

UMBC UGC New Course Request: PHIL 359: Ethics, Integrity, and Scientific Research

Date Submitted: 9/23/2019

Proposed Effective Date: immediately

	Name	Email	Phone	Dept
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COURSE INFORMATION:

Course Number(s)	PHIL 359
Formal Title	Ethics, Integrity, and Scientific Research
Transcript Title (≤30c)	Ethics, Integ, & Sci Research
Recommended Course Preparation	PHIL 150, PHIL 152
Prerequisite NOTE: Unless otherwise indicated, a prerequisite is assumed to be passed with a "D" or better.	
Credits	3
Repeatable?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Max. Total Credits	<small>This should be equal to the number of credits for courses that cannot be repeated for credit. For courses that may be repeated for credit, enter the maximum total number of credits a student can receive from this course. E.g., enter 6 credits for a 3 credit course that may be taken a second time for credit, but not for a third time. Please note that this does NOT refer to how many times a class may be retaken for a higher grade.</small>
Grading Method(s)	<input checked="" type="checkbox"/> Reg (A-F) <input type="checkbox"/> Audit <input type="checkbox"/> Pass-Fail

PROPOSED CATALOG DESCRIPTION (no longer than 75 words):

This course is a survey of topics concerning the ethical responsibilities of scientists in a variety of contexts, emphasizing issues arising in the context of designing and engaging in scientific research. Students will investigate the key features of different fundamental ethical theories, and then use this background to engage with topics such as: data acquisition and management, conflict of interests and scientific objectivity, misconduct in research and publication, the use of human and other animal subjects in research, the social responsibility of scientists.

RATIONALE FOR NEW COURSE:

The course is being created specifically to train STEM students in the UMBC College of Natural and Mathematical Sciences associated with its Building Infrastructure Leading to Diversity (BUILD) program, which is designed to investigate ways to enhance the diversity and success of students who have the goal of pursuing degrees in the sciences, technology, engineering, and mathematics (STEM). The focus of this initiative is to promote matriculation of students into the biomedical and behavioral research fields. The course was created at the behest of BUILD administrators, in order to have philosophy faculty train STEM students in ethical issues connected to scientific research. Its creation was written into CNMS's recent successful NIH-funded BUILD grant. It will be required of all BUILD students, and will be taught at least once every year, with an enrollment cap of 30 students. The course will be taught by faculty in the Philosophy Department with expertise in ethics generally and ethical issues in science and research in particular, and supplemented with guest speakers from UMBC and other institutions who have specific knowledge about the topics being discussed. Students will be assessed on the basis of their active participation in class discussions, role playing assignments (such as serving on a mock IRB, writing a

peer review of a fellow student's essay, or writing a consent form for research on human subjects), and essay assignments critically analyzing specific cases in light of the ethical issues and theories discussed.

Both because of its role in the BUILD program, and because of its offering frequency, we therefore need to have it available as a regular course in the catalog. The course will be taught at the 300-level. The recommended course preparations are our key introductory ethics courses – PHIL 150: Contemporary Moral Issues, PHIL 152: Introduction to Moral Theory – which provide solid preparation for PHIL 359 because of their content and also their emphasis on writing. As with all our courses, we want students to have the option of auditing, taking P/F or for a grade.

ATTACH COURSE OUTLINE (mandatory):

See attached syllabus.

Ethics, Integrity, and Scientific Research

PHIL 359 01

MW 5:30-6:45

Spring 2019: 1/27 – 5/20

Daniel G. Jenkins

Office: PAHB 467 **Phone:** 443-690-2557 **Office Hours:** MW 4:00 PM – 5:00 PM

Email: djenki2@umbc.edu

Functional Competency Satisfied by this Course: Critical Analysis and Reasoning

Required Books: [All Available in the Bookstore]

Research Ethics: A Philosophical Guide to the Responsible Conduct of Research, by Gary L. Comstock. Cambridge University Press, 2013. ISBN-10: 0521187087, ISBN-13: 978-0521187084.

