

# PSYC 300-B01 – Statistics in Psychology

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## Instructor

Dr. Martin Wiener

## Phone

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## Office Location

David King Hall, Room  
2055

## Office Hours

Wednesdays, 10:00am-  
11:50am, **or by  
appointment**

## Grade Criteria

<u>Grade</u>	<u>Percent</u>
A	90-100%
B	80-89.9%
C	70-79.9%
D	60-69.9%
F	Below 60%

**This course is entirely online. There are no required meeting times. Please read this syllabus very carefully to be sure you understand all aspects and requirements of the course.**

## Course Overview

*“Data is the sword of the 21st century, those who wield it well, the Samurai.” – [Jonathan Rosenberg, former Senior VP of Products at Google.](#)*

This course will cover the basics of statistics in psychology and the behavioral sciences. No matter what kind of psychology you are interested in (clinical, industrial, social, neuro, etc.), you WILL need to understand statistics. Even if you aren't interested in pursuing psychology as an academic major or career, having an understanding of statistics will provide you with a toolkit that you can use to better slice through the barrage of information that will be thrown at you throughout your lives.

This course is offered online, in an effort to provide a thorough introduction to students who may be unable to travel to campus. The structure of the course is designed such that students are expected to complete individual “modules” to advance through the course materials. You are expected to complete each module in order. Below you will find details with a **recommended timeline** for completing the course. If you wish, you may complete and submit the materials earlier than the deadline. However, since this class only lasts eight weeks, it is recommended that you take your time to go through the material as presented.

Each week, we will cover **two chapters** in the textbook, with the exception of the last week. These readings are required and essential to the course. Two lectures are posted per week, each one for a given chapter. In addition, a homework assignment is provided for the Lab (see Lab syllabus for more details). The homework assignments are due by 5pm on Friday of each week.

The instructor is available by email or phone throughout the entire session. You may email or call with questions, comments, concerns, etc. Throughout the semester, all emails or voice mails will be answered within 2 business (i.e., M-F) days – although responses will usually come within 1 business day, please allow 2 business days. During the first week, the instructor will be online and checking email and voice mail even more frequently, and will endeavor to answer all questions within several hours.

A discussion board will be available for this course. If you e-mail the instructor with a question regarding any of the material, your question (and the answer) will be posted to this discussion board so that other students will be able to see the question and the instructor's answer. In this case, the question will not be linked back to your name.

## Required Text and Resources

Statistics for the Behavioral Sciences (3<sup>rd</sup> edition), *Gregory J. Privitera*. Thousand Oaks, CA: Sage Publications. ISBN: 978-1-4522-8690-7

Online support can be found at: <https://edge.sagepub.com/priviterastats3e/student-resources>. It is highly recommended that you use these online student resources, as they provide an excellent overview of the textbook materials.

Additional support can be found by viewing the excellent resource available at <http://students.brown.edu/seeing-theory/>. Here, you will find visual examples of many of the concepts we will be covering in class. I encourage all of you to take a look.

### Evaluation Criteria

1. **Exams:** Four exams will be given, including a cumulative final. Exams will be administered every two weeks of the course. **Exams must be completed before each deadline.** *Each exam will cover the material for the preceding chapters since the last exam.* Students may not use any course materials (textbook, notes, online resources, etc.) during the exam. The only item you will need is paper for determining the answers, and a calculator. All exams must be completed in **two hours**. To ensure that this time limit is adhered to, all exams will be timed in Blackboard – once an exam is begun, **it must be completed within two hours**. Also, exam questions will be randomly selected **for each student**, so no student will take the same exam. To assist with completing the exam, each exam will come with a formula sheet containing all the formulas that were covered during the preceding portion of the class. Please note that, just because a formula is on this sheet does **not** mean that it is necessarily to be used to answer a question.

In addition, your lowest exam score from the **first three exams** will be dropped. This does not include the final exam, which must be taken. The final exam will cover all material for the course, but will **emphasize the final three chapters**.

**Lectures:** As outlined above, two lectures are presented as videos for each week, accessible via Blackboard. In the course schedule below, you will see the recommended dates on which each lecture should be viewed.

2. **Lab Assignment/Participation:** The lab portion of this course accounts for 25% of your grade. Please see the lab syllabus for details. Each week there is a homework assignment that will be due to the Lab instructor. You will be expected to download the homework assignment, provide the answers, and e-mail it to the instructor. The lab instructor is available via e-mail as well for any questions about these assignments. In addition, we have reserved a room on campus where the instructor will be available for a specified time each week, in case students are interested in coming in person to discuss or go over homework materials.

