SYLLABUS

QBIO 105: Introduction to Quantitative Biology Seminar

This course is a required course for students majoring in Quantitative Biology and can only be taken by QBIO students.

Spring 2021

Time and Location: **Tuesdays, 3:30-5:10 pm**
RRI 101

Course Instructors: Dr. Peter Calabrese (petercal@usc.edu)
Associate Professor (Teaching) of Quantitative and Computational Biology, Director of Undergraduate Studies – QBIO Major

Dr. Remo Rohs (rohs@usc.edu)
Professor of Quantitative and Computational Biology, Chemistry, Physics & Astronomy, and Computer Science

Teaching Assistant: Yibei Jiang (yibeijia@usc.edu)
PhD Student in Computational Biology and Bioinformatics

Introduction (from the USC catalogue)**:**

This course is the introductory seminar for students taking the QBIO major. It is ideally taken as freshman but it can be taken after a student's transfer into the QBIO program. The instructors will introduce the general field of Quantitative Biology, its definition and role within the Biological Sciences, and its relationship with Chemistry, Computer Science, Engineering, Mathematics, Medicine, and Physics. The curriculum will include introductory lectures by the instructors, guest lectures, and discussions.

Schedule:

1/11 **Dr. Remo Rohs**
Professor of Quantitative and Computational Biology, Chemistry, Physics & Astronomy, and Computer Science

1/18 **Dr. Andrew McMahon**
W.M. Keck Provost and University Professor of Stem Cell Biology and Regenerative Medicine, and Biological Sciences
Chair, Stem Cell Biology and Regenerative Medicine
Director, Eli and Edythe Broad CIRM Center for Regenerative Medicine and Stem Cell Research at USC

1/25 **Dr. Vsevolod Katritch**
Associate Professor of Quantitative and Computational Biology and Chemistry

2/1 **Dr. Melissa Guzman**
Gabilan Assistant Professor of Biological Sciences

2/8 **Dr. Steve Gazal**
Assistant Professor of Population and Public Health Sciences

2/15 **Dr. Berenice Benayoun**
Assistant Professor of Gerontology, Biological Sciences, Biochemistry and Molecular Medicine

2/22 **Dr. Serghei Mangul**
Assistant Professor of Clinical Pharmacy

3/1 **Dr. Jerry Lee**
Associate Professor of Clinical Medicine and Chemical Engineering & Material Sciences
Chief Science and Innovation Officer for the Lawrence J. Ellison Institute for Transformative Medicine of USC

3/8 **Dr. Alejandra Gonzalez Calle**
Assistant Professor of Research Ophthalmology
Note: for today's Q+A we also plan to have via Zoom
Dr. Mark S. Humayun
Cornelius J. Pings Chair in Biomedical Sciences,
Professor of Ophthalmology, Biomedical Engineering and Integrative Anatomical Sciences,
Director of the USC Ginsburg Institute for Biomedical Therapeutics and
Co-Director of the USC Roski Eye Institute

SPRING BREAK

3/22 **Dr. Scott Fraser**
Elizabeth Garrett Chair in Convergent Bioscience and
Provost Professor of Biological Sciences, Biomedical Engineering, Physiology and Biophysics, Stem Cell Biology and Regenerative Medicine, Pediatrics, Radiology and Ophthalmology

3/29 **Dr. Peter Calabrese**
Associate Professor (Teaching) of Quantitative and Computational Biology,
Director of Undergraduate Studies – QBIO Major

4/5 **Dr. Steve Kay**
University and Provost Professor of Neurology, Biomedical Engineering and Biological Sciences,
Director of Convergent Bioscience
Co-Director of the USC Norris Center for Cancer Drug Development

4/12 **Dr. Maja Mataric**
Chan Soon-Shiong Chair and Distinguished Professor of Computer Science, Neuroscience, and Pediatrics

4/19 **Dr. Carolyn Phillips**
Gabilan Assistant Professor of Biological Sciences

4/26 **Dr. Leslie Saxon**
Professor of Medicine (Clinical Scholar)
Executive Director, Center for Body Computing

Weekly Reports (10 points each; 140 points total): Reports should be no more than one page in length with up to 500 words. Reports must be typed and submitted electronically via Blackboard. Late reports will receive a maximum of 5 points. There will be a total of 14 weekly reports. These reports will have two parts: (a) summary of the previous lecture, and (b) potential questions for this week's lecture. For part (a), you must state the name of the previous lecturer, the date and title of the lecture, and list the main points raised during the lecture and discuss the meaning of each. For part (b), you should research the current week's lecturer and topic and pose several potential questions.

Grading: Your final letter grade in this course will be based upon all of your written reports, participation and discussion. Since there are no exams in this course, active participation and attendance are important components. Unless you are sick or test positive for COVID-19, in-person attendance is required. If you feel sick, do not attend class but contact us as soon as possible and accommodations will be made. The grade will consist of 140 points for weekly reports. Participation and active discussion will be considered for the final grade.

Statement for Observance of Religious Holidays: USC's policy grants students excused absences from class to observe religious holidays: http://orl.usc.edu/life/calendar/absences/ In this case, please contact your instructor in advance to agree on alternative course requirements.

Statement for Students with Disabilities: Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

Statement on Academic Integrity: USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *Scampus,* the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/.