BISC 502a: Maintaining and transmitting genetic information - Fall 2022

Description and enrollment - This course is a **graduate** level survey of molecular biology and genetics focused on how information is stored and transmitted in the cell with particular emphasis on experimental methods and logic. This course is designed for graduate students in the molecular biology PhD program. Graduate students in related fields with a suitable background in biological sciences may also be admitted at the discretion of the faculty. This course assumes familiarity with molecular biology principles and methods. It is not appropriate for undergraduates or non-science students. ***This syllabus is subject to change!*** **When: MW 2-4 pm RRI301**.

Format and materials - This course will be taught from the primary literature in a mixed format of lectures and journal clubs. Each module will include an exam, problem set, or other evaluation of that material (50 pts). Resources and review articles will be uploaded to Blackboard (blackboard.usc.edu). Background reading in any general Genetics, Cell Biology, or Molecular Biology textbook may be helpful.

Requirements All students are expected to attend lecture. Additional material will be provided on Blackboard (http://blackboard.usc.edu). Students are expected to monitor the Blackboard site for course announcements and new materials.

Instructors:

Xianrui Cheng, Assistant Professor xianruic@usc.edu
Irene Chiolo, Associate Professor chiolo@usc.edu (Course director)
Steven Finkel, Professor sfinkel@usc.edu
Myron Goodman, Professor mgoodman@usc.edu
Derrick Morton, Assistant Professor mortond@usc.edu

Office hours: Contact individual PIs to schedule office hours.

Week	Date	Topic	Reading
1	22 August	Finkel: Genetics	
	24 August		
2	29 August		
	31 August		
3	5 Sept Labor Day	HOLIDAY	
	7 Sept		
4	12 Sept	EXAM	
	14 Sept	Goodman: Molecular Basis of Mutagenesis and DNA Repair	
5	19 Sept		
	21 Sept		
6	26 Sept		
	28 Sept		
7	3 Oct	EXAM	
	5 Oct	Chiolo: Nuclear architecture and DNA Repair	
8	10 Oct		
	12 Oct		
9	17 Oct		
	19 Oct		
10	24 Oct	EXAM	
	26 Oct	Morton: RNA Biology: Co-/Post- Transcriptional control of Gene Expression	
11	31 Oct		
	2 Nov		
12	7 Nov		
	9 Nov	EXAM	
13	14 Nov	Cheng: A System Biology View of Embryonic Development	
	16 Nov		
14	21 Nov		
	23 Nov Thanksgiving Holiday	HOLIDAY	
15	28 Nov		
	30 Nov	EXAM	

Other Policies:

1. Exam dates are firm. If a student misses an exam due to a true emergency (with an acceptable written excuse; written information concerning a death in the family must be provided), we MAY schedule a make-up exam, or at our discretion MAY permit the use of the average of other exams in determining the course grade.
2. Regrading of exams will be done only by the professor who wrote the question. Regrading can only be done within one week of the day the exam is initially returned to the class.
3. No special assignments for extra credit are given.
4. Final exams will be kept in Dr. Chiolo's office for the required period.
5. Academic integrity policies of the university will be strictly followed. Infractions can result in severe penalties. Students are expected to familiarize themselves with the USC standards for academic integrity, as described in the http://www.usc.edu/student-affairs/SJACS/docs/GradIntegrity.pdf .
6. It may be necessary to make some adjustments in the syllabus during the semester. Students are responsible for monitoring materials on Blackboard.
7. Disability: Students requesting academic accommodations based on a disability are required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP when adequate documentation is filed. Please be sure the letter is delivered to Dr. Chiolo as early in the semester as possible. DSP is open Mon-Fri, 8:30-5:00. The office is in Student Union 301 and their phone number is 740-0776.