PHYSICS 690E

Ethics for Scientists & Engineers

W: 10 am -12 pm, Hasbrouck 106

SPRING 2007

Instructors:
Philip Nasca (School of Public Health and Health Sciences)
Marc Achermann (Department of Physics)

This 2-credit course is an introduction to the variety of ethics topics found in academic research with case studies that are relevant to nanoscience and nanotechnology. Scientific misconduct, public mistrust of research results, conflicts of interest, etc. are not entirely new ethics issues, but these topics have become more important in recent years. The goal of this course is to educate graduate students as they develop as researchers, providing them with a common ethical understanding so that they become aware of their obligation to conduct research in a responsible manner. It is also important to recognize how a researcher's behavior and attitudes affect coworkers, colleagues and ultimately the public. In addition, subjects such as mentor-student relationships and student's rights in the research environment will strengthen the graduate student position by providing them with information upfront about their rights and responsibilities during their graduate research career.

Topics include:

Introduction: Nanotechnology and Ethics
Philosophical framework for ethical behavior
Scientific misconduct
Plagiarism: How to recognize and avoid plagiarism
Planning projects and experiments
Conflicts of interest
Data management practices
Professional and project relationships
Authorship and publication
Communicating research findings to the public and the media
Whistle blowing
Commercial ventures and intellectual property

Support for the development of this course was made possible by the National Science Foundation under Award No. DGE-0504485, the UMass Amherst IGERT Nanotechnology Device and Innovation Program

IGERT
Program in Nanotechnology Innovation
University of Massachusetts Amherst

NSF