ST5 3003W: Seminar in Science and Technology Studies
11 am to 12:20 pm, Tuesdays and Thursdays, Rogers Hall 200
Department of Humanities and Social Sciences
Polytechnic Institute of New York University
Spring 2011

Instructor
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Office hours: 2 to 3 pm, Tuesdays & Thursdays, or by appointment

Prerequisites
Students must have completed HuSS 1023W (or the equivalent) and one Level 2 STS elective before taking this course.

Course Description
This course is a case study in how the field of Science and Technology Studies (STS) may be applied to the topic “cybernetics and society.” First, we shall investigate the technical history of cybernetics, thinking about its origins in control economics and its influence during the Cold War. Then, we shall evaluate two cultural offshoots: cyberpunk literature and cyberfeminism, trying to uncover what, if anything, these “cybers” have to do with the original. Although this course is a core course for STS majors, it is designed specifically to bring students with different academic backgrounds into contact with each other, and so it is also a Level 3 HuSS elective.

Objectives
This semester you will learn to:
• Recognize major thinkers in the history of technology and in STS
• Use key concepts in STS, such as embodiment, constructivism, and technology transfer
• Learn to how informal writing to extend your understanding of a subject area
• Increase your proficiency in writing

Structure
Most class time is devoted to discussion of the reading materials. There will be some lectures related to the history of technology as well as about writing. This course is designated “writing intensive” and along with explicit writing instruction there are a variety of formal and informal writing assignments.

Readings
The four required texts for the course are:
These are at the college bookstore and, when possible, on reserve in Dibner library.

In addition to the required books, there will be journal articles that you can download from library databases and PDFs that you will find on Blackboard. Please let me know before class if you have any trouble locating a required reading assignment.
Requirements

Attendance: On-time attendance for the entire class period is mandatory. Students who miss four or more classes automatically fail the course. For the purposes of attendance, missing fewer than twenty minutes counts as one-third of an absence (arriving late, departing early, leaving the room). Missing more than twenty minutes counts as an absence. Doctor’s notes are not necessary.

Attentiveness: Please pay attention during class and avoid behaviors that distract others. Do not eat, drink, or sleep during class. You should not use electronic devices, such as cell phones or laptops, at all. Do not hold side conversations; if someone tries to talk to you during class, tell him or her to speak to you after class. Do not bring visitors without advance permission.

Examinations: There is a midterm exam during our regular class period and a final exam during the exam period at a date and time the Registrar sets. The exams are cumulative and closed-book, and consist of short-answer and essay questions.

Honesty: Please be advised that I take the University policy about academic dishonesty seriously and will punish cheating or plagiarism by awarding a grade of “F” for the course and referring cases to Student Affairs for further action.

Papers: You will write two formal papers of 2,100 words for this class; both must be uploaded to Blackboard and scanned by SafeAssign before the deadline for credit.

Portfolio: At the end of class, you will collect the writing assignments you have completed this semester, revising the two essays, your resume and the writing log. Include a cover letter.

Preparation: According to New York State guidelines, a student should spend at least two hours to prepare for each hour in class. Thus, for this course, you can expect to spend about six hours per week getting ready for class. Please plan accordingly so that you can read thoroughly, write carefully, and comment thoughtfully.

Presentations: In the first half of the semester, each student will choose a topic about writing, research it and prepare a handout. After discussing the handout in a small group, and submitting it to me, you will present it to the class. Collectively, we shall refer to these as the “writing manual” and the writing manual is fair game for quizzes and exams.

Quizzes: There will be unannounced quizzes on the reading assignments and course lessons. You may consult your own handwritten notes, but not books or printouts, for these quizzes. If you miss a quiz due to lateness or absence, you shall receive a zero.

Writing Groups: I shall organize the class into small writing groups that will share in-class writing as well as review writing assignments.

Grading

I shall calculate your semester grade as follows:

- Quizzes and exercises 10%
- Papers and presentation 30%
- Exams 30% (10% midterm, 20% final)
- Portfolio 30%

How to Do Well

1. Be on time. At the start of class, you will notice that I provide a preview of what is coming up and also answer questions. If you regularly miss these first minutes, you will start to feel the uncomfortable sensation that you do not know what is going on. Keep in mind that trains, subways and busses usually take much longer than they “should,” so plan accordingly. Being late once is ok; it happens to everyone. If you are always late, then you are doing something wrong.

