Certain new technologies are greeted with claims that, for good or ill, they must transform our society. The two most recent: the computer and the Internet. But the series of social, economic, and technological developments that underlie what is often called the “Information Revolution” include much more than just the computer. In this course, we examine what made this series of developments seem so revolutionary, who said what about them, and why. We chart changing perceptions of information technologies as people begin to experience them as a part of everyday life and work. We will explore both the technologies themselves as well as their larger social, economic, and political context. These perspectives will inform our discussion of current issues such as life and censorship in ‘cyberspace’.

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STSC 160 : The Information Age

Professor Nathan L. Ensmenger
Office Hours: M-W, 2-4 pm, 362 Logan Hall
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Course Format:

The course meets for lecture on Monday and Wednesday afternoons from 1-2 PM and on Friday for recitation section. Attendance is mandatory: if you do need to miss class please let me or your TA know in advance. Grading will be based on four components: class participation (20%), three short assignments (25%), a mid-term exam (25%), and a final (30%). Your class participation grade will be based on attendance, active participation in the recitation section discussions, and your ability to produce insightful discussion questions based on the course readings. The short assignments are described in greater detail below.

Required Readings:

The bulkpack for this course is available at Wharton Reprographics. There is only one book required:


It is available at the Penn Bookstore.

Course Schedule:

I Introduction
The Information Age
Readings:

II Information Explosion
Gutenberg to Galileo
No Class
No Sections. Short assignment #1 due.
John, Richard. “Recasting the Information Infrastructure for the Industrial Age.” In A Nation Transformed by Information: How Information Has Shaped the United States from Colonial Times to the Present, edited by Alfred Chandler and James

III Faster than Thought
The Annihilation of Time & Space
What Hath God Wrought?
Readings

IV When Computers were Human
Industrializing Information
Information Factories
Readings

V War Machines
Giant Brains
Build Your Own Computer
Readings (Assignment #2 Due)

VI Evolution & Revolution
A New Industry?
IBM & the Seven Dwarves
Readings
VII Computers, Codes & DNA
Cybernetic Visionaries: Turing and von Neumann
Artificial Brains, Artificial Life
Mid-Term Exam
VIII Silicon Valley 1.0
No class (Fall Break)
East Coast, West Coast
Readings
Triumph of the Nerds Documentary
IX The Origins of the PC
From Hippies to Hackers
Apple, IBM, Microsoft
Readings
X The PC Goes Mainstream
But just what is it good for, exactly?
Videotext to Videogames
No Readings – Assignment #3 Due
XI You Say You Want a Revolution . . . ?
The Revolution Will Be Televised
From ARPAnet to Internet
Readings
Abbate, Janet. Inventing the Internet (MIT Press 2000), Chapters 1-4.
XII Digital Utopias
Electronic Frontiers, Information Societies
Virtual Communities
Thanksgiving Break
Begin reading chapters 1,2 of Brown/Daguid on plane/train/automobile.
XIII  The Glorious Information Revolution
    Digital Divides, Information Overloads
    Free as in Speech, Free as in Beer
    Readings
        Selected readings on digital divide and open source movement.

XIV  The Social Life of Information
    Knowledge: Code: Architectures
    Big Finish
    Anti-climax (review session)