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Students will be provided with a foundational understanding of the ethical issues and professional guidelines involved in scientific research, with the goal of fostering active, career-long commitment to responsible research. Relying on the case-study format, students will address ethical problems that arise in diverse areas. Students will be led to understand the parameters of research integrity, and scientists' ethical responsibilities to society and future generations.

Course Learning Outcomes:

1. Identify and evaluate central ethical problems in scientific research
2. Distinguish between descriptive and normative ethical claims

3. Demonstrate in writing an understanding of key different philosophical perspectives on morally significant issues in scientific research
4. Apply principles of philosophical reasoning in the creation of arguments about ethical problems that arise in the context of scientific research
5. Demonstrate verbally and in writing an understanding of the dependency of institutional viability, professional success, and societal welfare on research integrity

Methods of Evaluation:

Students will be assessed on their active participation in class discussions (10%), role playing assignments (serving on a mock IRB, assessing sample peer reviews, and writing a consent form for research on human subjects) (30%), and two essay assignments critically analyzing specific cases in light of the ethical issues and theories discussed (25% each). Additionally, students will earn points throughout the semester for attendance (10%). Students can generally expect grading to be completed and written feedback to be provided within one week of submitting an assignment.

Graded discussions require students to respond verbally to questions about assigned reading. Questions will be provided in advance, and discussions will be in seminar format. Each student is expected to complete all reading they are assigned and to come to class prepared to discuss what they have learned. Discussions account for a total of 10 points or 10% of your final grade.

Role-playing assignments require students to take on different roles in various aspects of the research process, individually and/or in groups, and to share with the class the products of their work in that role.

In the mock IRB assignment, some groups of students will be asked to create an IRB application, while others will evaluate that application. In another version of the assignment, student groups will be asked to evaluate different versions of a flawed IRB application.

In the peer review assignment, students will be asked to assess sample reviews of sample papers in accordance with the ethical guidelines for peer reviewers provided by the Committee on Publication Ethics. Some students may be asked to analyze the situation through the lens of authors, while others acts as reviewers.

In the consent form assignment, students will be given a research proposal and determine and designed a consent form that discloses relevant risks while fostering research interests. In another version of the assignment, students will be required to identify errors in flawed consent forms.

In all such assignments, responses will be graded on attention to relevant application details, insight into procedural and regulatory compliance, and sensitivity to ethical issues.

The two essay assignments will require students to provide a substantive analysis of a morally problematic situation in scientific research through the lens of moral theories and professional guidelines. Details to be given later in the course. Each paper is worth 25%

Attendance and participation in our face-to-face class sessions accounts for 100 points or 10% of your final grade. There are ten face-to-face sessions. Each day that a student attends and participates he will earn 10 points. For each unexcused absence he will thus fail to earn 10 points. Unexcused lateness (defined as not being present, in your seat, and ready to participate when one's name is called) will result in a 5-point deduction. If a student missed more than 15 minutes of the class session due to arriving late or leaving early, he will be counted as absent.

Computation of Final Course Grades:

There are 1,000 points to earn in the course. The assignments described above will contribute to your final grade as follows:

Discussion (In Class): 100 points / 10% of Final Grade

Role-playing (In Class): 300 points / 30% of Final Grade

Essays (At Home): 500 points / 50% of Final Grade

Attendance & Participation (In Class): 100 points / 10% of Final Grade

Final Grades will be rendered according to the following scale:

90-100% of total possible points (900 – 1000 points)	=	A
80-89% of total possible points (800 – 899 points)	=	B
70-79% of total possible points (700 – 799 points)	=	C
60-69% of total possible poin (600 – 699 points)	=	D
Below 60% of total possible points (0 – 599 points)	=	F

Late Work

Except in very rare circumstances I will not permit missed assignments or exams to be made up. If late work is accepted, lateness penalties may include letter-grade deductions based on degree of lateness. Under extenuating circumstances only, to be determined at my discretion, the last assignment or assessment of the semester may be submitted up to a maximum of one day late, with a grade deduction of one letter grade. After one day of lateness, the last assignment or assessment will not be accepted.

