

"Collaboration in Scientific Research: Ethical, Philosophical, and Other Perspectives on Scientific Practice"

An innovative advanced research course for PhD students from a range of disciplines: Autumn 2012

This National Science Foundation (NSF) funded joint research course offered at Illinois Institute of Technology (IIT) is designed for PhD students in science, engineering, and philosophy, history, and social studies of science from local universities. Cross-disciplinary collaboration is the central theme that motivates study of science from a variety of perspectives, including history and social studies of science along with philosophy of science and ethics and values. Students' current research is a starting point for discussion and for forming collaborations in the joint research portion of the course.

The course is taught by faculty from across the disciplines. The goal is to help students acquire a view of science, engineering, and science studies that makes the social and normative aspects of each essential and valuable as part of their understanding of their respective disciplines and research opportunities. Readings and class discussions explore topics such as modeling, experimentation, explanation, objectivity (and subjectivity), and cognitive values in science such as quantification, ethics issues in the institutions of science such as those associated with peer review, and ethics issues, such as conflict of interest, that arise from science as a social enterprise within the wider society.

- Tuition is provided by NSF funding and stipends cover additional costs of participation.
- This 15 week semester course is scheduled to meet for seminars on Monday afternoons at IIT from 2pm 5pm, starting on Monday, August 27, and ending on Monday, December 10, 2012
- Half the meetings will cover a set of topics, with readings and questions on the readings assigned for each topic. The
 other half will be devoted to collaborative research: presentation of PhD work, then work-in-progress presentations by
 groups.
- For seminar presentations and in the collaborative research, students will work in small multidisciplinary groups that each include at least one science or engineering student and one science studies student.
- Students present their collaborative research papers during the final two seminars of the course.

Student groups will make presentations and lead follow-up discussion based on assigned readings that are drawn from the writings of scientists, engineers, and science studies scholars (philosophers, historians, and social scientists). Students are graded on their presentations, written responses to questions on the readings, research collaboration, and final joint papers.

Faculty include Vivian Weil, IIT, Ethics; Jordi Cat, Indiana University, Philosophy of Science; Eric Brey, IIT, Biomedical Engineering; Sandra Bishnoi, Rice University, Chemistry; Nick Huggett, University of Illinois at Chicago, Philosophy of Science.

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