

THE ETHICAL DIMENSIONS OF BIOMEDICAL SCIENCES

GS 21 1051 – Course Information

- Dates & Time:** Fall 2025 (August 28 – November 20)
Thursdays, 10:00 a.m. – 11:15 a.m.
- Location:** All sessions will be in-person. Please refer to Canvas for your small group assignment.
- Course Schedule:** 8/28, 10:00 – 11:15 AM: organizational meeting followed by Pre-Test
9/4 – 11/20, 10:00 – 11:15 AM: small group sessions
11/21: 24-hour window to take Post-Test
- Course Director:** Shane Cunha, Ph.D.
MSE R356
(713) 500-7433
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Description:

This course is a systematic overview of the ethical concepts and traditions that are the foundation of biomedical science. The aim of the course is to provide students of the biomedical sciences with a framework to recognize, examine, and resolve ethical issues that may arise in their professional lives. These concepts will be examined through facilitated small group discussions of cases and exercises that involve ethical issues in the responsible conduct of biomedical research. Students will prepare to participate in these small group discussions by completing required reading assignments.

Objectives:

Upon successfully completing this class, students will be able to:

- 1) recognize the primary features of an ethical problem in science and research;
- 2) identify and analyze questions central to the specific ethical problems in science and research addressed in this course;
- 3) identify relevant professional and legal guidelines on the ethical issues addressed in this course;
- 4) formulate recommendations for preventing and/or resolving ethical conflict in specific areas of science and research; and
- 5) identify the appropriate institutional resources for addressing questions related to ethics in research and graduate education.

Reading Assignments:

The majority of reading assignments will be from ORI Introduction to the Responsible Conduct of Research by Nicholas H. Steneck, published by the Office of Research Integrity. This will be supplemented by institutional policies and procedures. In the last two sessions we will be using articles. Chapter assignments from Steneck, institutional policies and all articles will be posted on the Canvas course site. The entire Steneck document can be downloaded from <http://ori.dhhs.gov/documents/rcrintro.pdf>. Each week's reading assignments will be the entire chapter(s), related cases and exercises corresponding to the title of the weekly topic and any relative institutional policies. Students are expected to come to class prepared to discuss all the readings for the week, including the case examples in the textbook. A quiz will be administered through Canvas prior to each small group session to assess the student's mastery of the content of the reading assignments. The weekly quizzes can be found under the 'Quizzes' tab (on the left) in Canvas. They will be made available at 10 AM each Tuesday. Each quiz will have a 20 minute time limit and must be completed once started. Additionally, each student will be expected to present at least two (2) cases during the course of the semester and lead the discussion of these cases in the small groups.

Evaluation:

This class is graded on a Pass/Fail basis. In order for a student to obtain a Pass grade, the student must:

- attend and participate in all small group sessions
- maintain a 70% cumulative average on the weekly quizzes
- complete the Pre-test administered on August 28th AND the Post-test administered on November 20th.
- complete the 'Civics 101' online module in Canvas by October 31th.

Attendance is required at your assigned discussion group. Students must attend class in order to receive a quiz grade. Any unexcused absence will receive a grade of "0" for the session's quiz. The decision as to whether an absence is excused or not excused resides with the Course Director and Faculty Facilitators. Students should contact their facilitator and copy Dr. Cunha to request an excused absence in advance. Students with excused absences will have the opportunity to make up the session.

Students with disabilities who need related accommodation to participate fully in the course are requested to contact Shane Cunha as early as possible in the semester so that appropriate arrangements may be made.

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GS 21 1051, Fall 2025

Schedule: Thursdays 10:00 a.m.-11:15 a.m.

Date	Topic	Assignment*	Cases
08/28/2025	Organizational Meeting Pre-test		
09/04/2025	How to present a case & NYT article	Chapter 1, NO QUIZ	Case 1
09/11/2025	Scientific Integrity & Research Misconduct	Chapter 2	Case 2 & Exercise
09/18/2025	Research with Human Subjects	Chapter 3	Case 3 & 4
09/25/2025	Humane Care & Use of Animals in Research	Chapter 4	Case 5 & Exercise
10/02/2025	Management of Scientific Data	Chapter 6	Case 6 & 7
10/09/2025	Mentor and Trainee Responsibilities	Chapter 7	Case 8 & Exercise
10/16/2025	Collaborative Research Peer Review	Chapter 8 & 10	Case 9 & 10
10/23/2025	Conflicts of Interest	Chapter 5	Case 11 & Exercise
10/30/2025	No Class		
11/06/2025	Authorship	Chapter 9	Case 12 & Exercise
11/13/2025	Biosafety & Biosecurity	3 journal articles (on Canvas)	Case 13 & 14
11/20/2025	Genetics, Cloning, Stem Cell Research Post-test (Canvas website)	3 articles (on Canvas)	Case 15 & Exercise

* Chapter assignments from N.H. Steneck, ORI Introduction to the Responsible Conduct of Research, Department of Health and Human Services, 2007

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Faculty Discussion Group Leaders

<p>Joe Alcorn, PhD Associate Professor Department of Pediatrics UTHealth McGovern Medical School Joseph.L.Alcorn@uth.tmc.edu</p>	<p>Anjali Chauhan, MSc, PhD Assistant Professor Department of Neurology UTHealth McGovern Medical School Anjali.Chauhan@uth.tmc.edu</p>
<p>Yasmin Chebaro, PhD Associate Director for Academic & Faculty Affairs UTHealth-Houston Yasmin.Chebaro@uth.tmc.edu</p>	<p>Shane Cunha, PhD Associate Professor Dept of Integrative Biology and Pharmacology UTHealth McGovern Medical School Shane.R.Cunha@uth.tmc.edu</p>
<p>Callie Kwartler, PhD Assistant Professor Dept of Internal Medicine- Medical Genetics UTHealth McGovern Medical School Callie.S.Kwartler@uth.tmc.edu</p>	<p>Chris Mackenzie, PhD, F.R.S.B. Assistant Professor Dept. of Microbiology and Molecular Genetics UTHealth McGovern Medical School Ronald.C.Mackenzie@uth.tmc.edu</p>
<p>Gohar Manzar, MD PhD Assistant Professor Department of Radiation Oncology UT-MDACC gsmanzar@mdanderson.org</p>	<p>Sujatha Sridhar, MBBS, MCE Associate Vice President Research Compliance, Ed., & Support Services UTHealth Houston Sujatha.Sridhar@uth.tmc.edu</p>
<p>Brian Taylor, PhD, DABR Associate Professor Department of Imaging Physics UT-MDACC BTaylor9@mdanderson.org</p>	<p>Luis Vega, PhD Assistant Research Professor Dept of Pediatrics UTHealth McGovern Medical School Luis.A.Vega@uth.tmc.edu</p>
<p>Yong Zhou, PhD Associate Professor Dept of Integrative Biology and Pharmacology UTHealth McGovern Medical School Yong.Zhou@uth.tmc.edu</p>	