Course Syllabus
Technology and Human Values

STS 11   Dr. Stephen H. Cutcliffe
Fall 2006   327 Maginnes; x3350; shc0
Class: Tues.-Thurs. 9:20-10:35   Office Hours: MWF 9-Noon

Technology can inspire great wonder or great fear, and sometimes do so at the same time. It can entail grand social goals or the most mundane of consumer products, but the interrelationship between technology and the society that creates it is always dynamic and inherently value-laden. Cultural, political, and economic values help to shape and direct technological development, which in turn can have a profound effect on those same social values and the society that holds them. In this course we will examine technology as a "social process," exploring social and ethical questions raised by the exploitation of technological innovations and discussing how society channels the work of scientists and engineers through institutions characteristic of the society: governmental, economic, corporate, educational, cultural. We will pursue this understanding through assigned readings, discussion, selected films, and a "technology journal." By the end of the course you should be better informed about both the innovation of technology and its implications for society.

There are two major texts for the course, each of which is available for sale in the bookstore. Other readings will be on reserve or made available in class. Assignments should be read prior to the class as a basis for discussion.

Albert Teich, ed. *Technology and the Future*, 10th ed. (New York: Thomson Wadsworth, 2006)
Rudi Volti, *Society and Technological Change*, 5th ed. (New York: Worth, 2006)

Students will maintain a "technology journal" of clippings from the *New York Times* and other outside readings that you may seek out or stumble across, technology-related images, reaction papers, mini-assignments handed out in class, and questions and observations on the readings, etc., all pertaining to the subject matter of the course. The intent of the journal is to heighten student awareness of technology-related questions and issues and to help formulate an informed position or point of view regarding those issues. This is the opportunity to express your opinions, both your beliefs and your doubts, and to raise questions regarding the course materials. This portion of the course constitutes a major writing assignment. Thus, journals should be prepared in your best prose style. Clarity of expression and thoughtfulness are more important than the absolute number or length of your entries per se, although the more extensive your journal the better, as long as you don't sacrifice quality. Journals will be reviewed by the instructor three times during the course of the semester. The journal is an integral part of the course: late submissions will be penalized, and students **must turn in all 3 journals** to obtain a passing grade for the course.

This course will be conducted primarily in a discussion format; thus, all members will be expected to come to class prepared to discuss the readings and issues at hand as assigned for that day. Since a portion of the final grade will be based on class participation, I will not look lightly upon repeated absences or a failure to join in discussion. Students should come to class prepared with at least one clipping or image from the *NYT* or other relevant source and a response and at least one question or observation pertaining to the day's assigned reading, which are to be included as part of the journal. Clippings and observations will frequently provide material for classroom discussions.

The make-up of the final grade for the course will be as follows:

Technology Journals (3)---------------30% (10 points each)
Exams------------------------------------50% (15 points each, first 2 exams; 20 points, final essay)
Class participation and Attendance---20% (1 pt. <u>deduction</u> for each missed class above 5, unless you have
                                 a signed Dean of Students Office excuse, i.e., <u>not</u> a self-written note)
                    Total----------------100%

Academic Integrity
Issues of academic integrity and honesty are of the utmost importance at Lehigh, and this course is no exception. Cases of cheating, plagiarism, etc. will be taken seriously, reported, and prosecuted as appropriate.

Disabilities Policy
Students with special disabilities needs should consult with the Dean of Students Office. Appropriate consideration and accommodation will be accorded to those students presenting proper documentation at the beginning of the semester.

STS 11---Course Outline

Date   Topics and Readings

Part I. Thinking About Technology

Tues. Aug 29   Syllabus Handout and Introduction to Course
                    Mini-Assignment: Locate and either bring to class or post to the Blackboard site an image
                    that says something significant about technology.

Thurs. Aug. 31   **Video**: *Three Tales*
                    Read: Volti, Preface, Chapters 1 and 2

Tues. Sept. 5   **Technology's Impact on Society**
                    Discussion: *Three Tales*, images, and Technology in Our Daily Lives
                    Hand in a brief 2-page reaction paper on video.

