tendency	5%
Lab 2	Reliability / ANOVA	5%
Lab 3	Multiple Regression	5%
Research Presentation	APA style presentation of your project	10%
Final Research Paper	APA style research manuscript	20%
Assessment 2	Multiple Choice/Short Answer	12.5%

Final grades are determined after combining scores from the assignments, peer evaluation, class participation and the final exam. Students are ranked in order of total scores and a grade is assigned so that the class average falls between the 75th and 79th percentiles (Letter grade = B)

**This is a *tentative* grade distribution**

<b>Rating</b>	<b>Letter Grade</b>	<b>Grade Point Value</b>	<b>Percentage Grades</b>
Excellent	A	4.0	90-100%
Excellent	A-	3.7	85-89%
Good	B+	3.3	80-84%
Good	B	3.0	75-79%
Good	B-	2.7	70-74%
Satisfactory	C+	2.3	65-69%
Satisfactory	C	2.0	60-65%
Satisfactory	C-	1.7	55-59%
Poor	D+	1.3	50-54%
Minimal Pass	D	1.0	45-49%
Failure	F	0	0-44%

**Missed Exam/Assignment:**

In the case that you miss an exam due to illness, I will not require a note from a health professional. However, if more than one major assignment or component of the course is missed, I will require a note from a registered health professional. This medical certificate must acknowledge the date of the missed exam/assignment, and provide the contact information of the health provider. If you miss any class component, you must report your illness to me within 48 hours of the exam/assignment due date. If a single

class component is missed, the student will be given an extension or have the weight of the missed examination/assignment transferred to the final examination.

### **Student Responsibilities:**

**ACADEMIC INTEGRITY:** Grand Valley State University is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the *Code of Student Behaviour* (online at <http://www.gvsu.edu/studentcode/index.cfm>) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University. No student shall represent another's substantial editorial or compositional assistance on an assignment as their own. Furthermore, no student shall submit in any course or program of study, without the written approval of the course instructor, all or a substantial portion of any academic writing, essay, thesis, research report, project assignment, presentation or poster for which credit has been obtained by the student or which has previously been or is being submitted by the student in another course or program of study in the University or elsewhere. All forms of dishonesty are unacceptable at the University. Cheating, plagiarism and misrepresentation of facts are serious offenses. Anyone who engages in these practices will receive a grade of zero for the exam or paper in question and no opportunity will be given to replace the grade or redistribute the weights. Any offense will be reported to the Dean of the CLAS who will determine the disciplinary action to be taken.

**SAFETY:** Mask use is encouraged. Masks are freely available from any department office.

**STUDENTS WITH DISABILITIES:** 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 Resources (Room 200 STU; 616 331 2490). Furthermore, if you have a physical disability and think you will need assistance evacuating this classroom and/or building in an emergency, please make me aware so that I can develop a plan to assist you.

**ACADEMIC SUPPORT CENTRE:** Students who require additional help in developing strategies for better time management, study skills or examination skills should contact the Advising Resource Centre (200 STU).

### **WRITING CENTER:**

Writing consultants are highly-trained students ready to help you improve your writing. A consultant will meet with you one-on-one for 30 minutes to discuss your writing. Expect a friendly conversation with a highly-trained peer that will end with a plan for improving your project. <https://www.gvsu.edu/library/km/writing-center-26.htm>

### **SPEECH LAB:**

The mission of the Grand Valley State University Speech Lab is to empower speakers to shape their lives professions and society through confident and effective public presentations. Speech consultants, who are fellow GVSU students, complete a nationally certified training program that prepares them to assist with all parts of the speechmaking process including: choosing a topic,

organizing your thoughts, and practicing presentations. The Speech Lab's home office is located in 154 Lake Michigan Hall (Allendale) and services are free for all Grand Valley students. For more information about the Lab, its hours, virtual consultations, and to make an appointment, please visit the Lab website at: <https://www.gvsu.edu/speechlab>.

**\*\*\*PLEASE NOTE that updates to this schedule will be posted periodically throughout the semester. Check Top Hat regularly for updates**

January 10/12	
Topic	Reading(s)
Introduction	Syllabus
What is Psychology?	Top Hat: Module 1 (Due January 15th) Hergenhahn (2008)
January 17/19	
The Scientific Enterprise	Top Hat: Module 2 (Due January 20th)
Review of Quantitative (Descriptive) Research	Top Hat: Module 5 (Due January 25th)
January 24/26	
BONUS: Effective Learning Assignment (Due January 27th)	
Observation and Measurement	Top Hat: Module 6 / 7 (Due January 30th)
January 31 / February 2	
Variance and Hypothesis Testing	CITI Ethics Training (Due Feb. 3)
Inferential Statistics (Theory)	
February 7/9	
Experiments: Independent Groups	Top Hat: Module 9
Experiments: Repeated Measures	Top Hat: Module 10
February 14/16	
Research Project Review	
Assessment 1	
February 21/23	

Experiments: Mixed Models Interpreting Factorials	Top Hat: Module 10 Exercise
February 28 / March 2	
Experiment materials and Qualtrics programming Project Meetings	Gernsbacker (2017)
<b>March 5-12</b> <b>Spring Break</b> Research Question, Design and Hypotheses (Group) Assignment (Due March 15)	
March 14/16	
Graphing and Plotting Survey Methods	See Top Hat for Templates Module 8
March 21/23	
Tuesday: Survey Methods Survey Sampling	Complete Survey Item Design Exercise (See Top Hat) Module 8
March 28/30 Survey Item Design Assignment (Due March 31)	
Statistics Review	Module 14
Inferential Statistics	Module 15
April 4/6	
Inferential Statistics	Module 15
Laboratory 1 – JAMOVI / Formatting/ Central Tendency	Navarro & Foxcroft – Chapter 3 and 4
<b>April 11/13</b> <b>April 12 – (Bonus Opportunity)</b> <b>Student Scholarship Day</b>	
Laboratory 2 – Reliability / ANOVA Laboratory 3 – Multiple Regression	Navarro & Foxcroft– Chapter 12 (12.1 – 12.4) Navarro & Foxcroft – Chapter 11 (11.2 – 11.5) Navarro & Foxcroft – Chapter 13 (13.1 – 13.11)
April 18/20	

Student Research Presentations	
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**April 25**

**Final Research Paper Due: April 25 at Midnight**

**Assessment 2 (Final Exam)**

PSY 400 (01): Tuesday April 25, 10:00 - 11:50 a.m.

PSY 400 (02): Tuesday April 25, 12:00 - 1:50 p.m.

PSY 400 (05): 4:00 - 5:15 p.m.