

Undergraduate

Prepared By: David M. Kaplan

Phone: 565-3521

### REQUEST FOR ADDITION OF COURSE TO CORE CURRICULUM

College/School: College of Arts and Sciences

Department: Philosophy and Religion Studies

Subject Prefix: PHIL Course Number: 3700 Semester Credit Hours: 3

TCCNS Number (if applicable)	_____	Hours Per Week:	<u>3</u>	Lecture
	(common course number)		_____	Lab
Title	<u>Science, Technology, and Society</u>		_____	Recitation
Short Course Title :	<u>SCI, TECH &amp; SOCIETY</u>		_____	Other
	(maximum 22 characters including spaces)		<u>3</u>	

Category of Core Curriculum course is to be added: Capstone Experience

**Catalog Description:**

An examination of the interconnections among science, technology, and society and the ways they mutually shape one another to the benefit and detriment of social life and the environment. Topics include the social values of science and technology; technology and social progress; expertise and democracy; colonialism; and environmental justice.

**Prerequisite(s):**

None

If course is cross-listed, indicate below:

Department: _____	Subject Prefix/Course Number: _____
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**Justification for course to be added to Core Curriculum (Include how course would satisfy each exemplary objective.):**

PHIL 3700 Science, Technology, and Society is a course that has been designed to satisfy the Capstone Experience Core component area by focusing on questions concerning technology and science to form a bridge between and among disciplinary approaches. The very subject matter of the course is integrative and holistic. It will help students integrate knowledge across the curriculum. Students from the humanities, natural and social sciences, and engineering will be able to relate the subject of this course with any number of other courses they have taken in their major course of study.

Specifically, PHIL 3700 Science, Technology, and Society will satisfy the overarching objectives of the Capstone Experience core component area in the following ways:

- To make connections between different areas of knowledge and different ways of knowing:  
Students will learn about the interconnections among social values, socially-informed knowledge, science, and technology. They will approach science and technology primarily from three perspectives: philosophy, sociology, and history, but the case studies and examples that students will encounter draw from different areas of knowledge, such as gender studies, post-colonial discourse, and social psychology.
- To be able to express ways that exposure to different ideas, perspectives, and cultures and viewpoints have enriched their thinking.  
The subject matter of the course will expose students to a conjunction of disciplines they most likely have never encountered before, including non-academic perspectives such as indigenous peoples and members of developing nations, whose voices in the benefits/burdens of scientific and technological change are rarely heard. In addition to written assignments and class discussion, all students will give oral presentations on topics related to the texts they study in order to give them more opportunities to communicate what they have learned.
- To learn decision making strategies that include an ethical analysis.  
The primary thrust of STS is moral-political. By studying STS, students will not only learn about the mutual shaping of the technical and the social but also learn to criticize and evaluate desirable and undesirable consequences and influences of science and technology on social life and ethical beliefs. The class will pose hypothetical questions

to students about science and technology and help them formulate ethically-informed responses. The aim is to help students learn how to make ethically-informed decisions.

4. Participate in activities that promote the common good.

Each student will be required at the end of the semester to email a political representative (at either the local, state, or federal level), a not-for-profit advocacy organization, or a charitable organization, approved in advance by, and CC'd to, the course instructor, expressing his or her opinion about some matter of science or technology policy. Examples might include letters supporting, criticizing, or offering an analysis on subjects like: stem cell research, animal experimentation, off-shore oil drilling, TARP funds and specific technical projects, and so on. The instructor would help guide the activity to ensure that the opinions or analyses expressed incorporate a reasoned ethical analysis geared toward contributing to a policy debate about science-technology issues.

Consultation with University Curriculum Assessment Committee member:

Department: \_\_\_\_\_ Contact: Jim Conover Date: 4/15/09

New Core Curriculum Requests must include:

Syllabus:  Maximum 4-page syllabus attached

Assessment:  Consultation w/University Curriculum Assessment Committee member in this core component group.

