**Summary**

**Mutual influences**

*Information technology* — IT makes possible more social centralization and decentralization; new mathematical ideas enabled creation of IT

*Ideas* — Our ideas are shaped by our social experience and our experience with IT; new ways of thinking have social consequences

*Society* — Business requirements and industrial-scientific advances created IT; IT changes social relationships and raises new ethical and legal problems
**Multi-topic objectives**

0a. Participate in written exercises throughout the semester
0b. Solve a problem as part of a team
0c. Present a short talk in the classroom
0d. Summarize and reflect on the semester’s work
0e. Write a documented research paper
0f. Support opinions with evidence
0g. Acknowledge counter arguments
0h. Document sources used

**Topics**

1. Technical background
2. Social, ethical, and legal background
3. Security and privacy
4. Freedom of expression
5. Intellectual property and IT
6. Work, education, and culture
7. Risks, professional ethics, and evaluation of IT
8. Network structures and the global economy
1. Technical background

1. History of IT
2. Hardware and operating systems
3. Networked computing and the Internet
4. Social effects of IT
5. Text formatting, spreadsheets, and database management

1. History of IT

1. Why do computers exist?
2. How have they evolved?
2. Hardware and operating systems

How do computers work?

3. Networked computing and the Internet

1. What are the major technical changes in computing that affect us as members of society?

2. Does the networked character of computing today accelerates the rate of change in computing and in society?
4. Social effects of IT

How does technological change affect people as members of society?

5. Text formatting, spreadsheets, and database management

1. What do you do with your computer and phone?
2. What applications do college students and professionals need to know about?
2. Social, ethical, and economic background

1. Foundations of ethics
2. Informationalism
3. Globalization

1. Foundations of ethics

1. What is the right way to behave?
2. How do we allocate ethical importance to individual and to society?
3. What are our rights in relation to IT?
2. Informationalism

1. What are the effects of universal connectedness, ubiquity of computing, and the speed and low cost of processing, storage, copying, and communication of information?

2. Does today’s IT embody values from the social environment; or is it neutral and value free?

3. Does information technology, acting on itself, accelerate the rate of social change?

3. Globalization

1. Has IT enabled a global economy?

2. Have IT and globalization decreased or increased social polarization?

3. Is the world “flat” and is that good?

4. Does the connectedness of all people via IT raise social issues and enable changes in society?

5. Why did an economic crash come in 2008?
3. Security and privacy

1. Crime, law enforcement, and IT
2. Definitions and theories of privacy
3. Privacy issues raised by IT
4. Proposed protections

Readings: Baase, Chapters 2 and 5

1. Crime, law enforcement, and IT

- Does IT enable crime or law enforcement more?
2. Definitions and theories of privacy

1. What’s privacy?
2. Is privacy about power?
3. Do privacy safeguards protect the power of individuals?

3. Privacy issues raised by IT

1. Do IT-enabled security and privacy intrusions assert power over individuals?
2. Is the free-market or the consumer-protection view preferable?
4. Proposed protections

1. Are current technical and legal solutions to security and privacy concerns adequate to address the problems?

2. How may individual privacy be protected during legitimate criminal investigations?

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4. Freedom of expression

1. Rights of free expression
2. The global information infrastructure and democracy
3. Unprotected expression

Readings: Baase, Ch. 3; D. Johnson
1. Rights of free expression

1. What are our rights?

2. The global information infrastructure and democracy

1. Do computer systems widen freedom of expression, or limit and constrain it?

2. Does the global information infrastructure embody democratic values?
3. Limits to free expression

• What expression is not protected?
• How does IT cause limits of freedom to be tested?

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5. Intellectual property and IT

1. Purpose and limitations
2. Issues raised by IT
3. Software as intellectual property
4. Technical and legal solutions
1. Purpose and limitations

1. How does intellectual property differ from other property?
2. Why and how is it protected?

2. Issues raised by IT

1. Is file sharing OK?
2. Does the direct sharing of information and culture enabled by information technology outpace efforts to enforce intellectual-property rights?
3. Software as Intellectual property

1. Is software the property of the buyer?
2. What is it fair to patent?
3. Is the standard model or the “free software” model appropriate?

4. Technical and legal solutions

1. Does current law sufficiently protect legitimate intellectual-property rights?
2. Does it go too far?
### 6. Changes in work, education, and culture

1. Economic and work-related effects of IT
2. IT in education
3. Effects on culture

Reading: Baase, Ch. 6; Sec. 7.2

### 1. Economic and work-related effects of IT

1. What is work?
2. Are Facebook, YouTube, and Twitter part of work life?
3. Does the information revolution result in:
   - individualization of work?
   - increased fragmentation of society?
   - increased social cohesion?
   - a freer work life?
   - a disposable work force?
## 2. IT in education

1. What is education?
2. How do people learn?
3. Does the feedback loop of knowledge acting on knowledge aid self-reflection in learning?
4. Does the information revolution result in radical changes in education?
5. Is the classroom doomed?
6. What is the place of online learning?
7. What is the place of laptops in the classroom?

## 3. Effects on culture

1. What is culture?
2. What is *your* culture like?
3. Is there a FSU, U.S., or world culture?
4. Does integration of media radically change culture?
5. Does open access radically change culture?
6. What are the cultural roles of: video games; on-demand video; Facebook?
7. Risks, ethics, and evaluation of IT

1. Humans and IT
2. System and software failure
3. Ethics of IT professionals
4. Future prospects of IT

Reading:
Baase, Ch. 7-9; Appendix A

1. Humans and IT

1. Does IT serve us well today?
2. Do human interaction and community suffer because of computer use?
3. Do computers invite addiction or divert people from worse addictions?
4. Is e-commerce replacing human contact?
5. Why is human contact good and how important is it to people?
2. System and software failure

1. Is the reliability of software today at an advanced or primitive stage?
2. Could computer systems be much better than the ones we have?

3. Ethics of IT professionals

1. What are ethical responsibilities of people whose work is with technology?
2. What theories of ethics and of rights apply?
4. Future prospects of IT

1. Can a machine think?
2. Where is the boundary between living things able and not able to think?
3. Do humans compute?
4. When humans compute, are they thinking?
5. Is computer simulation of a mental process an actual mental process?
6. Could computers match and surpass human capabilities?

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8. Network structures in the global economy

1. The network enterprise
2. Society as flows of information
3. Decentralized structures and processes
1. The network enterprise

1. How has IT changed how production and business occur?
2. In shaping our world, are we enabled by the ubiquity of computing and the connectivity of people?

2. Society as flows of information

1. How do flows of information express what society is?
2. How does IT support intense information flows?
3. Decentralized structures and processes

1. Does the IT revolution make possible centralization or decentralization of power and production, or both?
2. Is IT associated with a new non-hierarchical organizational logic?
3. Does research in decentralized emergent behavior, and self organization shed light on social changes driven by IT?