BC360: Responsible Conduct in Biochemical Research Syllabus v1.0 Fall, 2021

Instructor: Professor Robert Cohen

Office hours and location: Immediately after class in MRB 190 or by appointment

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Class hours & location: Classes will meet in the 2nd half of the semester in MRB 190 on Thursdays from 10:00 – 11:40 AM. The first class meeting is on Oct. 21.

Course description: The objective of this course is to introduce students majoring in biochemical science to concepts and practices that underlie responsible — and irresponsible — conduct in modern scientific research. The course will begin with a brief look at how in the late 20th century the U.S. government became interested in the issue of fraud in science, and how those investigations evolved into a formal definition of research misconduct and requirements among researchers for Responsible Conduct in Science ("RCR") training. Because the public's perception of science and scientists has played a major role in the development of RCR, the class will discuss several examples of (mis)conduct in science that will be drawn from the popular press. Among topics to be discussed are actions that have been taken in response to allegations of misconduct; these discussions will include cases where those actions appear to indicate government (or university!) overreach. Key issues commonly encountered by researchers include data and resource sharing, confidentiality, authorship, and reviewing papers and grants; these will be discussed together with consideration of the many conflicts of interest — both real and perceived — encountered in the course of doing research. Finally, if time permits, the class will discuss the concept of "forbidden knowledge" in the context of responsible conduct of research.

Outcomes: Students in BC360 are expected to become familiar with RCR practices and responsibilities, and to develop an appreciation of the motivations and controversies involved.

Assessment: Students will study accounts of cases that exemplify important issues in the conduct of scientific research. These will be discussed and analyzed in class, in quizzes, and in written assignments.

Grading: Students will have in-class quizzes (30% total grade) to assess how well they have understood assigned material (readings or videos); as groups of 3-4 students, they will prepare brief "position papers" in class (30% total grade); a take-home essay assignment will be used as a final exam (40%).

Text: There is no required text for this course. Some material will be posted on the Canvas system, and students are expected independently to seek out other sources as necessary.

Tentative schedule

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Date	Topic
10/21	Course Introduction; FFP and RCR; ASBMB Code of Ethics
10/28	The Baltimore Case
11/04	The Baltimore Case – Closed; Distinguishing The Crooks from The Jerks
11/11	Giving Credit Where Credit is Due
11/18	Plagiarism
11/25	— No Class — Fall Recess —
12/02	Openness in Academia; Universities and Intellectual Property
12/09	Openness and Forbidden Knowledge

Important information for students: All students are expected and required to report any COVID-19 symptoms to the university immediately, as well as exposures or positive tests from a non-CSU testing location.

If you suspect you have symptoms, or if you know you have been exposed to a positive person or have tested positive for COVID, you are required to fill out the COVID Reporter (https://covid.colostate.edu/reporter/). If you know or believe you have been exposed, including living with someone known to be COVID positive, or are symptomatic, it is important for the health of yourself and others that you complete the online COVID Reporter. Do not ask your instructor to report for you. If you do not have internet access to fill out the online COVID-19 Reporter, please call (970) 491-4600. You may also report concerns in your academic or living spaces regarding COVID exposures through the COVID Reporter. You will not be penalized in any way for reporting. When you complete the COVID Reporter for any reason, the CSU Public Health office is notified. Once notified, that office will contact you and, depending upon each situation, will conduct contact tracing, initiate any necessary public health requirements and notify you if you need to take any steps.

For the latest information about the University's COVID resources and information, please visit the CSU COVID-19 site (https://covidrecovery.colostate.edu/).