

# Cognitive Science 14 Syllabus

Spring 2009

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## Instructor

[David Groppe](#)

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## Teaching Assistants

Kathleen Brumm  
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## Instructional Assistants

Gopal Kamath  
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Ben Topkins  
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Office Hour: Tue 12:30-1:30 PM  
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## Class

Lecture Tu/Th 3:30-4:50 PM Center Hall, Room 212

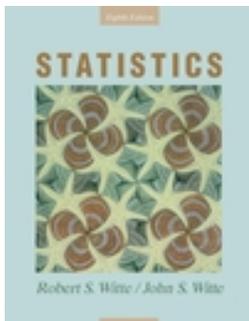
Lab	W 12-12:50 PM	Applied Physics & Mathematics, Room B432 (Ben, Leo)
Lab	W 1-1:50 PM	Applied Physics & Mathematics, Room B432 (Gopal)
Lab	Th 10-10:50 AM	Applied Physics & Mathematics, Room B432 (Kathleen)
Lab	Th 11-11:50 AM	Applied Physics & Mathematics, Room B432 (Kathleen)
Final	6/8, M 3-5:59 PM	Room TBA

## Goals

The purpose of this class is to introduce students to the basic concepts and tools necessary for doing quantitative research in the cognitive sciences. By the end of the class, students should be familiar with the practice and terminology of the scientific method (e.g., dependent & independent variables, observation vs. experimentation). They should also know basic techniques for visualizing, describing, and making inferences from data. The focus of the class will be on conceptual understanding and will cover only a few statistical analyses.

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## Textbook



**Statistics, Eighth Edition,**  
Witte, R.S. & Witte, J.S, 2007.

There are five copies of the textbook on reserve at the Social Sciences and Humanities desk at Geisel Library. Their call number is [ORC 60](#). Click the link to check availability.

In addition to the textbook, I will provide supplementary notes and readings for some lectures.

I will post my lecture slides to facilitate your note taking. Note that you will still need to attend lecture in order to understand the slides. Podcasts of all lectures will be available at [podcasts.ucsd.edu](http://podcasts.ucsd.edu).

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## Software

"R" is a freely available, professional quality statistics software package. There are versions for Macs, Windows, and Linux. You can download it and access helpful manuals and discussion boards from [www.r-project.org](http://www.r-project.org). R is available on Macs in lab, but what we do on Macs should generalize to other operating systems. [Here](#) is a list of R tutorial documents. We will



provide you with examples for everything you will need to do with R on the class calendar.

Two helpful guides to get started are:

[An Introduction to R](#)

[Using R for Introductory Statistics](#)

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## Lab

Weekly lab attendance is not required but is highly encouraged. Labs will give students a chance to go over concepts and tools covered in lecture using R and an opportunity to get help on homework problems.

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## Grading

<b>Assignments</b>	24%
<b>Midterm I</b>	20%
<b>Midterm II</b>	20%
<b>Project</b>	6%
<b>Final</b>	30%

About half of the homework will be done online via WebCT. You will be able to check your answers to these problems online before they are due (i.e., you will be able to find out if an answer is correct or incorrect). Assignments are due by the end of class on the assigned due date. Late homework will be accepted one lecture after the original due date (e.g., if an assignment is due on Tuesday, it will be accepted at Thursday's lecture but not next Tuesday's) for a 10% penalty. There will usually be WebCT assignments and a written assignment each week.

The midterms and final will be in-class exams. You will be allowed one sheet of notes and a calculator as you do the exams. **We do NOT offer make-up exams.**

In addition to the homework and exams, you will design and execute a simple experiment or observational study in collaboration with a small group of other students. You will collect your own data, present and analyze the data using the tools covered in class, and write up your results. The write up will be due at the final exam.

Each of the above five components of the overall class grade will be individually curved if necessary.

For 1% or 2% extra credit, you can participate in an experiment at a UCSD laboratory. Click [here](#) for more information. As an alternative means of extra credit, you can read do a reading assignment and answer questions about the reading. Click [here](#) for the extra credit reading assignment. The maximum extra credit you can earn in the class is 2%.

For an example of how your overall class grade will be computed click [here](#).

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## Cheating

Most of what I have to say about cheating is taken from [UCSD Prof. Emeritus David Jordan](#). I agree with Prof. Jordan's definition of cheating as:

- pretending that somebody else's work is yours so that you can get a higher grade than your own work merits
- falsifying data
- lying in order to extend a deadline or gain some other special advantage
- helping other people to do any of these things

The following are examples of cheating:

- copying answers on tests
- using prohibited reference materials (such as notes or books) during an exam
- turning in homework that you have not written yourself
- attempting to get credit for a group project that you did not contribute to
- quoting material without marking it as quoted and without attributing it to its source (or closely paraphrasing material without attributing it to its source)
- misrepresenting a medical or family emergency or other personal contingency in order to delay a scheduled exam or to get extra time on an assignment
- modifying graded material and then resubmitting it to "correct the error in grading"
- describing research deceptively or research that never happened

The following actions are perfectly acceptable:

- to study and to solve practice problems with other students outside of class
- to share notes with other students
- to divide the group project workload among members of the group
- to look at exams or papers from previous years or other classes if they happen to come your way

Here is UCSD's official policy on [academic integrity](#).

Prof. David Jordan of UCSD has written a much more readable [guide](#) to academic integrity at UCSD.