

Syllabus
Responsible Conduct of Research (Ethics and Compassion)

STS 6500
Spring Semester, 2017
R.W. Berne, PhD
Syllabus (Revised 11/10/17)

Course Overview

Responsible conduct of research is defined as “the practice of scientific investigation with integrity. It involves the awareness and application of established professional norms and ethical principles in the performance of all activities related to scientific research.” (NIH)

The NIH requires that all trainees, fellows, participants, and scholars receiving support through any NIH training, career development award (individual or institutional), research education grant, and dissertation research grant must receive instruction in responsible conduct of research.

The course will follow the NIS recommended format of substantial face-to-face discussions, combining didactic and small-group discussions. Case studies, short films, journal articles, S. Jasanoff’s *The Ethics of Invention*, and the “Introductory Topic Packet” by M. Kalichman, will be used as the primary foci of our conversations. Classes will center on discussion of the assigned readings, with particular attention given to students’ written responses to topical questions.

This is a 1-credit course, meeting for 50 minutes, once a week.

Course Grading

50% Participation in discussions about readings and films
50% 10, 1-2 page written responses to discussion questions and readings

Topics & Schedule

Week 1. Introduction

Jasanoff, S. (2016). The Power of Technology (Ch. 1). *The Ethics of Invention: Technology and the Human Future*

Week 2. Responsible Conduct of Research

Film: The Whole Truth & Noah’s Dilemma (AAAS Integrity in Scientific Research)

Reading: Budinger, T., Budinger, M. (2006). Ethics in scientific research (Ch. 2) in *Ethics of Emerging Technologies: Scientific Facts and Moral Challenges*.

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Week 3. Conflicts of interest: personal, professional and financial

Topic Packet: "Conflicts of interest," by Michael Kalichman

Reading: Harris, R. (2017). Begley's Bombshell, Ch. 1., *Rigor mortis: How sloppy science creates worthless cures, crushes hope, and wastes billions*

Week 4. Responsible authorship, publication ethics

Topic Packet: "Authorship," by Michael Kalichman

Reading: Gilmore, J., Strickland, D., Timmerman, B., Maher, T., Feldon, D. (2010). "Weeds in the flower garden: An exploration of plagiarism in graduate students' research proposals and its connection to enculturation, ESL, and contextual factors."

Week 5. Plagiarism and peer review

Topic Packet: "Peer Review," by Michael Kalichman

Reading: Borenstein, J. (2011). "Responsible authorship in engineering fields: An overview of current ethical challenges." *Science and Engineering Ethics*. Volume 17, Issue 2, pp. 355-364

Week 6. Risks of Invention

Jasanoff, S. (2016). "Risks and responsibility" & "The ethical anatomy of disasters" (Ch. 2 & 3). *The Ethics of Invention: Technology and the Human Future*

Week 7. Data acquisition; management, sharing and ownership

Topic Packet: "Data management," by M. Kalichman

Reading: Jasanoff, S. (2016). "Whose knowledge, whose property?" (Ch. 7) in *The Ethics of Invention: Technology and the Human Future*

Week 8. Ethical dilemmas in research integrity

Topic Packet: "Whistle blowing," by M. Kalichman

Reading: Swazey, J., Anderson, M., Lewis, K. S., (1993). "Ethical problems in academic research," *American Scientist*. Vol. 81, No. 6

Week 9. Human subject research

Topic Packet: "Human subjects," by M. Kalichman

Week 10. Collaborative research, including with industry

Topic Packet: "Collaboration," by M. Kalichman

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Week 11. Diversity in graduate education

Gibbs, Jr., K. (2014). "Diversity in STEM: What it is and why it matters." *Scientific American*.

Weeks 12 & 13. Values and Compassion

Jasanoff, S. (2016). "Reclaiming the future" & "Invention for the people" (Ch. 8 & 9) in *The Ethics of Invention: Technology and the Human Future*

Week 14. Reflections and Course Conclusion: What does this all mean for me as a graduate student?

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