Syllabus
Research Ethics and Scientific Integrity
Spring 2013 Honors Seminar
HON 407, CRN: 65314
Portland State University

Course Credit: 4 quarter hours

Instructor Information:
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Office Hours: Tuesdays and Thursdays, 2:00-3:00 PM

Class Meeting Information:
Tuesdays and Thursdays, 12:00-1:50 PM
Room 205, XSB

Course Description:
The seminar course will address traditional and modern topics in research ethics and scientific integrity. The course will primarily involve reading, abstracting, peer-editing, and in class discussion around the following major scientific ethics topics: 1) values in science, definitions of scientific ethics and research integrity, 2) peer-review, responsible authorship and publication, and plagiarism, 3) responsible data acquisition and management, 4) research misconduct, error and negligence in science, 5) contemporary ethical issues in biomedical research (stem cells, human and animal subjects, cloning, etc.), 6) impacts of science on society, 7) collaboration and commitment management, mentoring and being mentored, 8) bias in science, and 9) conflicts of interest. Students will participate in daily, open class discussions with the instructor and occasionally, invited, expert guests. Students will learn to write effective abstracts, conduct unbiased peer-review, conduct research and report on an independent examination of a case of research misconduct or other ethical issue, and participate in oral scientific and ethical discussions. Course materials will be from popular culture sources (books and videos), scientific journals, federal agency and professional society ethics training materials, and real and fictional case studies.
Major Course Materials:

1) *Research Ethics: Cases and Materials*  
Edited by Robin Levin Penslar  
Recommended: I will use this as a source of case studies and as a brief guide for some of the course topics.

2) *Ethics in Science: Ethical Misconduct in Scientific Research*  
John D'Angelo  
Recommended: I will use this as a source of case studies and as a brief guide for some of the course topics.

3) *Intuition*  
Allegra Gooding  

4) *The Immortal Life of Henrietta Lacks*  
Rebecca Skloot  
Required: A non-fiction book concerning ethical practice in human experimentation, the ownership and use of human cellular material, examples of historical racial biases in science, and many other important ethical concerns. A #1 *New York Times* Best-Seller.

5) *The Plutonium Files: America’s Secret Medical Experiments in the Cold War*  
Eileen Welsome  

Course Participation and Graded Assignments:
Course grades will be based on participation in and preparedness for in-class discussions and reviews, as well as on several small, written assignments, and on an individual course project with both written and oral components. The point scheme and allocation that will be used to determine the course grade appears below.

Abstract and Essay Writing: (150 points) There will be approximately 10-15 short writing assignments that will be announced with explicit instructions at the end of a class period (and posted on D2L following in class announcement). Each is DUE at the BEGINNING of the next class, following the class in which it is assigned. Written assignments will be abstracts (<500 words), short essays, or short response worksheets covering assigned course readings.
Peer-review: (100 points) At the end of approximately 10-15 of the lectures, 30 minutes will be devoted to peer-review of classmates' short written work. Explicit instructions for conducting peer-review will be given for each assignment. 5 points will be assigned for each peer-review sheet completed, meaning that a student must review at least 20 of his fellow classmates' written works during the term to receive 100% of the peer-review points. 1 point extra credit will be awarded, up to 10 extra points, for each additional peer-review completed. Remember that ethically, quantity should never be sacrificed for quality!

Term Project Case Study & In-class Presentation: (150 points) Each student will choose an independent, scientific ethics case study to research over the term of the quarter. The case study will be researched and written up analogous to the preparation of a scientific manuscript. That is, the student will propose an ethical problem to study, propose a hypothesis or other thesis for the study, conduct a thorough investigation of the case via appropriate reference materials, summarize the results of the investigation, and discuss the implications of the case on ethical, scientific and societal concerns. The paper should have an Abstract, an Introduction, a Methods Section, a Results section, a Discussion section, and a Conclusion section. Topic selection must be unique in the class, and must be approved by Dr. Goforth. A list of potential subject matter is available from Dr. G., although, if you know what to look for, you will see the subject matter encountered daily in your own life. Term projects will be presented (10 minutes Presentation + 10-20 minutes Discussion) starting on the last day of class and continuing during the final exam period.

In-Class Discussion Participation: (130 points) Throughout the quarter, students will participate in daily in-class discussions in groups of three. Dr. Goforth will award arbitrary (not real) points to the groups for quality responses, points, and examples. At the end of each lecture, the number of arbitrary points will be used to establish the number of real points as follows: The group with the highest number of points will be awarded 10 points; second highest, 9 points; third highest 8 points, fourth highest 7 points; all others with any accumulated arbitrary points, 5 points. There will be 19 opportunities to earn discussion points (20 lectures + 1 final exam – 2 lectures Dr.G. absent), which means that to get 100% of the participation points, you must on average place fourth or higher. For participation in all 19 discussions at 5 points per discussion, you will earn 73% of the participation points. Absences are individual and not team absences, that is, the team minus the absent individual will earn points, but will have to compete as if they were a full team.

Total Class Points: 150 (Abstracts/Essays) + 100 (Peer-review) + 150 (Term Project) + 130 (Discussion/Participation) = 530 points
Course Grading Scheme:
A: 90.0-100.0%, B: 80.0-89.9%, C: 70.0-79.9%, D, 60.0-69.9%, F: <60.0%
The letter grade will be determined using the following formula: number of
accumulated points / total possible points x 100%. I will use the +/- system within
the broad letter-grading scheme listed above (X0.0-X3.9 (-) and X7.0-X9.9 (+); X
= 6, 7, or 8).

Schedule of Topics and Assignment Due Dates:
An anticipated course schedule is given as a separate attachment. The
attachment is intended as a rough guide only to the anticipated order and
content of the class. Assignments and additional course content will be explicitly
posted with actual due dates on D2L. Note that information posted on D2L concerning
assignments and assignment due dates supersedes any information concerning these in the attachment.

Late Work and Absence Policy:
Late work will result in automatic loss of 10% of the points for the assignment for
each day it is late; it may be turned in in class on the due date, or by 5 pm on the
due date to the Chemistry Office (SRTC 262). Absences from class do not need
to be excused, but do result in penalty to your participation grade.

Disability Resource Statement: Any student who feels s/he may need an
accommodation based on the impact of a disability should contact me privately to
discuss your specific needs. Please contact the PSU Disability Resource Center,
located in Room 435 of the Smith Memorial Student Union (voice phone: 503-
725-4150; TTY: 503-725-6504; e-mail: drc@pdx.edu), to coordinate reasonable
accommodations if you are a student with verifiable documentation.

Ethics and Integrity Statement: I would usually end my syllabus with an Ethics
and Integrity statement…but since this is the topic of acute discussion for the
course, I ask you to review (or read for the first time) PSU’s Code of Student
Conduct and Responsibility, which can be found at the following site on the www:
http://www.pdx.edu/dos/psu-student-code-conduct.