

Debating Science  
NSF Program in Graduate Education  
The University of Montana  
Recruitment and Application Letter



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We write to inform you about a new National Science Foundation sponsored project *Debating Science*. This project is an exceptional educational opportunity for graduate students in science and engineering, as well as students in the humanities and social science whose interests focus on science and technology issues.

### **Project Purposes and Goals**

Contemporary scientific developments in areas such as climate change, biotechnology, and nanotechnology create ethical challenges of great magnitude, subtlety and complexity. Skilled deliberation is needed to meet these challenges and to make wise policy choices. Yet excellence at ethical deliberation cannot be taken for granted. It is no more or less innate than excellence, for example, in scientific reasoning. Both require study, critical reflection, and practice.

The goal of *Debating Science* is to encourage the development of cooperative deliberation between scientists and humanists on the social and ethical aspects of scientific research and technological innovations. The project employs a new educational model derived from current research in the field of practical reasoning. This innovative approach is designed to make public deliberations over science and technology comprehensive, logically organized, and more cooperative, in the process offering a smoother interface between science and ethics.

The program consists of two educational components: a 4-day summer workshop and a 3-credit online course. This program will be run in 2007 and 2008. Each year, thirty-six graduate students will be selected from a national applicant pool to participate.

### **Workshop**

The first workshop will be held at the University of Montana in Missoula from August 5<sup>th</sup> - 9<sup>th</sup>, 2007. Student travel and accommodation expenses for this workshop will be paid by the organizers. The workshop will feature nationally recognized experts in the three target areas of interest: agricultural biotechnology, nanotechnology and climate change. Workshop sessions will provide overviews of the current context of these debates as well as introduce students to the new approach to ethics education used in this project.

### **Online Course**

Following attendance at the summer workshop, students will take an online course during the fall semester. Three graduate-level, online courses will be offered simultaneously in 2007, with each course focusing on one of the three areas of concern. Students will select one course, depending on their area of interest, and each course will be limited to a dozen students. Courses will be team-taught by an ethicist and a scientist who each have expertise in the specific topic area. The courses will be discussion-oriented and students will explore the integration of scientific issues and ethical concerns. For example, in the biotechnology course students will explore such questions as: What social and environmental impacts will the widespread adoption of genetically modified organisms have? In the nanotechnology course, questions might include: How should the benefits of nanotechnology be shared between the rich and the poor, and between developed and developing countries? The course on climate change will discuss such questions as: What would a fair and democratic international greenhouse gasses reduction plan involve?

Each course will prepare graduate students to participate more effectively in important public scientific debates in their chosen careers. These courses can be taken for a traditional grade option or a pass/no-pass option. The online format should allow for maximum flexibility as students pursue their degree programs. Students will receive 3 transferable graduate credits after completing this course through The University of Montana's Office of Continuing Education.

All graduate students are welcome to apply to this program. Interested students can find more information on the program web page and can apply by following the "[application](#)" link on the *Debating Science* web page.

[www.umt.edu/ethics/debating\\_science](http://www.umt.edu/ethics/debating_science)