

EGR 205
Science, Technology, and Ethics
Picker Engineering Program, Ethics Program, Program for the Study of Women and Gender
Smith College

Professor: Donna Riley, 350 Ford Hall, x7003, driley@smith.edu, office hours W 3-4pm, Th 4:30-5:30pm
Class Meetings: Bass 204, TR 3-4:20

Description: Who decides how science and engineering are done, who can participate in the scientific enterprise, and what problems are legitimately addressed within these disciplines and professions? Under what conditions has science aided and abetted racist or colonialist research projects? What are the roles of technology, culture, and economic systems in the drive toward bigger, faster, cheaper, and more automated production of goods, and what are the consequences for human relationships and for the environment? When technology provides means for control, for example in military, information, reproductive or environmental applications, what rights and responsibilities follow? Using readings from philosophy, science and technology studies, and feminist and postcolonial science studies, we will examine such questions and encounter new models of science and engineering that are responsive to ethical issues.

Objectives: Students receiving a passing grade in this class shall be able to:

- Think critically about science, technology, and ethics, identifying and analyzing a variety of cases, and taking reflective action in response.
- Conduct original research in science, technology, and ethics.
- Lead insightful discussions on science, technology, and ethics topics.
- Effectively communicate the findings of original research on science, technology and ethics.
- Explain the complex relationships among science, technology, and ethics in current social contexts, and how these contexts inform and influence social choices about science, technology, and ethics.
- Assess and direct your own learning, and reflect on that process.

Evaluation:

45% Community-based Research Project

Scope + PRs (25%)

Final (20%) - 5000 words

20% 4 individual essays

15% Lifelong Learning

Self-directed learning proposal (5%)/final reflection (10%)

20% Class work

Preparation (reading questions) (10%) Due @10AM on due date; no late submissions but can skip one

Participation (10% - includes legwork on project)

Date	Material covered	Readings	Major Due Dates
Week 1			
9/6	Intro to course themes (What is ethics? What is justice? What is CBR?)		
Week 2: Introduction to Community Based Learning Project			
9/11	Community-based research	Science shop model, Citizen Science Weasel, Tabuchi	
9/13	Intro to Project	Read resources section of moodle page, focusing on first 3-4 sites and bottom section on science	Self-Directed Learning Proposal
Week 3: Introduction to Ethics			
9/18	Ethics Approaches	Warren, Walker, Winner	
9/20	Mountain Day		
Week 4: Nuclear Origins: Hiroshima and Nagasaki			
9/25	What is Ethics? No more Hiroshima (film)	Weston, Catalano	Project scope
9/27	ABCC and research ethics	Zinn, Lindee	Essay 1 (flex deadline)
Week 5: Bombs to Energy: The Invention of Nuclear Power			
10/2	A is for Atom (film)	Winner	
10/4	Climate of Hope (film) Report on progress	Lilienthal, Williams How Nuclear Power Works links	
10/5	Intersex Symposium at Mt. Holyoke		
Week 6			
10/9	FALL BREAK		
10/11	Questioning Objectivity of Science & Technology	Harding, Martin, Longino	
Week 7			
10/16	Science & Social Inequality: Cultures of Injustice	Frehill, Subramaniam	
10/18	Guest Speaker: Andy Larkin, SAGE Alliance		
Week 8			
10/23	Science and Social Inequality: Racist Projects Uranium Dreaming	Shrader-Frechette, Brugge, Navajo Report, video	
10/25	Guest Speaker: Marcus Atkinson, Footprints for Peace		

Week 9			
10/30	Science and Social Inequality: Racist Projects	Skloot, Schweitzer	
11/1	Science & Social Inequality: Cultures of Injustice	Slaton, Harding	Progress Report
Week 10			
11/6	Histories of Resistance	Lovejoy, others tbd	Essay 2: Was nuclear research a racist project? Is nuclear power? Integrate the readings from science and social inequality and nuclear warfare/energy to answer these questions.
11/8	Otelia Cromwell Day	No Class	
Week 11			
11/13	Alternatives to Nuclear Power in VT	PIRG Report, Germany, Japan	
11/15	Virginia Eubanks Visit	Eubanks (chs 1 and 5)	PR 4 Meet with SAGE 7pm
Week 12			
11/20	Project Work Time		
11/22	THANKSGIVING BREAK		
Week 13			
11/27	Project Work Time		
11/29	Project Work Time		Final Draft
Week 14			
12/4	Dry run of presentation		
12/6	Final presentation		
Week 15			
12/11	Debrief		
12/13	Wrap-Up and review		Report Revisions Due
Finals Week			
			Self-directed learning reflection

