

# HSS 371: Computers & Society

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(A) **Morton 205** Tuesdays 9:00am-11:30am  
(B) **Babbio 203** Thursday 9:00am-11:30am

Office Hours: Tuesday/Thursday 11:30-12:30 and by appointment

## Course Description

We are going to examine the politics and culture embodied by powerful technology. This includes internet governance (multi-stakeholderism, online communities, decentralization vs. centralization), ethical issues in computing (hacking, artificial intelligence, participatory design), privacy, intellectual property, and the global digital divide.

## Course and Program Objectives and Outcomes

### *College of Arts & Letters Objectives*

1. Students will demonstrate an awareness of ethical responsibility and the societal impact of their future profession.
2. Students will demonstrate a fuller understanding of the traditional humanities and social sciences through an understanding of their relation to the study of sciences and technology.
3. Students will demonstrate an awareness of cultures and societies other than their own.
4. Students will demonstrate writing and public speaking skills.
5. Students will demonstrate a love of learning in the liberal arts for its own sake.
6. Students will demonstrate leadership and team skills.

### *Social Sciences Program Outcomes*

1. *Philosophical foundation.* The student will understand the underlying theories and methods used in political science, psychology, and sociology and be able to apply them in individual and team directed research.
2. *Historical foundation.* The student will understand the evolution of the disciplines of the social sciences in concrete cause and effect relationships, and be able to

- discern schools of interpretation over time.
- 3. *Research*. The student will be able to design and conduct research in the social sciences using appropriate theories for the disciplines of political science, psychology and sociology. Quantification techniques as well as theoretical constructs will be employed in doing thesis research and data collection.
  - 4. *Tools*. The student will be proficient in computing technologies necessary for the specific discipline.
  - 5. *Professionalism*. The student will achieve a high degree of knowledge, accountability, and where warranted, certification in professional practice.
  - 6. *Leadership*. The student will be able to develop plans for research projects on a professional level.
  - 7. *Teamwork*. The student will be able to contribute to research activity as part of working team member, and facilitate cooperation among the members of the team resulting in a successful project.
  - 8. *Communication*. The student will enhance written and oral presentation skills using a variety of means to convey significant ideas and proposals.
  - 9. *Ethics*. The student will understand and abide by professional standards of ethics appropriate to the discipline on a professional level.
  - 10. *Social Issues*. The student will place into modern social context information derived from research such that the relationship between theory and practice are manifest.
  - II. *Lifetime learning*. The student will be treated as a professional with a lifelong investment in one's field of study, and a professional goal of continuing self-assessment and self-improvement.

### *HSS 371 course outcomes*

- This course will enrich your understanding of the history of computing and networks. (2)
- This course will help you think in greater depth about some ethical dilemmas of computing. (9)
- This course will teach you to think more critically about connections between computers, networks, and political power. (10)

*Additionally, HSS 371 contributes to three of the outcomes for students in the Stevens BS in Computer Science*

- [BS-CS E responsibility] An understanding of professional, ethical, legal, security, and social issues and responsibilities.
- [BS-CS F communicate] An ability to communicate effectively with a range of audiences.
- [BS-CS G impact] An ability to analyze the local and global impact of computing on individuals, organizations, and society.

## **Class Requirements**

### *Textbooks to Purchase*

- *Wasting Time on the Internet* by Kenneth Goldsmith

## *Grades and Course Policies*

### **Quizzes (20%)**

There will be a short quiz on each week's **Preliminary Reading** at the beginning of most classes.

### **Summary (20%)**

Each week two students will be required to collaborate on a class summary. The summary will include what was covered and discussed in this class.

This summary serves a few purposes:

- An outline of what was covered through the semester and a reference point for the final exam
- They encourage special attention given once a semester to a specific topic for the assigned students
- Provide me perspective as an instructor regarding what was covered and discussed

*Section A (Tuesday) will be due by Friday evening*

*Section B (Thursday) will be due by Sunday evening*

The summary should be 300-500 words. Focus on the subject of the lecture and the conflicting opinions given in the discussion. I will be posting these for everybody's benefit.

### **Midterm Project (30%)**

*Computer History and Contemporary Conflict*

#### **Requirements**

Contextualize a contemporary issue within the history of computers.

