

Quantitative Methods

PSY 467Q (20320)

Winter 2019

M: online; W: 2:00 – 3:50

OMA 101

Professor

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Office hours

Mon. 2-4

Tue. 10-12 (online)

Wed. 1-2

Course Description

This course covers fundamental concepts and statistical procedures used by psychologists to describe, summarize, and make inferences about data. Students will learn and apply the scientific method to an individual research project that will be completed in PSY 468W.

Pre-requisites: PSY 301 and Math 105 or Math 111 (or equivalents).

Psychological Science Program Outcomes (PSO)

1. Explain and/or apply principles, skills, values, or ethics of psychology.
2. Apply appropriate research methods to critically analyze human behavior.
3. Identify and demonstrate knowledge of sociocultural and international diversity.

Course Goals:

After completing PSY 467 and 468, the successful student will be able to:

- locate, interpret, critically evaluate, and summarize psychological research (PSO #2, ULO: Inquiry and Analysis),
- formulate testable hypotheses and identify appropriate study methodologies to assess those hypotheses (PSO #2, ULO: Inquiry and Analysis),
- collect, analyze, and interpret data using appropriate statistical techniques (ULO: Quantitative Literacy),
- demonstrate effective writing and oral presentation skills in APA style, including the clear and accurate reporting of statistical findings (ULO: Written Communication),
- understand and follow the APA code of ethics in treatment of participants and data reporting (PSO #1).

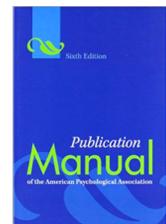
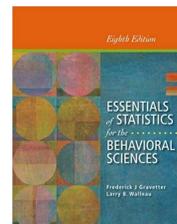
Textbook and Supplementary Materials

Required:

- Gravetter, F. J., & Wallnau, L. B. (2014). *Essentials of Statistics for the Behavioral Sciences* (8th ed.). Belmont, CA: Wadsworth. ISBN: 978-1-133-95657-0
- Scientific calculator

Strongly recommended:

- American Psychological Association (2010). *Publication Manual of the American Psychological Association* (6th ed.). ISBN: 1-4338-0561-8



Classroom Policies

Email: You are expected to check your university email account on a daily basis for communication from me concerning the class.

Email is the best way to contact me. I aim to return all inquires within 24 hours; however, I will not respond to emails about an assignment the day before it is due so do not wait until last minute to begin working on an assignment! Also remember, emails are not texts; they should have appropriate structure (subject, salutation, body, and signature).

Classroom Conduct: In order to effectively communicate class material, all students are expected to be non-disruptive and respectful of one another during lecture. Please refrain from arriving late, leaving early, or packing your belongings until after class is dismissed.

Cell phones and laptops should only be used for note-taking purposes.

Class notes: It is important to me that you are able to focus your attention on lecture material. For that reason, electronic copies of the PowerPoint slides will be posted on Moodle. I recommend that you print a copy of the slides before each video lecture to take notes on while watching.

Video lectures: The lectures for this class will be video recorded and posted to Moodle. You may not - nor may you allow others to - reproduce or distribute my video lectures without my written consent (regardless of whether a fee is charged).

Class cancellation: In the unlikely event that I must cancel class, I will do my best to notify you via email prior to our class start time. In addition, a note will be posted on the classroom door.

Extra credit: You may earn up to 10 points of extra credit by participating in research projects conducted in the Behavioral Sciences Division and/or by attending a PSY 301/468 poster session. Detailed instructions for each of these options will be posted on Moodle. In addition, you may earn 2 points of extra credit by attaching a slip demonstrating that you visited the Writing Center to any graded written assignment.

Grade-grubbing: A responsibility of teachers and scientists alike is to be humble. As such, I remain open to the possibility of being wrong. If you feel that you have been assigned an unfair grade, I encourage you to meet with me and explain your rationale. That said, I am not receptive to students who ask me to give them a higher grade out of the kindness of my heart (e.g., “but I need a B to graduate!”). I respect students who take ownership of the grade they earned.

