

SYGN502 A Introduction to Research Ethics (1 credit)

Fall 2012 (CRN# 82069)

Tuesdays, 4:00-6:00pm, for seven weeks

beginning August 28, 2012

Stratton Hall 102

Instructors:

Roel Snieder (Geophysics)

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Bulletin description:

Introduces students to the various components of responsible and ethical research practices.

Topics covered move from issues related to the planning of research through the conducting of research to the dissemination of research results. The course culminates with students writing and defending their personal ethics statements.

Text: *On Being a Scientist: A Guide to Responsible Conduct in Research*, 3rd ed. (National Academy of Sciences, 2009).

“This new course will enhance the ability of CSM graduates to meet the demands of an ethically complex and challenging research environment in the lab, the field, and the world.”

— Steve Castillo, Former CSM Provost

This course will help CSM meet its obligations under the American COMPETES Act (2007) to provide education and training in the responsible conduct of research (RCR) to all graduate students receiving NSF support.

Class Mechanics

Class will be conducted as a seminar. This means that although the instructors will make some presentations, so will students. In addition, all students should always come prepared and be able to discuss, ask questions, respond to queries, and further our common reflections on the issues at hand.

Readings will be assigned for all classes, with short response papers due each session at the beginning of class.

Additionally, students will be asked to come with articles or information to present concerning recent news or events related to responsible conduct of research.

Themes

The ethics of scientific research covers two broad areas of reflection. One concerns internal or science-science relations: The guidelines for conducting science in the most ethically responsible manner. The other concerns trans-science relations: Thinking about what is science for, relations between science and the good — meaning both a good personal life and the good of society. Although this seminar will touch on both areas, the emphasis is somewhat more directed toward the first than the second.

It is also important to emphasize that this seminar will of scratch the surface of these two rich and important areas of reflection.

Tentative Schedule

Week #1 Tue. Aug. 28

Self introductions. Presentation of the syllabus.

Video “Do Scientists Cheat?” and discussion.

Assignment: Read handouts "Is Ethics Relative?" and "How should one live?".

- Write a short elaboration on one of the dichotomies presented in the text "Is Ethics Relative?".
- Write one paragraph each regarding the "What?", "How?", and "Why?" in answer to "What constitutes the good life?".

Week #2 Tue. Sept. 4

What is ethics? What is the difference between dialogue and debate?

What constitutes the good life? How ought one live?

- Assignment: Read handout “Ethical Theories.”
- Write a one-page analysis and justification of the ethical theory you find most adequate.

Week #3 Tue. Sept. 18

Basic ethical theories: consequentialism, deontological ethics, virtue ethics, ethics of care.

Week #4 Tue. Sept. 25

Ethical issues in planning research. From doing things right to doing the right things.

Week #5 Tue. Oct. 2

Ethical issues in conducting research. *On Being a Scientist*, 1-8.

Week #6 Tue. Oct. 23

Ethical issues in disseminating research. *On Being a Scientist*, 9-13.

Week #7 Tue. Oct. 30

Students present and defend a personal ethics statement.

Outcomes for the CSM Graduate Ethics Education Requirement

We seek to insure that applied scientists and engineers who earn advanced degrees from or served as postdocs at CSM be able to:

- (1) Compare, contrast, and evaluate basic ethical theories.
- (2) Address a range of ethical issues they may confront in their professional lives.
- (3) Articulate their own ethical ideals and commitments to science, society, and the environment.

Grading

Grades will be determined primarily by the quality of argumentation and quality of the supporting material students use to lay out and justify whatever ethical positions they wish to defend. Some arguments are stronger than others, but the ethical choices made by students cannot be graded. The final grade will be based in equal parts on the following criteria:

1. homework (content, clarity of argumentation, personal involvement) (33%)
2. class participation and preparation (being present and active, and being a positive contributor to dialogue as described in the handout *Guidelines for discussion* (33%))
3. final project (written material, presentation, discussion) (34%)