

BISC 321: Multidisciplinary Seminar: Science, Technology and Society

Time and Location: Mondays 3:30-4:50 in ZHS 252

Instructor: Peter Calabrese

petercal@usc.edu

213-740-2434

RRI 403F

Office hours: Tuesdays 3:00-5:00 in RRI 403F, or by appointment

Introduction: This course is intended for students interested in the rapidly changing world of biology, biotechnology, and medicine. Every week we will have a different guest lecturer on a different topic. For a course such as this to succeed requires two things: (1) excellent lecturers, and (2) engaged students. I have taken care of the first part. I have scheduled lecturers, on a wide variety of topics, that are both great researchers and great presenters. I am excited to hear their lectures, and I think you will like them too. As for the second part, we want you to actively participate in the lectures, to ask questions, and to join a lively discussion. From experience, you will get more out of the lectures if you do some research beforehand. Some lecturers will provide a paper that they want you to read before their lecture, I will distribute these papers via Blackboard. For lecturers that do not provide a paper, do an internet search on the lecturer and their topic before the lecture.

Schedule:

January 7	Peter Calabrese Introductory Lecture
January 14	Ken Neilson Wrigley Chair in Environmental Studies and Professor of Earth Sciences and Biological Sciences, USC The Sustainable Campus Initiative (SCI): Fly On !!
January 21	Martin Luther King Day – no class
January 28	Dennis Hedgecock Paxson H. Offield Professor in Fisheries Ecology and Professor of Biological Sciences, USC Sustainable Seafood Aquaculture
February 4	Scott Fraser Provost Professor of Biological Sciences and Biomedical Engineering and Director of Science Initiatives, USC Multimodal and multidimensional analyses of complex biological systems
February 11	Stacey Finley Gordon S. Marshall Early Career Chair and Assistant Professor of Biomedical Engineering, Chemical Engineering and Materials Science, and Biological Sciences, USC

	Modeling the dynamics of biochemical reaction networks in cancer
February 18	President's Day – no class
February 25	David Agus Professor of Medicine and Biomedical Engineering; Director, Lawrence J. Ellison Institute for Transformative Medicine of USC; Director, USC Center for Applied Molecular Medicine Data driven health
March 4	Jerry Loeb Professor of Biomedical Engineering and Director of Medical Device Development Facility, USC From Haptic Robots to Bayesian Exploration to Differential Diagnosis
March 11	Spring Break – no class
March 18	Bodour Salhia Assistant Professor of Translational Genomics, USC
March 25	Steve Kay Provost Professor of Neurology, Biomedical Engineering and Biological Sciences, Director of Convergent Bioscience, USC Circadian Rhythms in Human Health and Disease
April 1	Neda Jahanshad Assistant Professor of Neurology, USC The genetic architecture of the human cerebral cortex
April 8	Andrew McMahon Director, Chair and W.M. Keck Provost Professor of Stem Cell Biology and Regenerative Medicine, and Biological Sciences Eli and Edythe Broad CIRM Center for Regenerative Medicine and Stem Cell Research at USC
April 15	Sherillelynn Lee Los Angeles Police Department, Forensic Science Division
April 22	John Carpten Professor and Chair of Translational Genomics; Director, Institute of Translational Genomics, USC Population and Tumor Heterogeneity in Cancer Genome Science

Weekly Reports (10 points each, 120 points total): A weekly report is due each week in lecture. This report will have two parts: (a) summary of the previous lecture, and (b) potential questions for this week's lecture. For part (a), you should state the name of the previous lecturer and discuss the important points raised during their lecture. For part (b), you should research the current week's lecturer and topic and pose several potential questions. The weekly reports should be typed, 1 page in length, consist of complete and grammatically correct sentences, on paper, and turned in in person during lecture. Electronic submissions will not be accepted. The grade for late submissions will be reduced 50% (so maximum 5 points).

Term Paper (30 points): A 3-5 page typed term paper is due on the last lecture, April 22. The topic of this paper may be a more in-depth exploration of a topic covered in

lecture (in which case the paper must include aspects of this topic that were not covered in lecture), or a biotechnology topic not covered in one of the lectures. Students should discuss their topic with me before April 1. Term papers must include a short bibliography citing primary sources.

Grades: Since there are no exams in this course, attendance and active participation in lectures, including asking questions, are essential. Your grade will consist of 120 points for the weekly reports and 30 points for the term paper (150 points total).

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. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

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

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

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, 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

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

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

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

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, 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

Non-emergency assistance or information.