

Syllabus: MICB 590 — Directed Research

Credit: 1 unit (or more; up to 3 per semester)

Meeting time: no specific time set

Location: Laboratory of principal investigator (P.I.)

First meeting: as agreed upon with P.I.

Course Instructions: as arranged by P.I.

Course Director: individual P.I.

Course Coordinator: Axel H. Schönthal, PhD

Contact: schontha@usc.edu

Course Background

MICB 590 is a course that requires students to join a suitable laboratory and participate in lab research. MICB 590 gives credit for performing hands-on experimental procedures and approaches, i.e., planning experiments, selecting appropriate approaches, executing experimental procedures, collecting results, analyzing results, interpreting results, and presenting the outcomes during lab meetings and discussions with the lab P.I.

Note: The activities in MICB 590 are different from those in MICB 570 (Student Seminar). MICB 590 gives credit for hands-on *practical* bench work (i.e., performing actual experiments), whereas credit in MICB 570 is in return for participation in *theoretical* aspects of lab work.

MICB 590 is not recommended for the first semester, unless the student is clearly settled in a lab at the beginning of the semester and is participating in hands-on research during the entire semester. MICB 590 can be taken for more than 1 unit per semester; for example, if the student anticipates to spend extensive time in the laboratory during a given semester (for example during the summer semester when not much other coursework is taken), the student may consider to enroll in 2, or even 3, units of MICB 590. MICB 590 can be taken repeatedly, i.e., students can enroll in MICB 590 during more than one semester.

MICB 590 is *NOT* a graded course; no letter grade is given. Instead, credit is received as Credit (CR) or No Credit (NC), based on the student's performance during the semester. The decision of CR/NC will be based on discussions between the P.I. (who hosts and mentors the student) and the departmental course coordinator (Professor Schönthal), who collects all grades and submits them to the Graduate School at the end of each semester.

Course Objectives

Participation in this course will provide the student with the following learning opportunities:

1. Gain first-hand insight into how a research group operates.
2. Become acquainted with the design and execution of experimental approaches.
3. Perform experimental procedures.
4. Interpret experimental results and prepare the data for presentation to a critical audience.
5. Unleash creativity by designing experiments to solve scientific problems.

6. Create and design experimental approaches to test hypotheses and experimental ideas.
7. Practice the execution of experimental procedures to gain hands-on proficiency in order to produce high-quality data sets.
8. Maintain a laboratory notebook to properly record all experimental details and activities.

Grading

Students will be evaluated on the following 5 criteria:

- (i) Did the student participate in practical aspects of lab activities on a regular basis throughout the entire semester?
- (ii) Did the student make an effort to be pro-active, meaning: did the student show initiative, without having to be prodded and urged repeatedly?
- (iii) Did the student develop some interest and enthusiasm over time?
- (iv) Did the student “mature” over time, meaning: did the student display progress with regard to the Course Objectives?
- (v) Did the student show responsible conduct, attitude, appearance and manners? For example, did the student provide the P.I. (or a lab member) with a schedule of when s/he can be present in the lab; or did s/he promptly inform the P.I. (or a lab member) when an agreed-upon meeting had to be cancelled or postponed? Did the student display professional, courteous behavior and did s/he respect others? Did the student abide by USC’s policies of Academic Conduct and Behavior (see guidelines below)?

Attendance

Regular, consistent, predictable, on time presence in the lab is required. The specific details should be discussed with the P.I. and/or arranged with a lab member who will welcome and guide the student. In general, physical presence in the lab should not take a large amount of time, especially at the beginning.

At a bare minimum, the student should expect to consistently participate in laboratory activities 2-3 times per week. More realistically, the student should expect to come to the lab 4-5 times per week, especially when it is envisioned that a thesis project will be developed. As the semester progresses and the student becomes more familiar with the lab environment and its people, additional hours can be added.

