

## BISC 305: Statistics for the Biological Sciences

**Lectures:** M, T, W, Th 10:00AM – 12:05PM, RRI 301

**Instructor:** Peter Calabrese, [petercal@usc.edu](mailto:petercal@usc.edu), 213-740-2434, RRI 403F

**Office hours:** M, W 12:05PM – 1:05PM, or by appointment

**Course Content:** Statistics for the Biological Sciences is an introductory course in statistics addressed to students in the life sciences. The learning objective is to illustrate statistical reasoning in biological science and medicine. The students will learn probability models, experimental design, statistical analyses, and interpretation of results. The course uses real data from life sciences.

**Textbook:** *Statistics for the Life Sciences* by M.L. Samuels, J.A. Witmer and A. Schaffner. Prentice Hall, 5th Edition.

**Grading:** There is a Midterm Exam and a Final Exam. There will be homework due every Tuesday and every Thursday. It is important that students do the homework: I believe that students learn the most when working on the homework. The homework will be a combination of problems from the textbook and assignments in R (R is a free computer program for statistics that we will introduce in lecture). A 50% grade deduction will be imposed for late homework, and no homework later than one week will be accepted. In addition, there will be two R projects. There will also be quizzes every Tuesday and every Thursday (there will not be a quiz the first week, and there will not be a quiz on the days when there are exams). The quiz on Tuesday will be on the content covered in the homework due the previous Thursday, and the quiz on Thursday will be on the content covered in the homework due two days earlier.

Assignment	Percentage of Grade
Homework	20
R projects	5
Quizzes	15
Midterm Exam	20
Final Exam	40

### Schedule:

Week 1	5/20 – 5/21	Chapters 1 and 2
Week 2	5/26 – 5/28	Chapters 3 and 4
Week 3	6/1 – 6/4	Chapters 5, 6, and Introduction to R
Week 4	6/8 – 6/11	Chapters 7, 8, and Midterm Exam
Week 5	6/15 – 6/18	Chapters 9 and 10
Week 6	6/22 – 6/25	Chapters 11 and 12
Week 7	6/29 – 6/30	Review and Final Exam

**Important Dates:**

Monday, 5/25 is a University Holiday (Memorial Day) so there will not be class

Thursday, 6/9 will be the Midterm Exam

Tuesday, 6/16 the 1<sup>st</sup> R project is due

Monday, 6/29 the 2<sup>nd</sup> R Project is due

Tuesday, 6/30 will be the Final Exam

**Statement on Academic Conduct and Support Systems****Academic Conduct:**

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, [policy.usc.edu/scientific-misconduct](http://policy.usc.edu/scientific-misconduct).

**Support Systems:**

*Student Health Counseling Services - (213) 740-7711 – 24/7 on call*

[engemannshc.usc.edu/counseling](http://engemannshc.usc.edu/counseling)

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

*National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call*

[suicidepreventionlifeline.org](http://suicidepreventionlifeline.org)

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

*Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 – 24/7 on call*

[engemannshc.usc.edu/rsvp](http://engemannshc.usc.edu/rsvp)

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

*Office of Equity and Diversity (OED) | Title IX - (213) 740-5086*

[equity.usc.edu](http://equity.usc.edu), [titleix.usc.edu](http://titleix.usc.edu)

Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.

*Bias Assessment Response and Support - (213) 740-2421*

[studentaffairs.usc.edu/bias-assessment-response-support](http://studentaffairs.usc.edu/bias-assessment-response-support)

Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.

*The Office of Disability Services and Programs - (213) 740-0776*

[dsp.usc.edu](http://dsp.usc.edu)

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

*USC Support and Advocacy - (213) 821-4710*

[studentaffairs.usc.edu/ssu](http://studentaffairs.usc.edu/ssu)

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

*Diversity at USC - (213) 740-2101*

[diversity.usc.edu](http://diversity.usc.edu)

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

*USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call*

[dps.usc.edu](http://dps.usc.edu), [emergency.usc.edu](http://emergency.usc.edu)

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

*USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call*

[dps.usc.edu](http://dps.usc.edu)

Non-emergency assistance or information.