Incompletes: I do not give incompletes to help students avoid receiving an F. To be eligible for an incomplete, you must be passing the class but lack one essential requirement. In addition, I must find your reason for requesting an incomplete acceptable. Please see me for more details.

Finals week attendance: In accordance with university policy, students must be available to meet during finals week. Our scheduled meeting time is Wed., Mar. 20 from 2:00 – 3:50 PM (this is when Block Exam 2 will be administered). **If you will be unavailable on that date, do not take this class!**

Classroom Policies cont.

Accommodations: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact your instructor and the Office of Disability Services, APSC 405, or at 503-838-8250, as early as possible in the term. Students needing medical or mental health care can access the Student Health and Counseling Center by calling 503-838-8313, emailing health@wou.edu, or by walking in to schedule an appointment.

▪ **Veterans statement:** Veterans and active duty military personnel with special circumstances are welcome and encouraged to communicate these, in advance if possible, to the instructor.

▪ **Service animals:** Students who require the use of a service animal in non-public areas (e.g., classrooms) must request an accommodation through the WOU Office of Disability Services (ODS). Please refer to the ODS website or call ODS (503-838-8250) for more information.

Mandatory reporting: As an employee at Western Oregon University, I am required by federal law to report any incident of sexual misconduct or sexual harassment. You have the right to maintain your privacy and not tell me any personal information that could result in mandatory reporting. If you disclose to me (verbally or in writing) about something that has occurred to you or another student, I must inform the appropriate university staff. Reporting is intended to safeguard students and provide students support. If you would like additional information, please visit www.wou.edu/student/assault_care.php.

Student success concerns: If I determine that your performance in this class is placing you at academic risk, you may be referred to a member of the Student Success Team. A student success specialist will offer to work with you to address issues and develop a student success strategy. Regardless of whether a referral has or has not been made, you are ultimately responsible for tracking your own progress in this course. If you would like to meet with a student success specialist regarding any academic struggles you are experiencing, please contact Student Success and Advising at 503-838-8428 or at studentsuccess@wou.edu.

Student absence notification: If for some reason you are absent due to an extenuating circumstance or medical situation, you must report the incident through official channels before I will make an exception for late or missed work (if applicable). To complete a Student Absence Notification Request, go to <http://www.wou.edu/advising/absence> or contact Student Success and Advising at 503-838-8428 or at studentsuccess@wou.edu.

Course Structure

This course is organized as a “flipped” classroom, such that all lecture material will be communicated outside of class and class time will be devoted entirely to hands-on experience. You are responsible for completing the assigned readings and video lectures prior to each class session. Each class session will involve (1) a quiz and (2) a lab activity (i.e., SPSS assignment).

Given that this is a hybrid class, we will only be meeting once per week (on Wednesdays).

I recommend that you use the time we would have been in class were this not a hybrid to watch the video lectures.

Course Engagement (10 pts.)

Doing well in this course requires a high level of engagement both inside and outside of class. You are expected to watch all lectures and participate in class discussions and activities.

Lecture Attendance: Although no formal attendance policy will be enforced, you are expected to attend class everyday. If you miss a class, it is your responsibility to make arrangements to get the materials you missed.

Participation/Effort (10 pts.): At the end of the semester, I will assign you a participation grade based on your participation in class discussions, activities, and your observance of the basic rules of classroom conduct. If you do not actively participate, you will receive 0 pts. (which could result in a lower letter grade).

Weekly Quizzes (50 pts.)

It is critical that you complete the reading assignments and watch the video lectures *prior to the start of class*. To ensure that you are understanding the material, there will be a 30-minute quiz (closed book, no notes) at the start of class each week. Each quiz will consist of 5 or fewer short-answer questions worth 10 points total. Only your best-scoring 5 of the 7 quizzes will count toward your grade. **No exceptions will be made, even for excused absences.**

Weekly Labs (120 pts.)

The majority of class time will be spent on lab assignments in which you will analyze data using both direct computation and SPSS. As part of each lab, you will be asked to summarize your findings in APA-style. There are 7 labs, but the first is not graded. Each of the remaining 6 labs is worth 20 points. If you miss class or do not complete a lab before the end of class, you will have until 11:59 PM on the following Sunday to submit the lab before it is counted as late.