Class Attendance and Participation:

Attendance and participation are mandatory, and attendance will be taken promptly at the beginning of each class. One cannot learn philosophy well without participating in class discussion. Moreover, I will be presenting material in class that is not in the reading. If you miss a class, try to get another student's notes, and you are always welcome (and encouraged) to discuss the material with me during my office hours.

UMBC Disability Statement:

UMBC is committed to eliminating discriminatory obstacles that may disadvantage students based on disability. Student Support Services (SSS) is the UMBC department designated to:

- receive and maintain **confidential** files of disability-related documentation,
- certify eligibility for services,
- determine reasonable accommodations,
- develop with each student plans for the provision of such accommodations,
- and
- serve as a liaison between faculty members and students regarding disability-related issues.

If you have a disability and want to request accommodations, contact SSS in the Math/Psych Building, Room 213 or Academic IV-B wing Room 345 (or call 410-455-2459 or 410-455-3250). SSS will require you to provide appropriate documentation of disability and complete a Request for Services form available at <http://my.umbc.edu/groups/sss>. If you require accommodations for this class, make an appointment to meet with me to discuss your SSS-approved accommodations.

UMBC Statement of Values for Academic Integrity:

By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and

behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, or the Office of Undergraduate Education.

Disclosures of Sexual Misconduct and Child Abuse or Neglect

As an instructor, I am considered a Responsible Employee, per UMBC's Policy on Prohibited Sexual Misconduct, Interpersonal Violence, and Other Related Misconduct (located at <http://humanrelations.umbc.edu/sexual-misconduct/umbc-resource-page-for-sexual-misconduct-and-other-related-misconduct/>). While my goal is for you to be able to share information related to your life experiences through discussion and written work, I want to be transparent that as a Responsible Employee I am required to report disclosures of sexual assault, domestic violence, relationship violence, stalking, and/or gender-based harassment to the University's Title IX Coordinator.

As an instructor, I also have a mandatory obligation to report disclosures of or suspected instances of child abuse or neglect (www.usmh.usmd.edu/regents/bylaws/SectionVI/VI150.pdf).

The purpose of these reporting requirements is for the University to inform you of options, supports and resources; you will not be forced to file a report with the police. Further, you are able to receive supports and resources, even if you choose to not want any action taken. Please note that in certain situations, based on the nature of the disclosure, the University may need to take action.

If you need to speak with someone in confidence about an incident, UMBC has the following Confidential Resources available to support you:

The Counseling Center: 410-455-2472

University Health Services: 410-455-2542

(After-hours counseling and care available by calling campus police at 410-455-5555)

Other on-campus supports and resources:

The Women’s Center, 410-455-2714

Title IX Coordinator, 410-455-1606

Additional on and off campus supports and resources can be found at:

<http://humanrelations.umbc.edu/sexual-misconduct/gender-equitytitle-ix/>.

Course Calendar/Schedule

<u>Week</u>	<u>Date</u>	<u>Class Topic</u>	<u>Reading</u>	<u>Assignments</u>
1	Jan. 27, 29	Introductions, Syllabus; What is Applied Ethics?	<ul style="list-style-type: none"> • Comstock, Introduction 	
2	Feb. 3, 5	Ethical Reasoning	<ul style="list-style-type: none"> • Thomson, “The Trolley Problem” (in Bb) • Comstock, Part A “Case Study: Can of Worms” • Martinson, et al., “Scientists Behaving Badly” (in Bb) • UCSD Research Ethics Program, “Guidelines for Discussions” (in Bb) 	
3	Feb. 10, 12	Ethical Theories	<ul style="list-style-type: none"> • Mill, <i>Utilitarianism</i> (excerpts in Bb) • Kant, <i>Groundwork</i> (excerpts in Bb) 	
4	Feb. 17, 19	Research Ethics and Professional Codes of Ethics	<ul style="list-style-type: none"> • WMA, “Declaration of Helsinki” (in Bb) • WEF, “Code of Ethics” (in Bb) • Appleyard, “Who Cares? The Declaration of Helsinki” (in Bb) • Comstock, Ch. 5: “Articulate Reasons” 	
5	Feb. 24, 26	Research With Human Subjects	<ul style="list-style-type: none"> • Comstock, “Part C: Respect Stranger’s Rights” • Comstock, Ch. 9: “Inform Subjects.” • Beauchamp and Childress, “Autonomy” from <i>Principles of</i> 	Mock IRB Assignment In-Class Wed. Feb. 26

