

Introductory Statistics for Behavioral Scientists
PSYC W1610
Fall 2010
Syllabus

General Information

Instructor: Brian C. Rakitin
Course Hours: MW 10:35 - 11:50 AM
Course Location: Room 200B Schermerhorn Hall
Office Hours: Monday 12-1PM, or by appointment
Office Location: 356 Schermerhorn or in classroom
Phone: 212-305-7476
E-mail: br130@columbia.edu
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Teaching Assistants

Name	Dobormir Rahnev	Rahia Mashoodh	Katherine Thompson
Lab Section	PSYC W1611.003.2010.3	PSYC W1611.002.2010.3	PSYC W1611.001.2010.3
Lab Hours	F 10:10-12 pm	R 6:10-8 pm	R 4:10-6 pm
Office Hours	F 12-1pm	W 4-5pm	M 2-3pm
Office	Sch 312	Sch 318c	Sch 318c
email	dar2131@columbia.edu	rm2713@columbia.edu	kjt2111@columbia.edu

Please feel free to stop by during any of our office hours. If you would like to make an appointment with any of us, it is usually best to contact us by e-mail, or you can try to check in with us before or after class.

Course Description

This course is designed to introduce you to basic concepts in statistics with an emphasis on understanding the structure of data, the graphical representation of data, how to summarize data, the mathematical notation for statistics, the structure of an inferential statistical problem, and the most common statistical techniques employed in psychological science. It is NOT a class in mathematical statistics. The goal of this course is to give students both a theoretical understanding of basic statistical techniques and experience with real data that will allow students to recognize when and how to apply those basic techniques as they move forward with their education in psychology.

In addition to the lectures, this course has a mandatory laboratory section that meets once a week. All students registered for PSYCH W1610 must also register for one of the PSYC W1611.00X sections. Lab activities will include homework sets, problem solving workshops, and data analyses in excel and SPSS.

Degree requirements:

- PSYC W1610/1611 will meet the statistics requirement of the Psychology and Neuroscience and Behavior majors in the College and in G. S., provided that the student achieves a final grade of C- or better.

Course Requirements

Lecture Attendance

Regular class attendance is an important part of this course. In addition to lecture material, classroom presentations may include demonstrations and group projects.

Because of the nature of the material, students may find it very useful to bring computers to class. Please be respectful of your fellow students. Do not play games, surf the web, or conduct other non-class related activities during class. Disruptive students may be asked to leave the classroom. All cell phones must be turned off at the

beginning of class.

Laboratory Attendance and Assignments

Laboratory projects and homework will include problem sets and data description and summary exercises to be completed in class or by 9AM the day of the next lab meeting, as instructed by your TA. These projects will require use of data handling and statistical packages such as SPSS and EXCEL.

Attendance at each laboratory section meeting is MANDATORY. Your lab grade may be penalized for unexcused absences or lateness, in addition to lack of participation in lab exercises and discussions.

Exams

There will be a midterm and a final exam. Questions may come from the lectures, the labs, or the text. Three formats of questions are likely: 1) computational problems to be solved by hand (bring your calculator), 2) conceptual short answer questions, 3) multiple choice questions.

If you will be unable to attend any of the exams, please let the instructor or TA know as soon as possible. Vacation travel plans are not an acceptable reason for missing an exam. If you miss an exam due to a documented illness or family emergency, you will be permitted to take a make-up exam with permission from your dean and me. You must contact me with your intention to take a make-up exam as soon as possible, preferably by the day of the exam. Make up exams will be scheduled no later than 5 class days after the exam, and exam times are subject to the availability of the teaching assistants.

Grading

Neither laboratory assignments nor the exams will be graded on a curve. Exam grading is based on a scaling formula that considers the range of raw test scores, preserves the relative distance and ordering of scores among students, and eliminates competition for a fixed number of each letter grade. Students will be permitted to review their exams at times set by the TAs, and contest grading. Professor Rakitin, not the TAs, is the sole final arbiter of contested grades.

Your total number of points for this course will be calculated as follows:

Exam 1 – 25%

Exam 2 – 35%

Laboratory Assignments – 30%

Attendance and Participation – 10%

Students with Disabilities

Students with disabilities who will be taking this course and may need disability-related classroom accommodations are encouraged to make an appointment to see me as soon as possible. Also, stop by the Office of Disability Services (ODS) in Lerner Hall, Suite 802 to register for support services, if you have not done so already. Students who are eligible for extra exam time should be certain to fill out the appropriate paperwork at the Office of Disability Services. Once I have received confirmation of your status, I will be able to make arrangements for additional exam time. Note that ODS often requires 2 weeks to process an application, so don't wait until midterm week to get in touch with them.

Schedule of Classes (Subject to change!)

Date	Day	Topic	Reading
Sept 8	Wed	Introduction. What is statistics?	Chapter 1
Sept 13	Mon	The structure of a statistical problem.	
Sept 15	Wed	Organizing and illustrating data.	Chapter 2
Sept 20	Mon	Central tendency 1	Chapters 3-5
Sept 22	Wed	Central tendency 2	Chapters 3-5

Sept 27	Mon	Variability 1	Chapters 3-6
Sept 29	Wed	Variability 2	Chapters 3-6
Oct 4	Mon	TBA	
Oct 6	Wed	Probability & the normal curve 1	Chapters, 6, 11, 14-18
Oct 11	Mon	Probability & the normal curve 2	Chapters, 6, 11, 14-18
Oct 13	Wed	Samples and populations 1	Chapters, 6, 11, 14-18
Oct 18	Mon	Samples and populations 2	Chapters, 6, 11, 14-18
Oct 20	Wed	Review & Q & A	
Oct 25	Mon	Midterm	
Oct 27	Wed	Testing differences between means 1	Chapters 23, 24
Nov 1	Mon	<i>Academic Holiday</i>	
Nov 3	Wed	Testing differences between means 2	Chapters 23, 24
Nov 8	Mon	Analysis of variance 1	Chapters 28, 29
Nov 10	Wed	Analysis of variance 2	Chapters 28, 29
Nov 15	Mon	Non-parametric tests of significance 1	TBA
Nov 17	Wed	Non-parametric tests of significance 2	TBA
Nov 22	Mon	Correlation 1	Chapters 7-10
Nov 24	Wed	Correlation 2	Chapters 7-10
Nov 29	Mon	Regression 1	Chapters 7-10
Dec 1	Wed	Regression 2	Chapters 7-10
Dec 6	Mon	Non-parametric measures of correlation 1	TBA
Dec 8	Wed	Non-parametric measures of correlation 1	TBA
Dec 13	Mon	Review & Q & A	
TBA	TBA	Final	

Readings

	ISBN	Title	Author	Publisher	Copyright Date	Price
Required						
1.	9780321433794	Stats :data and models	Richard D. De Veaux, Paul F. Velleman, David E. Bock.	Boston :Pearson, Addison-Wesley,	©2008.	\$144.00