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

| Th Aug 15 Introduction, Overview, Course Plan, The Secret of Life 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 Docampo Mathematics/Physics Th Sep 12 Genomics & other omics, Genome editing Lander Tu Sep 17 Fluorescence in Biology; The case of GFP Th Sep 19 EXAM 1 Immunology Tu Sep 24 Therapeutic antibodies Roberto Docampo Microbiology Th Sep 26 Influenza Roberto Docampo Microbiology Tu Oct 01 Malaria in the world Noelia Lander II. Observational Research Th Oct 03 HIV & opportunistic infections Ramakrishnan Tu Oct 08 Obesity epidemic | | Lecture | Additional | Speaker | | |
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| Tu Oct 15 | Gene therapy | Roberto |
| | | Docampo |
| Th Oct 17 | Smallpox eradication | Roberto |
| | Title, abstract and outline for presentation due | Docampo |
| Tu Oct 22 | Public Health (WNV) | Nuria W. |
| | | Negrão |
| Th Oct 24 | Hygiene hypothesis | Silvia |
| | | Moreno |
| Tu Oct 29 | Antibiotic Resistance | Noelia |
| TI 0 101 | 01 1 1 | 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 | |
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