

Date: November 30, 2009

To: Moses Lee, Dean for the Natural and Applied Sciences

From: Darin Stephenson, Chair of the Mathematics Department

Re: Responsible conduct in research – training for mathematics and statistics research students

Mark Pearson has run a “responsible research training” program for other science departments (Computer Science, Engineering, and Physics) in recent years, and this plan takes advantage of the structure developed for that program.

The planned program would take place in two sessions, probably at or near the end of the work day. The two sessions would be separated by about a week.

1. In the first meeting, students would review the official research ethics policy statement of the professional organization most closely aligned with their research topic. For mathematics research students, this would be the American Mathematical Society’s statement; for statistics students, this would be the statement from the American Statistical Association.
2. In the first meeting, students would review and discuss historical case studies relating to research ethics. They would identify the key ethical issues involved and discuss the consequences incurred in the case studies.

Issues covered will include:

- a. Data acquisition, management, sharing, and ownership, (primarily for statistics research students)
  - b. Publication practices and responsible authorship, peer review, and collaboration in science,
  - c. Human subjects training (for statistics research students).
  - d. Forms of research misconduct and conflicts of interest
3. In the first meeting, students would also review some fictional case studies relating to similar issues. Students would be asked to discuss these fictional cases in small groups, and then present their case and its ethical analysis to the group. (This could continue into the second meeting, if needed.)
  4. Before the second meeting, students would work together to develop their own fictional case study relating to ethical research in their intended research field.
  5. These student-developed case studies would be circulated and discussed at the second session.
  6. Finally, each student would be asked, at the end of the second session, to write a brief statement about his or her view of responsible ethical research conduct in the discipline, and how this relates to work currently underway.