One essay of about 1500 words (1400-1500 words acceptable, including all notes and references)

1. Source one article, essay, or academic paper from the last three years. This article should clearly outline a contemporary source of conflict (i.e. privacy, the digital divide, etc...).
2. Research the broad history of this issue and highlight milestones. For example, in cryptography you might include the Roman Caesar cipher (circa 50 B.C.E.), the German Enigma (1920s), etc..
3. Cite and contextualize the arguments made in the original essay with historical precedence.
  - Explain what makes the situation similar to historical events
  - Explain what makes the situation unique to the 21st century.

## **Evaluation**

- Historical examination must be both thorough and concise: cite everything you think is relevant and nothing more.
- Arguments *must* be supported by *specific* evidence.
- Proper grammar and spelling required.

## **Final (30%)**

Final exam covering the entirety of the course. You will reference class summaries and your notes from your reading to prepare for this examination.

## Around Stevens

### *Writing and Communications Center*

The College of Arts & Letters maintains the [Writing & Communications Center at Stevens](#) in Morton 210. Their office hours are Monday-Friday, 11 am - 5 pm. You can stop in or make an appointment to get help with your papers, presentations, and all other work you do at Stevens.

### *Honor Board Policies*

You should by now be familiar with [The Honor System at the Stevens Institute of Technology](#). It is your responsibility to uphold the ideals set forth in the Honor System Constitution. Specific student responsibilities include:

- Maintaining honesty and fair play in all aspects of academic life at Stevens;
- Writing and signing the pledge, in full, on all submitted academic work;
- Reporting any suspected violations to an Honor Board member or to the Dean of Student Development;
- Cooperating with the Honor Board during investigations and hearings.

If you ever have questions about how to interpret the Honor System in relation to your work in my class, please get in touch with me.

### *Students with disabilities*

If you require special accommodations due to a disability, or if you need individual arrangements should the building be evacuated, you must inform the office of Student Counseling and Psychological Services, Dr. Angelica M. Diaz-Martinez, Director, in the Howe Center, 7th floor (x5177), and complete the Faculty Contact Form. Once you have done so, you should ask to meet with me so that we can work out any special arrangements that may be necessary.

# Schedule

## *Introduction (Big Ideas)*

### **Week 1 — Culture (B: 19/Jan A: 24/Jan)**

- **Lecture:** Atari, Missile Command, and the Cold War
- **Discussion:** Does immersive gaming and media pose a threat to society?
- **Preliminary Reading:** none

#### Further Reading

- [\*10 PRINT CHR\\$\(205.5+RND\(1\)\); : GOTO 10\*](#) by Montfort, Nick Montfort, Patsy Baudoin, John Bell
- [\*Atari Inc.: Business Is Fun\*](#) by Curt Vendel, Marty Goldberg

### **Week 2 — Politics (B: 26/Jan A: 31/Jan)**

- **Lecture:** Computers and Ethics: The Military, Politics, and Culture
- **Discussion:** Can technology be truly ethically neutral?
- **Preliminary Reading:**
  - *Do Artifacts Have Politics?* by Langdon Winner (1980)
  - *Computers as Ethical Artifacts* by Nathan Ensmenger

#### *Contemporary Issues*

### **Week 3 — NSA Nation (B: 2/Feb A: 7/Feb)**

- **Lecture:** The Church Committee
- **Discussion:** Should personal privacy be as valued as social safety?
- **Preliminary Reading:** Watch Part 1 of Frontline's [\*United States of Secrets\*](#)

#### Further Reading

- Frontline's [\*United States of Secrets\*](#) Part 2
- Glenn Greenwald at the Guardian
- Glenn Greenwald at the Intercept
- John Schindler at [\*The XX Committee\*](#)

### **Week 4 — Media (B: 9/Feb A: 14/Feb)**

- **Lecture:** The Medium is the Message: Newspaper/Radio/TV/Internet
- **Discussion:** Is Fake News an inevitable byproduct of the current digital landscape?
- **Preliminary Reading:**
  - [\*Wasting Time on the Internet\*](#) by Kenneth Goldsmith (Introduction: *Let's Get Lost*)
  - [\*Wasting Time on the Internet\*](#) by Kenneth Goldsmith (Chapter 1: *The Social Network*)

#### Further Reading

- *The Medium is the Message* by Marshall McLuhan, Quentin Fiore
- *Understanding Media: The Extensions of Man* by Marshall McLuhan

