

BISC 193 (Introduction to Research I), Fall 2020

Catalog Description

A series of lectures and discussions at which faculty of the department introduce their research activities to students entering biology and related majors. Co-requisite: BISC 120Lg or BISC 121Lg. Instruction Mode: Lecture. Grading Option: Credit/No Credit. 1 Unit.

Overview / Learning Objectives

One of the greatest advantages of studying at a research university is the opportunity to be taught, advised, and mentored by faculty members whose activities include creating new knowledge in their fields. This course will give students a chance to meet some of these faculty members, hear about their research, ask questions, and perhaps establish mentoring or advising relationships that will benefit students' career development. It is also designed to facilitate students' involvement in faculty-mentored research, i.e., finding positions in research laboratories. The course is intended for students at any level who are majoring in Biological Sciences, Human Biology, Quantitative Biology, Neuroscience, Health and Human Sciences, Health and Humanity, Environmental Science and Health, Human Development and Aging, Health Promotion and Disease Prevention Studies, and other programs with a life science emphasis. It will be valuable for students interested in careers in the health professions.

Instructor

Professor Albert Herrera, Neurobiology Section, Department of Biological Sciences

Contact Information: Office HNB 116, email aherrera@usc.edu, telephone (213) 740-9177

Office hours: By appointment, via Zoom video conferencing. Please email Dr. Herrera with times you would be available to meet.

Course Format

The course consists of eleven 50-minute seminars, on Tuesdays, 11:00-11:50 am. All seminars will be presented via live Zoom video conferencing. Links to the Zoom meetings will be posted on Blackboard (blackboard.usc.edu). Seminars will be recorded and archived on Blackboard. **However, because grading will be based primarily on students' participation (see below), attending and engaging in the live seminar is essential.** We will not meet on August 18 to give students time to acclimate to the new semester, nor on November 10 to give students extra time to prepare for final exams and assignments in other classes. Each meeting will consist of a seminar given by a faculty member, with time reserved for students' questions and comments.

Schedule (the schedule will be updated as necessary)

Wk	Date	Speaker	Title (<i>italicized titles are approximate</i>)
1	Aug 18	----- no class -----	-----
2	Aug 25	Albert Herrera	Introduction to undergraduate research, part 1
3	Sep 1	Albert Herrera	Introduction to undergraduate research, part 2
4	Sep 8	Albert Herrera	Introduction to undergraduate research, part 2
5	Sep 15	Matthew Dean	The evolution and development of genital bones
6	Sep 22	Chien-Ping Ko	How basic research helps to develop a therapy for a neurodegenerative disease Spinal Muscular Atrophy
7	Sep 29	Steve Finkel	Long-term survival and evolution of bacteria
8	Oct 6	Caleb Finch	Mal-convergent smokes: Air pollution and cigarettes

9	Oct 13	David McKemy	What peppers, peppermint and wasabi can tell us about cellular mechanisms of pain
10	Oct 20	Steve Kay	Rhythm research: Our 24-hour biological clock in health and disease
11	Oct 27	Remo Rohs	Quantitative studies of gene regulation
12	Nov 3	Myron Goodman	Better living through hypermutation
13	Nov 10	----- no class -----	-----

Textbooks

- There is no assigned textbook. Recommended supplemental material will be posted on Blackboard.

Blackboard <https://blackboard.usc.edu/>

- All course materials, information, and announcements will be posted on Blackboard until the end of the semester. Blackboard is to be used only for appropriate, course-related activities.

Grading

- Assigned grades will be Credit or No Credit. No letter grades will be assigned.
- Grading will be based on each student's engagement with the lecture presentations, judged primarily by asking of pertinent questions, discussion, and attentiveness. While credit is not given for solely for attendance, attendance is obviously necessary for participation. There will be no exams.
- At about the midpoint of the semester, each student will receive a brief report on their class standing.
- Credit will only be given for the items listed above. No extra credit will be given.