Late policy: Each lab is due in .docx format via Moodle. A 20% deduction will be applied to labs that are not uploaded to Moodle by 11:59 PM on the following Sunday. Labs submitted after the start of class the following Wednesday will receive a 0. **No exceptions will be made, even for excused absences.**

Exams (200 pts.)

There will be two non-cumulative Block Exams worth 100 points each (the second exam will be given during the final exam period). Each exam will consist of multiple-choice and short-answer questions that assess your conceptual knowledge, ability to apply statistical formulas, and use SPSS. **Remember to bring your formula sheet, statistical tables, and a calculator!**

Study Guides: I do not provide study guides as doing so would rob you of an additional opportunity to rehearse lecture material. In lieu of study guides, I will post two practice exams.

Make-up Policy: If you miss an exam, you must take the make-up exam during Finals week (there will be no exceptions). The only time available to take a make-up exam is Wed., Mar. 20 between 10:00 and 2:00 PM. You are required to contact me ASAP to schedule a time to take the exam during this 4-hour window.

Research Report (120 pts.)

You will begin preliminary work on an individual research project that you will complete in PSY 468. This project is similar to the project you completed in PSY 301, except your study design must include two independent variables, at least one of which must be experimentally manipulated. In PSY 467, you will submit a draft of the first half of the paper, which includes the title page, introduction, method, and references sections. Although you are encouraged to share articles and ideas with fellow students who are conducting studies similar to your own, **your research report MUST be written independently.**

Your research report will be graded across the following phases in PSY 467:

Plagiarism certification	Required *
Topic idea	15 pts.
Annotated bibliography	25 pts.
Peer review	30 pts.
Introduction/Method draft	50 pts.
Total	120 pts.

* You may not submit written assignments in this class until your plagiarism certification is complete.

Detailed guidelines will be provided in class and posted on Moodle for each phase of your research report.

Plagiarism detection: WOU instructors use Turn-it-in, a plagiarism detection and learning tool that is now integrated with Moodle, to identify the percentage of similarity in your writing to journal articles, internet sources, and other students' papers in its database. It then generates a report for instructors highlighting potentially unoriginal work. The use of Turn-it-in is subject to the Privacy Pledge and Policy posted on [Turnitin.com](https://turnitin.com), and you will retain all rights to your written work.

Late policy: Each phase of your research report is due in .docx format via Moodle by noon on the designated day. A 10% deduction will be applied for assignments or papers that are not uploaded to Moodle on time. An additional 10% deduction will be applied for each 24-hour period thereafter that the assignment or paper is late up until 1-week at which point a grade of 0 will be given. **No exceptions will be made, even for excused absences.**

Paper due: Wed., Feb. 11

Day 1: Submitted after noon on Feb. 11, but before noon on Feb. 12	10% deducted
Day 2: Submitted after noon on Feb. 12, but before noon on Feb. 13	20% deducted
...	
Day 7: Submitted after noon on Feb. 17, but before noon on Feb. 18	70% deducted
1-week late (or later)	100% deducted

Grading

There are 500 total possible points in this class. Your total is determined by the sum of scores you receive on each of the items below.

Quiz 1 (10 pts.)	+	Quiz 2 (10 pts.)	+	Quiz 3 (10 pts.)	+	Quiz 4 (10 pts.)	+	Quiz 5 (10 pts.)	+	Quiz 6 (10 pts.)	+	Quiz 7 (10 pts.)	=	50 pts.		
Lab 1 (20 pts.)	+	Lab 2 (20 pts.)	+	Lab 3 (20 pts.)	+	Lab 4 (20 pts.)	+	Lab 5 (20 pts.)	+	Lab 6 (20 pts.)	+	Lab 7 (20 pts.)	=	120 pts.		
Topic Idea (15 pts.)	+	Annotated Biblio. (25 pts.)	+	Peer Review (30 pts.)	+	Introduction/Method (50 pts.)									=	120 pts.
		Participation (10 pts.)	+	Block Exam 1 (100 pts.)	+	Block Exam 2 (100 pts.)						=	210 pts.			