Thurs. Sept. 7   **Perspectives on Technology**
                    Read: Pref., Intro., Marx, and Weinberg in Teich, pp. xvii-xxi, 1-12, 27-34.

Tues. Sept. 12   **Perspectives on Technology**—continued
                    Read: Berry, Winner, and Wajcman in Teich, pp. 35-40, 50-79.

Thurs. Sep. 14   **Perspectives on Technology**—continued
                    Read: Mesthene, McDermott, and Florman in Teich, pp. 41-49, 91-112.

Part II. The Process of Technological Change

Tues. Sept. 19   **Sources of Technological Change**
                    Read: Volti, Chapter 3.
                    Pool in Teich, pp. 13-21.

Thurs. Sep. 21   **The Science/Technology Relationship and the Diffusion of Technology**
                    Read: Volti, Chapters 4 and 5.
                    Ceruzzi in Teich, pp. 253-64.

Tues. Sept. 26   Catch-up and Review of Parts I and II
                    Journal #1 covering Parts I and II due.

Thurs. Sept. 28   **1st Exam**

Part III. Technology and the Environment

Tues. Oct. 3   **Overview --** Read: Volti, Chapter 6.

Thurs. Oct. 5   **Dilemmas of Global Climate Change**
                Read: Karl/Trenberth and Abraham in Teich, pp. 233-49.

Tues. Oct. 10   *No Class—Pacing Break*
Thurs. Oct. 12   *No Class—Instructor out of town*

Part IV. Medical and Biological Technologies

Tues. Oct. 17   **Overview** -- Read: Volti, Chapter 7.

Thurs. Oct. 19   **Genetic Issues**
                Read: R.A. Weinberg, Bush, and Murray in Teich, pp. 207-31.

Part V. Technology and the Transformation of Work

Tues. Oct. 24   **Work in Pre-industrial Societies; Technology and Jobs**
                Read: Volti, Chapters 8 and 9.

Thurs. Oct. 26   **Technology and Work**—continued
                Read: Volti, Chapter 10 and Zuboff in Teich, pp. 304-11.

Tues. Oct. 31   Catch-up and Review of Parts III-V
                Journal #2 Covering Parts III-V Due.

Thurs. Nov. 2   **2nd Exam---**

Part VI. Communications and Information Technologies

Tues. Nov. 7   *Election Day—Get Out and Vote!!*
                Printing, Radio, and Television
                Read: Volti, Chapters 11 and 12, pp. 197-212.

Thurs. Nov. 9   **Video:** "Synthetic Pleasures" (# 2002)
                Read: Lessig and Kapor in Teich, pp. 282-303.
                Write: A short journal response to video, due on Tues. Nov. 14.

Tues. Nov. 14   **Computers and the Information Society**
                Read: Volti, Chapter 12, pp. 213-19.
                Discussion: Teich Essays, T.V. Show Evaluation, and "Synthetic Pleasures"

Part VII. Military Technology and Terrorism

Thurs. Nov. 16   **Overview**
                Read: Volti, Chapter 14 (optional Chapter 13)
                Rochlin in Teich, pp. 312-29.

Tues. Nov. 21   **Terrorism and Vulnerability**
                Read: Lovins, Martin, 9-11 Commission, and Dempsey in Teich, pp. 167-206.

Thurs. Nov. 23   *No Class—Thanksgiving Break*

Part VIII. Shaping and Controlling Technology

Tues. Nov. 28   **Technology and Its Creators**
                Read: Volti, Chapter 15 (optional Chapter 16)

Thurs. Nov. 30   **The Ethical Role of Engineers and Businessmen**
                Read: Forester and Morrison in Teich, pp. 265-81.

     Discussion: Falsifying Data Scenario.

Tues. Dec. 5 **Shaping and Controlling Technology**
       Read: Volti, Chapter 17; Joy, Brown/Duguid, and Kurweil in Teich, pp. 113-65.

Thurs. Dec. 7 **Final Discussion and General Review for Final Essay**
       Journal #3 on Parts VI-VIII Due.

Final Exam due December 20, no later than 4 p.m. in instructor's office.