

Essential Info

LANGURE mini-course

The mini-course will fulfill its objectives if, after completing it, each participant is able to:

1. Explain LANGURE's 6 deliverables;

- A new doctoral-level 1.0 credit core course in RE taught to hundreds of PhD students at a half-dozen universities across the country and to masters degree students as applicable.
- An online version of the course, freely available to all;
- A novel suite of 15 interactive, freely-available, online RE modules covering the role of women and underrepresented minority students in engineering and scientific research; statistics; nanotechnology; physics; chemical engineering; computer science; nuclear engineering; intellectual property; and 7 other areas;
- More than 100 faculty and graduate students involved in researching, designing, developing, and testing the new course and its 15 discipline-specific modules;
- Dozens of high school science teachers using a version of one of our modules to enliven units on agricultural biotechnology with a discussion of the technology's ethical dimensions;
- Strategies to implement a required course in research ethics at our 8 participating institutions.

2. Find additional information about LANGURE on the web;

www.ncsu.edu/langure

3. Explain the learning objectives (below), target audience (all doctoral students), number of credits (1.0) and semesters (Fall and Spring) in which the "Introduction to Research Ethics" course will be offered (7 weeks, 2 hr class sessions per week);

The purpose of this course is to help students understand the policies regulating research at land grant universities (LGUs) and the moral principles on which these policies are based. The course will fulfill its objectives if, after completing it, students have the ability to explain the:

1. Research mission of land grant universities

2. Ethical principles supporting research policies

- Definition of ethics: difference from custom, science, religion, and law;
- Methods for analyzing moral arguments and making decisions;
- Seven ethical principles and their justification;

3. Policies regulating research

- Mentoring, and under-represented minorities and women in research;
- Use of humans in research;
- Use of animals in research;
- Research misconduct, and appropriate responses, including whistleblowing;
- Authorship and peer review;
- Intellectual property;
- Conflicts of interest and commitment; collaborative research;

- o Proper experimental design, data collection, and statistical interpretation;

4. Discipline-specific issues

5. Importance of life-long learning in research ethics, and how to find updated information.

4. Understand various proposals for the core topics to be covered in the Intro course;

See above "Learning Objectives" for Comstock's initial proposal consisting of 5 topics.

Questions: 1. Should use of humans be explicitly covered in core?

2. Should use of animals be explicitly covered in core?

5. Explain the context in which the "Intro" students are likely to encounter the module on which the participant is working;

During week number 6 of the 7 week course, at this point: "4. Discipline-specific issues"

6. Explain the dates, and who is responsible, for completion of:

- a. First draft of module Sr and Jr Fellows at NC State
- b. Second draft of module Sr Fellows at participating institutions
- c. Intro course offered on campus Institutional Leaders
- d. National conference at NC State to discuss second draft of module
Sr and Jr Fellows at NC State plus Sr Fellows at participating institutions
April 2007
Up to \$ in travel costs provided--domestic travellers
Up to \$ in travel costs provided--Hawaii travellers
- e. Proposal submitted to annual professional meeting to present module
Sr and Jr Fellows at NC State plus Sr Fellows at participating institutions
Deadlines vary -- August 2006?
- f. Module presented at annual professional meeting
Sr and Jr Fellows at NC State plus Sr Fellows at participating institutions
Up to \$ in travel costs provided--domestic travellers
Up to \$ in travel costs provided--Hawaii travellers

GC
10/28/05