Assessment procedures (criteria to be used in assessing this course) must be attached separately

**APPROVED:**

Department Chair: \_\_\_\_\_

J. Bernard Callisto

Date: \_\_\_\_\_

4/19/09

College/School Curriculum  
Committee Chair: \_\_\_\_\_

B. Schaefer

Date: \_\_\_\_\_

5/7/09

Dean of College/School: \_\_\_\_\_

B. Schaefer

Date: \_\_\_\_\_

5/7/09

Core Oversight Committee

Chair: \_\_\_\_\_

Date: \_\_\_\_\_

University Curriculum

Committee (VPAA): \_\_\_\_\_

Date: \_\_\_\_\_

# SCIENCE, TECHNOLOGY, AND SOCIETY

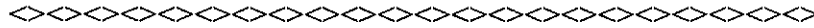
PHILOSOPHY 3700—SPRING 2008

TUESDAY & THURSDAY 12:30-1:50

PHYS 112



Professor: Robert Figueroa  
Department of Philosophy and Religion Studies  
University of North Texas



Office: 320e EESAT Building  
Office Hours: Wednesday 11:00-4:00 (or by appt)  
Phone: 940-565-2621 (Office & Messages)  
Email: [rmfigueroa@unt.edu](mailto:rmfigueroa@unt.edu)

## Course Description:

This course will be considered a student-centered class in which students will be expected to lead many discussions and debates over the issues and literature. Students will write weekly one-page position statements that will drive much of the conversation and topics of each class. Additionally, the professor will act both as facilitator and primary guide to the topics, in an effort to promote critical thinking on the issues and literature. Students will be expected to build collaborative group presentations around specific cases of their choosing, and apply interdisciplinary philosophical understanding to their case studies.

Course content will be directed to a number of issues relating to the interconnections between social values, especially social justice, and science and technology studies. The philosophy of science and technology will be the primary conceptual tool of this interdisciplinary course.

Some of the fundamental questions we will address include:

- ✦ What is the relationship between social and political values in the advances of science and technology today?
- ✦ What are the ethical obligations and restrictions connected to sharing technologies?
- ✦ How are the goals and philosophies of democracy related to techno-science?
- ✦ What are the social values connected to scientific legitimacy over other forms of reasoning, and in what ways is technological progress good for promoting social welfare?
- ✦ What constitutes expert knowledge and the social privileges that are allotted to these experts?
- ✦ What technological advances have led promoted the society-nature divisions, and in what ways are current sciences and technologies attempting to close those divisions?

Among these questions, we will be exploring new developments in science and technology studies, including: intellectual property rights; disability theory; techno-science implications for issues of gender, race, culture, and socio-economic status; globalization; technological origins to current social problems; scientific and technological policies; social debates of particular technological advancements; religion and science; colonialism and the sharing of scientific knowledge; and the maintenance of scientific and technological regimes across social change.

**Primary Texts and Literature:**

- ❖ Abram, David: *The Spell of the Sensuous: Perception and Language in a More-Than-Human-World*, (New York: Vintage Books, 1996).
- ❖ Russell, Edmund: *War and Nature: Fighting Humans and Insects with Chemicals from World War I to Silent Spring*, (New York: Cambridge University Press, 2001).
- ❖ Kleinman, Daniel Lee: *Science and Technology in Society: From Biotechnology to the Internet*, (Malden, MA: Blackwell Publishing, 2005).
- ❖ Tesh, Sylvia Noble: *Uncertain Hazards: Environmental Activists and Scientific Proof*, (Ithaca: Cornell University Press, 2000).
- ❖ Additional readings are to be provided.

**Course Requirements:**

- ❖ Weekly position statements for class discussion. These are to be one-page documents that will be handed in on Tuesdays of each week. Name, date, and course number must be at top of page; document to be double-spaced and written with a thesis and clarity. Further details will be provided on the first Thursday (1.17.08) of the semester.
- ❖ Group presentation of case and theory. Details of this assignment will be provided early in the semester. Complete groups are required to meet with professor early in the development of the project.
- ❖ Two papers 5-7 pages. Details of papers will be provided.
- ❖ Regular class participation. Details of course policy on attendance will be made available on the first Thursday (1.17.08) of the semester

**Grading:**

- ❖ Essays                    50%
- ❖ Weekly papers        10%
- ❖ Presentation         20%
- ❖ Final Exam            20%

**First Week's Reading Schedule: Available on the course webpage.**

January 15, Tuesday	Introductions and course description. Readings for Thursday, 1.17, Kleinman Chapters 1 & 2, and Sarewitz. Science is political/technology is social.
January 17, Thursday	Discussion of readings, scientism and technological progressivism (determinism). Readings for Tuesday, 1.22, Kleinman Chapter 3, and Lacey. World wide web and the digital divide
January 22, Tuesday	Discussion of readings, biotechnology and sociocultural nexus of seeds. Readings for Thursday, 1.24, Kleinman Chapter 4, and Hood. Intellectual property and owning life
January 24, Thursday	Kleinman, Ch. 5. Science and indigenous resources: colonialism and biocolonialism
January 29, Tuesday	Kleinman, Ch. 6. Men, women, science and engineering