## *History*

### **Week 5—Computer History I (B: 16/Feb A: 21/Feb)**

- **Lecture:** From Herman Hollerith to Alan Turing
- **Discussion:** Should there be limits to anonymity in the digital age?
- **Preliminary Reading:**
  - *Locating the Victim: An Overview of Census-Taking, Tabulation Technology, and Persecution in Nazi Germany* by David Martin Luebke and Sybil Milton
  - *Locating the Victims: The Nonrole of Punched Card Technology and Census Work* by Friedrich W. Kistermann
  - *The Politics of Cryptography: Bitcoin and The Ordering Machines* by Quinn DuPont

### **Week 6—Computer History II (B: 23/Feb A: 28/Feb)**

- **Lecture:** IBM Stretch: A New World of Computing
- **Discussion:** In light of the ILLIAC IV protests, are there any legal limits to employing a computer as a weapon of war?
- **Preliminary Reading:** TBD

### **Week 7 - Computer History III (B: 2/Mar A: 7/Mar)**

Section A: Midterm Due!

- **Lecture:** Computers Outside of the United States and Great Britain
- **Discussion:** Do computers carry cultural artifacts?
- **Preliminary Reading:** *Cybernetic Revolutionaries: Technology and Politics in Allende's Chile* by Eden Medina
  - (Chapter 1: *Cybernetics and Socialism*)
  - (Chapter 4: *Constructing the Liberty Machine*)

### **Week 8 — Computer History IV (B: 9/Mar A: 21/Mar)**

Section B: Midterm Due!

- **Lecture:** The Personal Computer and Digital Devices
- **Discussion:** Has the personal computer made the world better?
- **Preliminary Reading:**
  - *The Computer as a Communication Device* by J. C. R Licklider (1968)
  - *Wasting Time on the Internet* by Kenneth Goldsmith (Chapter 3: *Our Browser History Is the New Memoir*)

## *Contemporary Issues Revisited*

### **Week 9 — Internet Governance and Cyberlibertarianism (B: 23/Mar A: 28/Mar)**

- **Lecture:** Computing and Social Movements (Hacking)
- **Discussion:** If caught, should white hat hackers be tried in the same way as black hat hackers?
- **Preliminary Reading:** TBD

## **Week 10 — Internet Governance and Cyberlibertarianism (B: 30/Mar A: 4/Apr)**

- **Lecture:** Computing and Social Movements (Cyberlibertarianism)
- **Discussion:** Is it ethical to restrict the free flow of information?
- **Preliminary Reading:**
  - *Wasting Time on the Internet* by Kenneth Goldsmith (Chapter 4: *Archiving is the New Folk Art*)
  - *Wasting Time on the Internet* by Kenneth Goldsmith (Chapter 7: *Lossy and Jaggy*)

### Further Viewing

- *All Watched Over By the Machines of Loving Grace* by Adam Curtis

## **Week 11 — Second Machine Age (B: 6/Apr A: 11/Apr)**

- **Lecture:** Automation, Computers, and Labor
- **Discussion:** Do you believe that Silicon Valley is making the world better?
- **Preliminary Reading:**
  - *IEEE (Institute of Electrical and Electronics Engineers) Code of Ethics*
  - *ACM (Association for Computing Machinery) Code of Ethics*

## **Week 12 — GNU, FOSS, and Licensing (B: 13/Apr A: 18/Apr)**

- **Lecture:** MIT, Hacking, and Intellectual Property
- **Discussion:** Have you stolen intellectual property? (What are some ideas to enforce the value of ephemeral property or at least compensate/encourage invention?)
- **Preliminary Reading:** *Hackers* by Steven Levy (Chapter 2: *The Hacker Ethic*)

### Further Reading

- *Philosophy of the GNU Project*

## **Week 13 — Computers & Art (B: 20/Apr A: 25/Apr)**

- **Lecture:** The Digital Canon
- **Discussion:** Are videogames art?
- **Preliminary Reading:**
  - *Better Science Through Art* by Richard P. Gabriel and Kevin J. Sullivan
  - *Wasting Time on the Internet* by Kenneth Goldsmith (Chapter 8: *The Writer as Meme Machine*)

## **Week 14 - Final (B: 27/Apr A: 2/May)**

- **Lecture:** none
- **Preliminary Reading:** none