

Quantitative Methods in Psychology

01:830:200, Section B2

May 29 – July 5th 2012 | M - TH, 1:50 PM - 4:30 PM, LCB-102

Instructor: Leigh Wilton

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Office: 515 Tillet Hall

Office Hours: Wednesdays 12:00-1:00 pm, by appointment

Course Materials

Text: Kiess, H.O., & Green, B.A. (2010). Statistical Concepts for the Behavioral Sciences, 4th edition, Allyn & Bacon. ISBN-10: 0205626246; ISBN-13: 978-0205626243

Please bring your textbook and a calculator to class every day, and refer frequently to the course website (<http://sakai.rutgers.edu>) for additional materials, assignments, and class updates. You do not need to purchase a special calculator for this class, but make sure it can perform basic computations required in statistics (e.g., taking the square root). Cell phone calculators often don't do many of the functions you will need for this course, and are not permitted on exams or quizzes. Additional materials (e.g., lecture slides, assignments, announcements) will be posted on the course website; it is each student's responsibility to remain current with all postings.

Course Goals and Structure

This course is designed to provide a basic introduction to statistics and quantitative methods for the behavioral sciences (specifically psychology), including (1) the meaning of statistics that are widely used in social sciences and often cited in the media, (2) theories behind these statistics (3) why and when to use different statistics in evaluating data, and (4) how to perform the calculations by hand. These skills are essential to understanding and evaluating research articles and media reports, as well as performing your own research.

To achieve the course goals we will explore examples in class, discuss relevant methodologies, work through statistical analyses together, and complete assignments to reinforce understanding of statistical techniques. We will also work in groups to discuss issues in statistics, develop ideas for experiments, and discuss how research in psychology relates to current events and the broader community.

Grading and Evaluation

Your final grade will be comprised of the following five components:

25% **Midterm**

25% **Final**

20% **Quizzes**

15% **Homework**

15% **In-class assignments**

The grading scale is as follows:

A = 90% or above	B = 80-84%	C = 70-74%	F = 59% or below
B+ = 85-89%	C+ = 75-79%	D = 60-69%	

Exams and Quizzes: There will be one midterm, one final, and four quizzes during this class. Each quiz is 5% of the final grade (for a total of 20% made up of quizzes). You may develop and bring a single 8x10" sheet of paper filled with formulas, notes, or general musings on statistics to each exam and quiz. These papers will be turned in to the instructor upon completion of each exam or quiz. Make up exams will only be allowed for fully documented (in writing) medical and family emergencies. If you need to miss an exam or quiz for an emergency please let me know as soon as is reasonably possible. Bring to the next class written documentation and a phone number and name for use in verifying the emergency.

Homework: Practice questions will be assigned after each class. They must be completed and turned in before the beginning of the next class period. A penalty of one point per day will be applied for late homework assignments unless we have made special arrangements *in advance*.

In-class assignments: In class we will complete individual and group projects designed to reinforce concepts and skills learned during lecture. Some projects will be assigned group grades, and some will be graded individually. If you are absent without notice and you miss an assignment, you will be unable to make up the work.

Attendance and Lateness: Because the course builds on material covered in previous sessions, **attendance is required**. Absences for family and medical emergencies or extreme events (e.g., picking up your Nobel Prize in Sweden) must be documented in writing (e.g., doctor's note) and with as much advance notice as is possible. Unexcused absences will impact your final grade.

Extra Credit: Extra credit may be given for participating in research studies that take place at Rutgers. Each study that you participate in will add one point to your final exam grade, up to a maximum of 3 additional points. Research participation opportunities will be announced in class.

Academic Integrity: Please familiarize yourselves with Rutgers' Policy on Academic Integrity (<http://teachx.rutgers.edu/integrity/policy.html>), which includes cheating, plagiarism (including the internet!), and facilitating violations of academic integrity. Anyone suspected of committing an act of academic dishonesty will be reported to the Disciplinary Committee; those found to have done so will, *at the very least*, receive an F for the course.

Students With Disabilities: Any student who feels he or she needs accommodation for a physical or learning disability should contact the Office of Disability Services (151 College Ave, Suite 123; phone 732-932-2848) and read more about Rutgers' policy (<http://disability/services.rutgers.edu>). If you request accommodations for this course, you will need a letter from Disability Services. This letter must be provided to me by our second class, at which point you may make a request for course-specific accommodations. The Chair of Undergraduate Psychology and I will review your request and may choose to modify it before it is approved.

Summer 2012 Schedule

Please note that this schedule is **tentative; any changes will be announced in class and on Sakai.*

Week	Class	Day	Chapter(s)	Topic	HW
1	1	5/29	1	Introduction to Statistics	1
	2	5/30	3 & 4	Frequency Distributions & Central Tendency	2
	3	5/31	2	Scientific Research; Review (Ch. 1-4)	3
2	4	6/4	5	Quiz (Ch 1-4); Variability	4
	5	6/5	6	Distributions, Probability, Standard Scores	5
	6	6/6	7	Inference & Estimation; Review (Ch. 5-7)	6
	7	6/7	8	Quiz (Ch 5-7); Hypothesis Testing	7
3	8	6/11	9	Experimentation & Testing Differences	8
	9	6/12		Testing Differences	
	10	6/13		Review (Ch. 1-9)	
	11	6/14		Midterm (Ch. 1-9)	
4	12	6/18	10	One-Factor Between Subjects ANOVA	9
	13	6/19	11	Two-Factor Between Subjects ANOVA	10
	14	6/20		Review (Ch. 10 & 11)	11
	15	6/21	12	Quiz (Ch. 10 & 11); One-Factor Within-Subjects ANOVA	
5	16	6/25	13	Correlation	12
	17	6/26	14	Regression	13
	18	6/27	15	Nonparametric Tests; Review (Ch. 12-15)	14
	19	6/28		Quiz (Ch. 12 – 15); Review	
6	20	7/2		Review (Ch. 1-15)	
	21	7/3		Final (Ch. 1 – 15)	
	22	7/4		No Class – Happy 4 th of July	
	23	7/5		No Class – Happy 4 th of July	