### 3 | Science, Technology, and Society

January 31, Thursday	Kleinman, Ch.7. Democracy and expertise: citizenship in a high tech age
February 5, Tuesday	Abram, Introduction Philosophy and ecology
February 7, Thursday	Abram, Ch. 1. Non-western approaches to science and technology
February 12, Tuesday	Abram, Ch. 2. Connection-with and detachment-from nature
February 14, Thursday	Abram, Ch. 3. The meaning of truth in the science
February 26, Tuesday	Abram, Ch. 4. Ecological thinking for humanity, science, and technology
February 28, Thursday	Russell, Introduction Chemical warfare and society
March 6, Thursday CANCEL	
March 11, Tuesday	Russell, Ch. 1. WWI and the aftermath
March 13, Thursday	Review
March 18, Tuesday, SPRING BREAK	
March 20, Thursday, SPRING BREAK	
March 25, Tuesday	Russell, Chs. 2-3. Chemists during war and peace
March 27, Thursday	Russell, Chs. 4-5. Nuclear science at war and peace
April 1, Tuesday	Russell, Chs. 5-6. Arms race, agriculture, environment
April 3, Thursday	Tesh, Introduction.
April 8, Tuesday	Tesh, Chs. 1-2. Protests against pollution and environmental health research
April 10, Thursday	Tesh, Chs. 3-4. Environmental science and society
April 15, Tuesday	Tesh, Chs. 4-5. Politics and science of risk
April 17, Thursday	Tesh, 6. Environmental social movements, social change
April 22 – May 6	Group Projects
MAY 8, THURSDAY, 10:30-12:30 (PHYS 112), FINAL EXAM PERIOD	

## PHIL 3700 Science, Technology, and Society Assessment Procedures

PHIL 3700 Science, Technology, and Society will assess its success in meeting the Exemplary Educational Objectives for Humanities primarily by giving students an entrance and exit survey that will include questions about each EEO. Student answers from the start of the semester would be compared with answers given at the end of the semester. The instructor will evaluate the responses to ascertain if students have indeed achieved each EEO. If it is the instructor's opinion that students have not achieved each EEO, the instructor would modify either the substance of the course or classroom teaching strategy to ensure the objectives are met.

The questions asked at the start and end of PHIL 3700 Science, Technology, and Society would be as follows:

1. To make connections between different areas of knowledge and different ways of knowing.

A survey question would be, *What is the relationship between science, technology, and society?* By the end of the course, it would be expected that 75% of the student replies demonstrate a more detailed and sophisticated understanding of the relations among science, technology, and society than they had at the start.

2. To be able to express ways that exposure to different ideas, perspectives, and cultures and viewpoints have enriched their thinking.

A survey question would be, *What are some of the technological issues facing poor developing nations that are at the same time social issues?* By the end of the course, it would be expected that 75% of the student replies demonstrate a more detailed and sophisticated understanding of the interplay between technological and social problems than they had at the start

3. To learn decision making strategies that include an ethical analysis.

One survey question would pose a hypothetical question about what one should do in the face of a scientific-technological problem if one were in a decision-making position of authority. The test would be to see if students include an ethical analysis at the end of the course that was absent at the start of the course. A question might be, *Let's say that you are responsible for ensuring that experimental drugs are ready for public consumption. You must decide on the fate of an "obesity pill" that is 100% safe and effective in helping people lose weight. No side-effects. Do you approve the drug? Why or why not?* By the end of the course, it would be expected that 75% of the student replies demonstrate a more detailed and sophisticated understanding of the interplay between technological and social problems than they had at the start

4. Participate in activities that promote the common good.

Each student will be required at the end of the semester to email a political representative (at either the local, state, or federal level), a not-for-profit organization, or charitable organization, approved in advance by, and CC'd to, the course instructor, expressing his or her opinion about some matter of science or technology policy. Examples might include letters supporting, criticizing, or offering an analysis on subjects like: stem cell research, animal experimentation, off-shore oil drilling, TARP funds and specific technical projects, and so on. The instructor would help guide the activity to ensure that the opinions or analyses expressed incorporate a reasoned ethical analysis geared toward contributing to a policy debate about science-technology issues. 90% of students would be expected to complete this task.

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