			<i>Biomedical Ethics</i> (excerpts, in Bb) <ul style="list-style-type: none"> • CDC, "Tuskegee Study" (website; link in Bb) 	
6	Mar. 2, 4	Research Misconduct	<ul style="list-style-type: none"> • Whitney, "IRB's: A Flawed System of Risk Management" (in Bb) • Comstock, "Part A: Protect My Interests" • Comstock Ch. 1: "Report Misconduct" • Gross, "Scientific Misconduct at Harvard" (in Bb) 	
7	Mar. 9, 11	Authorship and Peer Review, Review for Essay 1	<ul style="list-style-type: none"> • Comstock, Ch. 2: "Avoid Plagiarism" • Comstock, Ch 6: "Write Cooperatively" • Comstock, Ch. 7: "Protect Manuscripts" • NIH, "Guidelines for Authorship Contributions" (in Bb) • NIH, "Processes for Authorship Dispute Resolution" (in Bb) • Essay 1 Assignment Prompt (in Bb) 	Peer Review Assignment In-Class Wed. Mar. 11
8	Mar. 16, 18	<i>Spring Break</i>		
9	Mar. 23, 25	Mentor-Mentee Relationships	<ul style="list-style-type: none"> • Comstock, Ch. 10: "Mentor Inclusively" • National Academy of Sciences, "The Role of Mentoring" (in Bb) • NIH, "Mentoring Research Cases" (in Bb) 	
10	Mar. 30, Apr. 1	Intellectual Property and Data Management	<ul style="list-style-type: none"> • Comstock, Ch. 11: "Recognize Property" • Comstock, Ch. 8: "Clarify Statistics" • NIH, "Data Management and Scientific Misconduct" (in Bb) 	Essay 1 due Mon. Mar. 30
11	Apr. 6, 8	Questionable Research Practices, Replicability, and Reproducibility	<ul style="list-style-type: none"> • Romero, "Philosophy of Science and the Replicability Crisis" (in Bb) • NIH, "Research Reproducibility" (in Bb) 	
12	Apr. 13, 15	Collaborative Research and Conflicts of Interest	<ul style="list-style-type: none"> • Comstock, Ch. 12: "Reveal Conflicts" 	Consent Form Assignment

			<ul style="list-style-type: none"> • Freedman and Mullane, "The Academic-Industrial Complex" (in Bb) • NIH, "Dual Use Research" (in Bb) 	In-Class Wed. Apr. 15
13	Apr. 20, 22	Research With Animal Subjects	<ul style="list-style-type: none"> • Comstock, "Part D: Honor All Interests" • Comstock, Ch. 13: "Treat Humanely" • National Research Council, "Guide for the Care and Use of Laboratory Animals" (excerpts, in Bb) • Singer, "All Animals Are Equal" (in Bb) 	
14	Apr 27, 29	Scientific Research and the Environment, Review for Essay 2	<ul style="list-style-type: none"> • Comstock, Ch. 14: "Preserve Environments" • Rawls, <i>A Theory of Justice</i> (excerpts, in Bb) • Essay 2 Assignment Prompt (in Bb) 	
15	May 4, 6	Social Responsibilities of Scientists	<ul style="list-style-type: none"> • Comstock, Ch. 15: "Cultivate Responsibility" • Bird, "Socially Responsible Science is More Than 'Good Science'" (in Bb) • NIH, "Implicit and Explicit Biases in the Research Setting" • Jaschik, "What Larry Summers Said" 	
16	May 11	Laboratory Safety	<ul style="list-style-type: none"> • C.S.B, "Texas Tech Laboratory Explosion" (in Bb) • Langerman, "What Went Wrong?" (in Bb) 	
FINAL EXAM WEEK	May 18			Essay 2 due Mon. May 18