BIOMEDICAL RESEARCH IN HEALTH AND DISEASE
CBIO 4200 and 4200H

COURSE INFORMATION

DESCRIPTION: This course will address the impact of biomedical research in human health and disease. The course is intended primarily for pre-med students; however, science majors may also enroll. Students will be expected to master the concept of how scientific research is done, and the various mechanisms by which biomedical research has impacted individuals and the societies in which they live.

The course will be largely organized in a topical fashion, generally with one or two lectures covering one scientific discovery that has changed medicine.

The lectures files will be available on the course web site and a reading assignment for each lecture will be posted for students to read before the class.

CLASS SCHEDULE: The class will meet for 2 periods per week for didactic lectures: Tuesday and Thursdays, 2:00-3:15 pm, room S175, Paul D. Coverdell Center.

COURSE COORDINATOR: Dr. Roberto Docampo, Rm S350B, Paul D Coverdell Center, Tel: 542-8104; Email: rdocampo@uga.edu

OFFICE HOURS: By appointment only. If students need help with the material or would like to discuss something in more detail, we will encourage them to email me to make an appointment or talk to me after class.

COURSE REQUIREMENT FOR GRADING: 3 exams and a power point and written presentation. The exams will be based on the lectures' content. The presentation will provide the opportunity to search the literature on one specific scientific discovery and investigate how it changed the medical field. A list of topics and specific instructions will be provided the first week of September. Attendance of each lecture is expected. Formal records of attendance will be kept.

GRADING: Each of the 3 exams and the presentation will individually account for 25% of the final grade. Grades will be assigned on a 100% scale. Students enrolled in the 4200H will have additional course requirements.

EXTRA CREDIT ACTIVITY: A list of lectures will be provided related to biomedical research and students could have the opportunity to attend one of these lectures and write a one-page summary about the content of the talk.

SCHEDULE FALL 2019

	Lecture	Additional reading	Speaker
Th Aug 15	Introduction, Overview, Course Plan, The Secret of Life		Roberto Docampo
Tu Aug 20	Research Funding		Roberto Docampo
Th Aug 22	Scientific integrity		Roberto Docampo
I. Hypothesis-driven research: Chemistry			
Tu Aug 27	Drug design		Roberto Docampo
Th Aug 29	Tyrosine kinases & cancer		Sri Ramakrishnan
Th Sep 3	Free radicals in cancer and aging		Roberto Docampo
Signal Transduction			
Th Sep 5	Nitric Oxide in Biology		Roberto Docampo
Tu Sept 10	Calcium signaling and disease		Roberto Docampo
Mathematics/Physics			
Th Sep 12	Genomics & other omics, Genome editing		Noelia Lander
Tu Sep 17	Fluorescence in Biology; The case of GFP		Roberto Docampo
Th Sep 19	**EXAM 1**		
Immunology			
Tu Sep 24	Therapeutic antibodies		Roberto Docampo
Microbiology			
Th Sep 26	Influenza		Roberto Docampo
Tu Oct 01	Malaria in the world		Noelia Lander
II. Observational Research			
Th Oct 03	HIV & opportunistic infections		Sri Ramakrishnan
Tu Oct 08	Obesity epidemic		Roberto Docampo

Th Oct 10	**EXAM 2**		
Tu Oct 15	Gene therapy		Roberto Docampo
Th Oct 17	Smallpox eradication **Title, abstract and outline for presentation due**		Roberto Docampo
Tu Oct 22	Public Health (WNV)		Nuria W. Negrão
Th Oct 24	Hygiene hypothesis		Silvia Moreno
Tu Oct 29	Antibiotic Resistance		Noelia Lander
Th Oct 31	Student presentations		
Tu Nov 05	Student presentations		
Th Nov 07	Student presentations		
Tu Nov 12	Student presentations		
Th Nov 14	Student presentations		
Tu Nov 19	Student presentations		
Th Nov 21	Student presentations		
Th Nov 26-29	**Thanksgiving break**		
Tu Dec 03	**EXAM 3**		