## **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, <u>driley@smith.edu</u>, 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)

page, focusing on first 3-4 sites and bottom section on science  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)  Proposal  Proposal  Proposal  Proposal  Proposal  Warren, Walker, Winner  Weston, Catalano  Project scope	Date	Material covered	Readings	Major Due Dates						
What is ethics? What is justice? What is CBR?)   Week 2: Introduction to Community Based Learning Project   Science shop model, Citizen Science   Weasel, Tabuchi										
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    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?   Weston, Catalano   Project scope   9/27   ABCC and research ethics   Zinn, Lindee   Essay 1 (flex deadlin winner   10/2   A is for Atom (film)   Winner   10/2   A is for Atom (film)   Lilienthal, Williams   10/4   Climate of Hope (film)   Lilienthal, Williams   10/5   Intersex Symposium at Mt. Holyoke    Week 6   10/9   FALL BREAK     10/10   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   10/24   Science, Navajo Report, video    Week 8   10/25   Science, Navajo Report, video    Week 9   10/26   Science, Navajo Report, video    Week 9   10/27   Science, Navajo Report, video    Week 9   10/28   Science, Navajo Report, video    Week 9   10/29   Science, Navajo Report, video	9/6	(What is ethics? What is justice? What is CBR?)								
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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						
	Wee	k 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					
	Wee	k 12						
11/20	Project Work Time							
11/22	THANKSGIVING BREAK							
	Wee	k 13						
11/27	Project Work Time							
11/29	Project Work Time		Final Draft					
	Wee	k 14	<b>,</b>					
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							