

## STS 101Q:

# Technology in Contemporary Society

Autumn Quarter, 2005-06

Wednesdays, 2:15-4:30	Professor Robert McGinn
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### I. Purpose of Seminar

The purpose of STS 101Q is to offer a seminar-format introduction to the STS field. In terms of intellectual focus, the course will be devoted to exploration of phenomena of science and technology in contemporary society, primarily but not exclusively in the contemporary U.S. A major course objective is to enhance the student's understanding of the natures, social relations, and cultural significance of science and technology, among the most potent forces transforming life on earth in the new millennium. To this end, the course will address, in a critical-analytical manner, key ethical, social, cultural, and policy issues associated with the development of technology and science in contemporary society. Major course themes include (a) salient sociological features of contemporary science and technology; (b) noteworthy influences of these forces on 21st-century society and culture; (c) the social shaping of scientific and technological activities, products, and systems to serve often conflicting interests; and (d) changes in social mentalities, institutions, processes, and policies needed to enhance the influence of science and technology on society in the future. In pursuing these themes, we shall explore several case studies, drawn from the areas of construction, biotechnology, and information technology.

STS 101Q is a seminar version of STS 101. Thus, like the latter, it satisfies the Interdisciplinary Foundational Course Requirement of the STS B.A. and B.S. majors. See <http://www.stanford.edu/group/STS/BAreq.html> and <http://www.stanford.edu/group/STS/BSreq.html>.

### II. Required Reading

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|-------------------------------------|--------------------|
| 1. SCIENCE, TECHNOLOGY, AND SOCIETY | Robert McGinn      |
| 2. TECHNOLOGY                       | Neil Postman       |
| 4. STS 101Q COURSE READER: 2004     | Robert McGinn, ed. |

### III. Schedule of Topics and Assignments

- W 9/28 Course introduction  
Complete and discuss STS Literacy Survey  
Concept of STS Literacy

- W 10/05 The Natures of Science and Technology and their Relationship  
 Read the articles by DeSolla Price, Handlin, Rosenberg (two of them), and Ch. 1 of McGinn
- W 10/12 Contemporary Science and Technology: Salient Sociological Characteristics  
 Read articles by Kevles (2), Richter, Anonymous, Salisbury, Carhart, Petroski, Funderberg, Dooling (Boeing 777 & Kuala Lumpur high-rise cases), and Economist Staff (re GPS)
- W 10/19 Contexts and Theories of S and T in Society  
 Read articles by Sharp, Simons, Ch 4 of McGinn; and by Hughes, Cowan, Kuhn, Gladwell, and McGinn, Ch. 5, 93-101
- W 10/26 Influences of S and T on Institutions and Groups  
 Read articles by Bjerklie, Longman, Barnes, Cowan (2 of them), Postman, and Ch. 7 of McGinn
- W 11/02 S, T, and the Fine Arts: 1750 to the Present  
 Read articles by Petroski, Sant'Elia, and Ch. 11 of McGinn
- W 11/09 Ethical Issues in Science and Engineering  
 Read articles by DeWitt, Weiss, Lederman, Broad, Morgenstern (Citicorp), Glanz and Lipton (WTCtr), and Diamond (Bhopal)
- W 11/16 Influence of Society on Science and Technology  
 Read articles by Sinsheimer, Baltimore, Hornig, Siegel, and Winner
- W 11/23 **NO CLASS:** Thanksgiving Week Break
- W 11/30 Focal Areas: IT and BT in Society  
 Read Postman's *Technopoly*, Pollan article (genetically engineered potato), and one other article on biotech to be distributed
- W 12/07 Student Presentations

## V. Grading

1. Seminar participation: 50%

2. In-Class Presentation: 30%  
3. Final Exam: 20%

## VI. Presentation Instructions

### **Presentations (12/7)**

Working in pairs, each duo is to select a specific ‘rich’ article from an issue of the *New York Times*, *Washington Post*, or *Los Angeles Times* published in 2005. The article must involve some noteworthy phenomenon of science and/or technology in contemporary society (e.g., an innovation, experiment, project, invention, system, accident, trend, plan, etc.) that the student believes raises a noteworthy, intriguing, non-obvious, and non-hackneyed social issue. To maximize the intellectual benefit for the presenter, the student would be well advised to focus on an issue about which he or she has not made up her or his mind.

Each duo is to make a well-organized, 15-minute, in-class presentation on the issue it has chosen to explore. During the presentation the student should

- identify the issue being contested in the situation described in the article and show how the issue is represented in the article, including the key arguments utilized by both sides to justify their positions on the issue;
- briefly describe the essential background factual aspects of the situation covered in the chosen article;
- shed some bright STS light on the identified issue by subjecting it to probing analysis, analysis that, among other things, utilizes at least some course materials (e.g., concepts, frameworks, theories, perspectives, etc.);
- indicate what the student thinks would be an improved position on the issue in question and why.

Note well: the main point of this assignment is not the particulars of the position you wind up taking on the issue, but rather the quality of the analysis you make of the issue and established positions on it and how fruitfully you utilize course materials to shed valuable “STS light” on the issue.

Each duo should make 13 photocopies of its article: one for each student herself or himself, one for the other 12 students in the class, and one for the instructor. Distribute the articles in class on 11/30. Assume that everyone has read the articles beforehand. What is desired in this assignment is that the student adroitly “unpack” the chosen issue and in so doing convince the class members that the analysis carried out really has enabled one to reach a more compelling judgment or position on the issue in question.

## VII. Final Exam

The oral examination (scheduled for Th, Dec. 15, 12:15-3:15 PM) is typically a 30-minute oral. In it, the student's comprehension of the main points of the course readings and of key course concepts, models, frameworks, and theories will be explored.