Content of the Following Pages

- **Statements on Academic Conduct, Integrity Standards, Discrimination, Assault**
- **Support Systems Available to Students**

ACADEMIC CONDUCT AND ACADEMIC INTEGRITY STANDARDS

- Members of the USC community are expected to be honest and forthright in their academic endeavors.
- To falsify the results of one's research, to present the words, ideas, data, or work of another as one's own, or to cheat on an examination corrupts the essential process by which knowledge is advanced.
- When students accept their offer to USC they are also accepting to abide by the Student Conduct Code.
- This is a higher standard of conduct than expected in the general community because we are TROJANS.
- When USC confers a degree, it is acknowledging students' academic success and their ability to be a positive, honest, and outstanding citizen within society.
- In failing to uphold academic standards students cheat themselves and others out of learning, degrade the value of their education, and diminish the prestige of the USC education.
- Ignorance of these expectations is not an acceptable justification for violating the Student Conduct Code.

The University prides itself in maintaining high academic integrity standards. The entire academic community benefits from the adherence to such standards. Among the violations of integrity standards is plagiarism. Plagiarism has to be avoided. It is a serious academic offense with serious consequences. When it occurs, the consequences for the student can be severe. For example, credit for a course may be denied and a grade of F is given, permanent notation on transcript, suspension or expulsion from the University, or revocation of admission or degree.

What is Plagiarism?

- Plagiarism is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.
- For example, if you use a sentence from somebody else's paper and insert it into your own paper without clearly marking the source, you are plagiarizing.

Further information, including a number of tutorials for students, can be found online at: <https://libraries.usc.edu/research/reference-tutorials>. This website has tutorials such as: how to avoid plagiarism, how to prevent academic dishonesty, how to manage your research, and other useful how-to tools and tutorials.

Understanding and Avoiding Plagiarism: Module 1 (What is plagiarism?)

<https://libraries.usc.edu/tutorial/understanding-and-avoiding-plagiarism-module-1-what-plagiarism-what-citation>

Understanding and Avoiding Plagiarism: Module 2 (Citing to avoid plagiarism)

<https://libraries.usc.edu/tutorial/understanding-and-avoiding-plagiarism-module-2-citing-avoid-plagiarism>

Students should expect that their work (such as term papers, research proposals, presentations, written theses, etc.) will be checked for plagiarism with the use of appropriate software (Turnitin; iThenticate; Copyscape; PaperRater; etc.).

DISCRIMINATION, HARASSMENT, ASSAULT

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu/> or to the *Department of Public Safety* <http://dps.usc.edu/>. This 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. The Sexual Violence Prevention Services at <https://sites.google.com/usc.edu/rsvpclientservices/home> provide 24/7 confidential support, and further help in emergencies can be found here: <https://studenthealth.usc.edu/emergencies/>

OTHER SUPPORT SYSTEMS

A number of USC schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu/> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
sites.google.com/usc.edu/counseling-mental-health

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

988 Suicide and Crisis Lifeline - 988 for both calls and text messages – 24/7 on call
988lifeline.org

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL) – 24/7 on call
sites.google.com/usc.edu/rsvpclientservices/home

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - (213) 740-5086
eootix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298
usc-advocate.symplicity.com/care_report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

The Office of Student Accessibility Services (OSAS) - (213) 740-0776

osas.usc.edu

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

USC Campus Support and Intervention - (213) 740-0411

campussupport.usc.edu

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

Diversity, Equity and Inclusion - (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

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) 442-1200 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.

Office of the Ombuds - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

ombuds.usc.edu

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

Occupational Therapy Faculty Practice - (323) 442-2850 or otfp@med.usc.edu

chan.usc.edu/patient-care/faculty-practice

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.

Beyond Academic Challenges

Balancing course work, midterms, finals, and laboratory research presents a challenge and at times can feel overwhelming. On top of that, many students are far away from home and family, perhaps even their country and their native language, which can feel quite depressing. Sometimes, relationship problems come up and make life miserable. But no matter the problem, USC offers resources to help students deal with depression, anxiety, and other types of distress. USC's services are not only geared toward helping students with academic challenges, but also with personal problems. Students in need should not hesitate to take advantage of the services that are listed above; there is no need to feel embarrassed or ashamed. USC is offering these services and resources so that students are in the best position to meet their academic and personal goals.