### General Policy

Honor Code: George Mason University has an Honor Code, which requires all members of this community to maintain the highest standards of academic honesty and integrity. Cheating, plagiarism, lying, and stealing are all prohibited. All violations of the Honor Code will be reported to the Honor Committee. See [honorcode.gmu.edu](http://honorcode.gmu.edu) for detailed information.

Disability Statement: If you are a student with a disability and you need academic accommodations, please see me and contact the Disability Resource Services (DRS) at 703-993-2474. All academic accommodations must be arranged through that office. Please see me as soon as possible about this, as I will not adjust grades for exams after they have been given.

Make-up policy: Make-up exams will only be given if exceptional circumstances are claimed AND substantiated. I must see proof of what you are claiming to verify that it is true.

Add/Drop Deadlines: Please note that the *last day to add classes* is **June 4<sup>th</sup>**. The last day to drop a course *with no tuition penalty* is also **June 4<sup>th</sup>**. The final day to drop *with a 50% tuition penalty* is **June 10<sup>th</sup>**. After June 10<sup>th</sup>, withdrawal from the class is unrestricted until June 18<sup>th</sup>, after which the selective withdrawal period, for undergraduates only, lasts until July 7<sup>th</sup>.

Official Communications via GMU E-mail: Mason uses electronic mail to provide official information to students. Examples include communications from course instructors, notices from the library, notices about academic standing, financial aid information, class materials, assignments, questions, and instructor feedback. Students are responsible for the content of university communication sent to their Mason e-mail account and are required to activate that account and check it regularly.

If class has to be canceled, you will be informed via e-mail. Information will be provided in the e-mail about making up the missed class.

**Technology:** For this class, the only requirement is that you bring a calculator with you. Powerful graphing calculators are not needed – all you will require is a calculator that can calculate square roots ( $\sqrt{\quad}$ ) and exponents ( $x^2$ ). Please note that calculators are necessary for completing the exams.

**Online Course Resources:** This course will be run through Blackboard. **It is extremely important to access Blackboard through the MyMason Portal – please follow these instructions:**

1. Go to <http://mymasonportal.gmu.edu/>
2. Login using your Mason ID and password (the same one you use for your GMU email account)
3. Click on the ‘Courses’ tab (toward the top right of the screen)
4. Go to the list of courses entitled “Course List” (in the **middle** of the screen)
5. Click on the link for Psys 300-B01

The class website in Blackboard will contain access to videos, assignments, the discussion board, exams, and other course resources. Nearly all course activities will take place in Blackboard, so it is important to login and begin to explore the various components in the first days of the semester.

**Course Schedule:**

Please note that the dates below are all the **recommended dates** for viewing the lectures and covering the material. The assigned chapters are expected to be read each week.

Week	Date	Lecture topics/Activities	Assigned reading
1	6/1	Introduction to Statistics	Chapter 1
	6/3	Summarizing Data: Frequency and Visualization	Chapter 2
2	6/8	Summarizing Data: Central Tendency	Chapter 3
	6/10	Summarizing Data: Variability	Chapter 4
	6/14	<b>Exam 1</b>	
3	6/15	Probability	Chapter 5
	6/17	Normal Distributions and the Central Limit Theorem	Chapter 6
4	6/22	Sampling Distributions	Chapter 7
	6/24	Hypothesis Testing	Chapter 8
	6/28	<b>Exam 2</b>	
5	6/29	Testing the Difference of Group Means	Chapter 9
	7/1	Testing the Difference of Condition Means	Chapter 10
6	7/6	Confidence in Statistical Estimates	Chapter 11
	7/8	Analysis of Variance Between Subjects*	Chapter 12

	7/12	<b>Exam 3</b>	
7	7/13	Analysis of Variance Within Subjects	Chapter 13
	7/15	Analysis of Variance: Factorial	Chapter 14*
8	7/20	Correlations*	Chapter 15
	7/22	Review of Materials	None
	7/24	<b>Final Exam</b>	

\*For Chapter 12, you are not responsible for sections 12.6 and 12.7 on Post-hoc tests

\*For Chapter 14, you are not responsible for section 14.6

\*For Chapter 15, you are not responsible for sections 15.2, 15.3, and 15.4 on Spearman, Point-Biserial and Phi Correlations.