Impairments Affecting Your Performance

- Students occasionally encounter difficulties that affect their academic performance, such as illness, accidents, bereavement, depression, anxiety, learning disabilities, and other problems. If you encounter such difficulties, please contact one of the support services listed below, or bring them to the attention of one of the instructors. We may be able to offer accommodations. All such discussions will be confidential. Please seek help as soon as you feel your performance or well-being is affected.

Support Services

- Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents as soon as possible. Reporting such incidents is important for the safety of the whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. A list of offices to which one can report such incidents, as well as sources of support for other issues, follows.
- Student Health Counseling Services (213) 740-7711 – on call 24/7 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 (800) 273-8255 – on call 24/7 suicidepreventionlifeline.org
Free and confidential emotional support to people in suicidal crisis or emotional distress.
- Relationship & Sexual Violence Prevention Services (213) 740-4900 – on call 24/7
engemannshc.usc.edu/rsvp Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

- Office of Equity and Diversity - 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.
- 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. Please see section below entitled "Students with Disabilities" for important course-specific information.
- USC Support and Advocacy (213) 821-4710 studentaffairs.usc.edu/ssa
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 – on call 24/7 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.

Academic Integrity

- Our university depends on honesty, integrity, and ethical behavior among its members. Among other things, students' ethical behavior includes respecting the intellectual property of others, submitting individual work unless otherwise directed by the instructor, protecting one's own academic work from misuse by others, and avoiding the use of another's work as one's own.
- *Please note that sanctions for violations are severe.* This is necessary to protect the integrity of grades and the academic process. The minimum sanction is usually an F for the course. Suspension or expulsion from the university is also possible in egregious cases or for repeat offenses.
- **Resources on academic integrity standards, policies, and expectations:**
 1. Trojan Integrity Guide: <http://www.usc.edu/student-affairs/SJACS/forms/tio.pdf>

2. Guide for Avoiding Plagiarism: <http://www.usc.edu/student-affairs/SJACS/forms/tig.pdf>
3. Overview of Academic Integrity: <http://www.usc.edu/student-affairs/SJACS/forms/AcademicIntegrityOverview.pdf>
4. Tutorial on Academic Integrity: http://www.usc.edu/libraries/about/reference/tutorials/academic_integrity/index.php
5. SCampus (University Governance, paragraph 11): <http://web-app.usc.edu/scampus/1100-behavior-violating-university-standards-and-appropriate-sanctions/>
6. Scientific Misconduct: <http://policy.usc.edu/scientific-misconduct/>

Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with the *Office of Disability Services and Programs* (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP and should be delivered to the Lab Manager early in the semester. For more information, you can visit the DSP office in GFS 120 (8:30-5:00, M-F), call at 213-740-0776, email at ability@usc.edu, or go to their website: http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html.

Policies Concerning Student-Athletes

Student-athletes may not be penalized when University-sanctioned competitions conflict with course activities. When a class will be missed for a sanctioned competition, it is the student-athlete's responsibility to approach the instructor in advance. The student-athlete must provide the instructor with an official letter from Student-Athlete Academic Services (SAAS, <https://saas.usc.edu/academic-support-services/travel/>). The letter must certify that the competition is a University-sponsored event that deserves accommodation. Accommodations will not be made for other types of conflicting events. Details on the University's policy can be found at <http://www.usc.edu/admin/provostoffice/oaaaa/guidelines.html>. Arrangements for the accommodation must be agreed upon in advance of the event. If multiple team members will be absent, each must make an individual arrangement with the instructor.

Email Communication

To ensure privacy, only students' USC accounts (*usc.edu* domain name) can be used for email communications regarding confidential matters. Other email accounts cannot be used. Students are responsible for understanding the content of official messages that instructors send to their USC accounts. Therefore, each student must check their USC email regularly and make sure their account is not over quota, so new messages can be received.

Emergency Preparedness / Course Continuity

If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* (<http://emergency.usc.edu/> or 213-740-9233) will provide information related to safety and course continuity. We expect that instruction will be continued by means of Blackboard, teleconferencing, and other technologies. Alternative assignments may be given if classes are canceled for prolonged periods. If you have not already done so, please register with TrojansAlert (<https://trojansalert.usc.edu/>) to facilitate communication during emergencies.