

**Research Design and Data Analysis  
Psychology 101, Course number 73938**

**Spring, 1998**

**Class:**

Lecture: Tuesday and Thursday 9:30 to 11:00, in 100 GPB. Please be on time!  
Section: See *Computer Lab Section* below.  
Final: Exam group 9, Monday May 18, 5-8 PM.

<b>Instructor:</b>	<u>Phone</u>	<u>EMail</u>	<u>Office</u>	<u>Office Hours</u>
Jack Gallant	642-2606	gallant@socrates	3311 Tolman	Tu 11-12
<b>GSI:</b>				
Casey Ballentine	642-5148	caseyb@socrates	3330 Tolman	TBA
Robert Branstrom	642-5292	branstrm@socrates	5325 Tolman	TBA
Keith Brown	642-5292	ksb@uclink3	5309 Tolman	TBA
Erin Heerey	642-2055	erinah@socrates	3330 Tolman	TBA

**Overview of Class:**

The class covers experimental design, statistical reasoning and statistical methods appropriate for psychological research. The class meets three times per week: two general lectures and a computer lab/discussion section. The lectures will emphasize the intuitive understanding of statistical reasoning, while the lab sections will focus on data analysis. The lectures will contain a large amount of material that is not available in the textbook, but that may help you gain a more intuitive understanding of the material. (Black Lightning lecture notes are available for those of you who have to miss a lecture.) The sections will include a review of material presented in class, simulation and analysis carried out on the computer, homework assignments and quizzes. **Attendance at sections is required for the class!**

**Computer Lab Section:**

Computer lab sections will meet in room 5316 Tolman Hall at the following times:

<u>Section</u>	<u>Weekday</u>	<u>Time</u>	<u>GSI</u>
107	Monday	9-11	Erin Heerey
108	Monday	11-1	Casey Ballentine
109	Monday	1-3	Keith Brown
101	Wednesday	9-11	Robert Branstrom
102	Wednesday	11-1	Robert Branstrom
103	Wednesday	1-3	Keith Brown
104	Wednesday	3-5	Casey Ballentine
105	Friday	9-11	<i>CANCELED</i>
1-6	Friday	11-1	Erin Heerey

It is EXTREMELY IMPORTANT that you show up to the first meeting of your assigned section (the second week of class). If you miss your section you may lose your spot, in which case you will have to shop for a slot in a different section. The GSIs will put a swapboard up outside of 5316 Tolman for people that want to switch sections. You *must* have your final section assignment by the end of the third week of class (February 6).

NOTE: One of these sections has been CANCELED. Students who have signed up for this section will have to select a different section, but will have first choice of the available slots. Please arrange this ASAP with the GSI who is responsible for the section you are interested in. (This must be arranged by February 6.)

**Tests and Homework:**

There will be two midterms and a final covering material covered in the assigned readings, the lectures and the lab. The tests will be cumulative, but will be weighted toward the most recent material. Special exams will be given when necessary in accordance with University policy. See your GSI to arrange such exams. Most weeks will include additional assignments. Some of these can be completed in the computer lab while others will be assigned as homework. All homework and computer assignments

will be due at the beginning of section the following week. Students will be expected to abide by all the rules and regulations of student conduct and ethical academic behavior issued by the Student Conduct Office.

**Grades:**

Grades will be based on performance in the computer lab, homework, midterms and final.

Computer Lab/Homework	25%
Midterm 1	20%
Midterm 2	20%
Final	30%

**Extra Credit Project:**

If you choose you may conduct an extra credit project. The extra credit project must be a research project of your own design, including data acquisition, data analysis and a final write up (10 double-spaced pages, in APA format). The project can be conducted in a team of two if you wish, though in this case each of you must turn in your own final paper (i.e. the final write-up must be separate).

If you are interested in doing an extra credit project, you must submit a 2 page proposal to your GSI by the second midterm. The proposal should describe the experimental hypothesis and proposed data acquisition and analysis procedures. The project must be approved by the GSI before it will be accepted as extra credit. For this reason it is strongly recommended that you meet with your GSI to discuss the project well in advance of the proposal deadline. Extra credit projects must be turned in along with your final.

The project will be assigned a score from 0-3, and that score will be applied to your final grade score, boosting it from 0-3 grade steps. (Thus a score of 1 would move you from a B to a B+, a score of 2 could move you from a B+ to an A, and a score of 3 could move you from a C to a B. You would receive no grade enhancement for a score of 0. It should be obvious that this scheme is based on the assumption that each grade level, A, B, C and so on, has three steps, B-, B, B+ and so on.)

NOTE: This will not be an easy project! It will be time consuming and difficult, though you will learn a lot from it. You should only consider this if you are going to take it seriously.

**Wait List Policy:**

(1) All Seniors on the wait list will be accepted into the class. (2) Students who have declared a major other than Psychology must petition to be admitted. To arrange this, see the GSI that is running the section to which you would like to be admitted. (3) Students who have not yet declared a major can be admitted only with the permission of the instructor. (4) Concurrent enrollment students can be admitted with the permission of the instructor. No one will be accepted from the wait list after the end of the third week of classes (February 6), so be sure to resolve this issue early.

NOTE: The Psychology Department has decided that no one will be admitted to the major simply because they have taken Psych 101. You can only be admitted to the major if you have fulfilled all of the prerequisites and other requirements for the major. (Psych 101 is not a prerequisite, but a requirement for the major.)

**Important Dates to Remember:**

Last Day to Move off Wait List:	Feb 6
Midterm 1	Feb 19
Midterm 2	Apr 2
Final	May 18, 5-8 PM

**Course Text:**

The textbook for the class is *Statistical Methods in Education and Psychology* (third edition) by Gene Glass and Kenneth Hopkins. This textbook is fairly clear but it contains much more information than will be covered this semester. (Of course you are welcome to read unassigned sections if you wish, but tests will only cover material presented in the assigned sections, as well as other material presented in class.) Lectures will include substantial material and methods that are not discussed in the book, but which will be on the tests.

If you would like additional information on the Monte Carlo and randomization methods discussed in the lectures (but not in the Glass & Hopkins text), I recommend Brian F. J. Manly, *Randomization, Bootstrap and Monte Carlo Methods in Biology*, Chapman and Hall (ISBN 0412721309). If you would like additional information on ANOVA (the most common statistical method in Psychology), I recommend Geoffrey Keppel, William Saufley and Howard Tokunaga, *Introduction to Design and Analysis* (second addition), W.H Freeman (ISBN 0716723212). Both of these books can be obtained within a few days from Amazon.com (<http://www.amazon.com>).