2. Take notes, even if I am not writing on the board. Taking notes helps you stay focused on the material we are studying. Note taking also serves another purpose: It helps you to get used to
writing about the course materials in your own words. Since the evaluation in this course is written, taking notes is valuable practice (and good exercise for your writing muscles!). There is no need to write down everything I say, but make sure you take down interesting ideas and connections to the course themes. Go over your notes after class to fill in the gaps.

3. Ask questions. Please raise your hand at the beginning of class or during a presentation. It does little good to whisper to the person next to you; instead, feel free to ask me for clarification. Also, use office hours or write an e-mail message for additional information.

4. Read actively. Prepare by reading the assignment for the day carefully before class. Mark key phrases and passages that have to do with the ideas in the course. Take notes like you are preparing a laboratory notebook – write down what you think is important, with examples, and prepare questions you want to ask.

Bibliography


Tentative Schedule (revised 29 January 2011)

Jan. 25 Introduction

Part 1: Prehistory

Feb. 1 The Governor
• S. Bennett, Chapters 1 and 2 from A History of Control Engineering 1800-1930
• Choose topic for Writing Manual

Feb. 3 Control Systems
• Mindell, Chapters 1–3

Feb. 8 Bell Labs and Vannevar Bush
• Mindell, Chapters 4–6
• Bring in draft of Writing Manual for small group

Feb. 10 World War 2
• Mindell, Chapters 7–9
• Hand in revised draft of Writing Manual

Feb. 15 The Birth of Digital Thinking
• Mindell, Chapters 10–12

Part 2: Cybernetics

Feb. 17 First Wave Cybernetics
• Hayles, Chapters 1–3
• Writing Manual Presentations 1–6

Feb. 22 Reversing Entropy
• Wiener, Human Use of Human Beings (1950), Preface, Chapters 1–5
• Writing Manual Presentations 7–12
Feb. 24 Bodies of Information
  • Wiener, Chapters 6 to end
  • Writing Manual Presentations 13–18
Mar. 1 Pattern Recognition
  • Turing, “Computer Machinery and Intelligence” (1950)
  • Essay 1 due at 8 pm
Mar. 3 Second Wave Cybernetics
  • Lettvin, et al. “What the Frog’s Eye Tells the Frog’s Brain” (1959)
Mar. 8 Cybernetics as Analogy
  • Hayles, Chapters 4–6
Mar. 10 Thinking Machines
  • J. R. C. Licklider, “Man-Computer Symbiosis” (1960)
Mar. 22 Cybernetic Governance
  • Slava Gerovitch, “Cybernetics in the Service of Communism”
  • Eden Medina, “Designing Freedom, Regulating a Nation: Socialist Cybernetics in Chile”
Mar. 24 Midterm Exam

Part 3: Cyberpunk and Cyberfeminism
Mar. 29 Creation Narratives
  • Hayles, Chapters 7–9
Mar. 31 Cyberspace
  • William Gibson, “Burning Chrome” (1982)
Apr. 5 The Augmented Self in a Wasteland
  • Vonda N. McIntyre, excerpt from Superluminal (1983)
  • John Varley, excerpt from Demon (1984)
  • Bring in draft of resume
Apr. 7 Neal Stephenson
  • Snow Crash (1992), chapters 1–14
Apr. 12 Stephenson, con’d
  • Snow Crash, chapters 15–31
Apr. 14 Stephenson, con’d
  • Snow Crash, chapters 32–48
  • Essay 2 due at 8 pm
Apr. 19 Stephenson, concluded
  • Snow Crash, chapters 49–end
Apr. 21 Cyberfeminism
  • Octavia Butler, excerpt from Dawn (1987)
Apr. 26 Cyborgs Oppose the Home Work Revolution
  • Donna Haraway, “A Manifesto for Cyborgs” (1991)
Apr. 28 Reification of Race
  • Writing portfolio due
TBA Conclusion
  • Shelly Jackson, “My Body, a Wunderkammer” (1997)
  • Hayles, Chapters 10 and 11
TBA Final Exam

The Registrar’s Office will schedule our final exam sometime in May. Do not make travel plans until the date and time have been announced.