

COGS 14A: Introduction to Research Methods

Summer 1, 2015; M W, 2-4:50pm

*** subject to change ***

1 Personnel

Instructor

Tyler Marghetis (tmarghet@ucsd.edu)
www.cogsci.ucsd.edu/~tmarghet
Office hours: Wednesday, 1-2, SSRB 203

2 Official Course Description

The official description: "Introduction to the scientific method. Methods of knowledge acquisition, research questions, hypotheses, operational definitions, variables, control. Observation, levels of measurement, reliability, validity. Experimentation and design: between-groups, within-subjects, quasi-experimental, factorial, single-subject. Correlational and observational studies. Ethics in research."

In other words: How do scientists think and what do they do? What about *cognitive* scientists? What is good science? What is bad science? What is evil science?

3 Course Description

This is the course in which you learn how cognitive scientists think—and how, yourself, to think like a scientist. Most days will involve ~80 minutes of lecture, two 15 minute discussions of the methods used in a published article, and around 45 minutes of small-group activities. We will take a snack-break in the middle.

4 Required Materials

1. *iClicker2*
 - www.iclicker.com/Products/iclicker2/
 - The original iClicker also works
 - Register in TED

5 Supplementary (Optional) Materials

2. *Research Methods in Psychology* (3rd ed.), by Wendy Schweiger
 - A copy is on reserve in Geisel

6 Requirements and Evaluation

This course requires in-class participation, two assignments per week culminating in a “Research Portfolio,” a group presentation, a midterm, and a final exam.

6.1 Breakdown of Final Grade

- Participation: 5%
- Paper Presentation: 10%
- Midterm Exam: 20%
- Final Exam: 30%
- Research Portfolio: 30%
- Bonus: Experiment Participation: +2%

Additional details on assignments and exams will be provided in class.

6.2 Engagement and Participation (5%)

Objective: Critical reflection is crucial to understanding and mastery. To encourage genuine engagement, part of your grade will come from participation in peer-discussion during lecture.

Here’s the deal: I want you to put in the effort to read, reflect, and participate during lecture. In return, you can earn these easy points toward your final grade.

We will be using Peer Instruction, a pedagogical technique in which students periodically break into small groups for discussion. We will use the iClicker system to record the outcomes of these discussions, so you must buy an iClicker (available, new and used, at the campus bookstore). You must click in for at least 75% of a class’s questions to receive credit for that session. You can miss 1 class without losing points, thus allowing for funerals, births, illness, etc. You will not be graded on whether you indicate the “correct” answer—only for participating.

6.3 Research Design Portfolio (30%)

Objective: Learn to think critically about existing research and develop the skills to develop new studies.

Instructions: During most class meetings, you will work in small groups on an assignment that will give you practice with some aspect of research design. These will make up a “research design portfolio” that you will submit at the end of the course. To make sure that you are keeping up with the work, you will also submit each assignment before the next lecture.

Grading:

The final portfolio, including one complete IRB application, will be worth 30% of your final grade. Each activity worksheet will contribute two percentage points to the final research portfolio.

Due dates: Posted to the ThisCourse website. You will use a Google form to submit each assignment.

6.4 Exams (20% for the midterm; 35% for the final)

Exams cover material from both lectures and readings. Format is multiple-choice, with multiple correct answers (to be discussed in class). Final exam is cumulative.

6.5 Experiment Participation

You can earn bonus points by participating in psychology experiments, using the SONA system (<http://ucsd.sona-systems.com>). Each hour of SONA participation is worth one percentage point, up to a maximum of two.

6.6 Grading Rubric

Course grades will be assigned according to the following scale:

- ≥ 97%: A+
- ≥ 93%: A
- ≥ 90%: A-
- ≥ 87%: B+, etc.

7 Course Policies

7.1 Electronic Devices

In order to maintain an engaging learning environment, all electronic devices must be turned off or silenced before the start of class. ***This includes tablets, laptop computers, and cellphones.*** If you have an outstanding reason for using your tablet or laptop (e.g. you prefer digital notes), then please discuss this with me before class. You should then sit in the front row. The only time when it is appropriate for anybody (and everybody) to open their laptop is if a classroom discussion hinges on a detail from one of the readings.

You may have a pressing reason for checking text messages or accepting phone calls during class (e.g. you or your partner is pregnant and the due date is approaching; you have children at home for whom you are responsible; a loved one is sick and you need to respond quickly to changes in their health). Please let me know at the start of class and, if necessary, step outside the classroom to use your cell.

7.2 Email

This policy is adapted with permission, sometimes verbatim, from Prof. Spring Duvall.

Please use email to share fun course-related content (e.g. articles that touch on course themes, relevant quotes from literature, etc.) or to set up a face-to-face

meeting. For more in-depth discussions (such as guidance on assignments) please plan to meet in person, either in my office hours or before or after lecture.

If you have questions about course mechanics, please do the following, in order: check the syllabus, ask other students in the course, ask your question during lecture, try to attend office hours, and only then send me an email.

If you cannot attend my office hours, please email me to set up an individual face-to-face meeting! I love chatting with students. I really do. Your message should include at least two timeslots when you would like to meet and a brief (1-2 sentences) description of the reason for the meeting. I am also available by Skype or by phone during office hours, in case you are able to talk but unable to come to campus.

In general, our conversations should take place in person or over the phone rather than via email, thus allowing us to get to know each other better and fostering a more productive, interactive learning atmosphere.

7.3 Accommodations for Disabilities

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD), which is located in University Center 202 behind Center Hall. Students are required to present their AFA letters to Faculty (please make arrangements to contact me privately) and to the OSD Liaison in the department in advance so that accommodations may be arranged. Contact the OSD for further information: 858.534.4382, osd@ucsd.edu, disabilities.ucsd.edu

7.4 Academic Misconduct

I check assignments for plagiarism and report all suspected cases of academic misconduct to the Academic Integrity Office. **I really do.**

Here's a brief blurb from the Academic Integrity Office: "Integrity of scholarship is essential for an academic community. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind."

In this class, you are encouraged to discuss assignments and readings with your peers. All assignments, however, must be written by you, must contain your own ideas and words, and must clearly indicate where the ideas or words of others have been incorporated into your assignment (e.g. include an appropriate citation). **This applies to *all* submitted work, including rough drafts.**

The general sentiment is this: We want you to acquire new knowledge and new skills. We also need to evaluate your mastery of that knowledge and those skills. Both these objectives demand that you do your own thinking and writing. If you're

ever unsure about whether something qualifies as academic misconduct, *please ask!* Asking if something counts as “cheating” is *encouraged*. We are very happy to have a friendly discussion about what counts as academic dishonesty.