Total = 500 pts.

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
100 – 93%	92 – 90%	89 – 87%	86 – 83%	82 – 80%	79 – 77%	76 – 73%	72 – 70%	69 – 67%	66 – 63%	62 – 60%	< 60%
500 – 464.5	464 – 449.5	449 – 434.5	434 – 414.5	414 – 399.5	399 – 384.5	384 – 364.5	364 – 349.5	349 – 334.5	334 – 314.5	314 – 299.5	≤ 299

Academic Integrity

I expect scholastic honesty and will report all instances of suspected dishonesty. **Policy violations may result in a score of 0 for an assignment and possibly a failing grade for the course.** According to the WOU Code of Student Responsibility (Section 574-31-030), academic dishonesty includes, but is not limited to:

- **Cheating:** Intentional use or attempted use of artifice, deception, fraud, and/or misrepresentations of one's academic work.
- **Fabrication:** Unauthorized falsification and/or invention of any information or citation.
- **Facilitating dishonesty:** Helping or attempting to help another person commit an act of academic dishonesty. This includes students who substitute for other persons in examinations or represent as their own papers, reports, or any other academic work of others.
- **Plagiarism:** Representing without giving credit the words, data, or ideas of another person as one's own work in any academic exercise. This includes submitting, in whole or part, prewritten term papers of another or the research of another, including but not limited to, products of commercial vendors who sell or distribute such materials.
- Any use or attempted use of electronic devices (e.g., cell phones, iPads, laptops, etc.) in gaining an illegal advantage in academic work in which use of these devices is prohibited.

Course Schedule – Winter 2019

(subject to change)

Date	Lectures to Watch	Readings	Quiz/ Assignments	(Suggested) Time Management
Block 1				
Wed. Jan. 9	N/A	N/A	Math quiz (0 pts.)	Plagiarism cert.
Wed. Jan. 16	Research Methods Experimental Design APA Style	1.1 – 1.2 1.3 N/A	Quiz 1/Lab 1 Topic idea due (Sun., Jan. 20)	Topic idea
Wed. Jan. 23	Scales of Measurement Frequency Distributions	1.4 1.5, 2-1 – 2.4	Quiz 2/Lab 2	Annotated bib.
Wed. Jan. 30	Central Tendency Variability	3.1 – 3.6 4.1 – 4.4, p. 109 – 111	Quiz 3/Lab 3 Annot. bib. due	I/M draft
Wed. Feb. 6	Z-Scores Distribution of Sample Means Probability & Sample Means	5.1 – 5.2 7.1 – 7.2 6.2 – 6.3, 7.3 – 7.5	Quiz 4/Lab 4	
Wed. Feb. 13	BLOCK EXAM 1			

Block 2				
Wed. Feb. 20	Specifying Hypotheses Logic of Hypothesis Testing Errors in Hypothesis Testing	p. 204 – 206 p. 207 – 212, 8.4 8.2, 8.6	Quiz 5/Lab 5 I/M draft to peer reviewer †	Peer review
Wed. Feb. 27	Single Sample T-Tests Effect Size Confidence Intervals	9.1 – 9.2 8.5, p. 260 – 262 p. 264 – 268	Quiz 6/Lab 6 Peer review due *	
Wed. Mar. 6	Independent Samples T-Tests Dependent Samples T-Tests Effect Size and C.I.s	10.1 – 10.2 11.1 – 11.2 10.3, 11.3*	Quiz 7/Lab 7	I/M
Wed. Mar. 13	Review for Exam		I/M due	

* except p. 296 – 297 & 326 – 327

† must be complete and submitted on time in order to perform a peer review for someone else

* must be submitted on time in order to receive a grade to ensure the student whose paper you're reviewing has enough time to make revisions based on your feedback

Final Exam Week				
Wed. Mar. 20 2 – 3:50 PM	BLOCK EXAM 2			

Research Report Timeline

