Invitation

What do you need to know about the ways information technology affects you, as a member of society? Can we keep our privacy? How freely can we share songs and videos? How much can we depend on technology? How do social networks like Facebook bring us together, and how do they place us at risk?

If you are curious about how information technology could change your life for better or worse in the next twenty years, then please join us in this inquiry.

What this course offers: We create an environment to collaboratively investigate the influences of society and information technology on each other. We offer students some questions for inquiry; some information to support the inquiry; and ways to show learning results.

Our inquiry

Do the globalized economy and the information technology revolution shape each other? Does information technology embody social values and in turn produce changes in values? How do hardware and software change our lives? What are the effects of universal connectedness, ubiquity of computing, and the speed and low cost of processing, storage, copying, and communication of information?

The course seeks to offer an environment for critical inquiry in which you are invited to build a new way of understanding these questions.

In this course, we work together to explore information technology and to investigate what is worth knowing about it – what skills will serve you. Each of the seven topics will focus on questions that may matter to you.

We will use some collaboration-support software, the Internet, and media to manage part of our discussion, to access research material, and to present our topics.

In Topic 1 (technical background) we’ll ask these questions: Why do computers exist? How do they work? What applications do college students and professionals need to know about? What are the major technical changes in computing that affect us as members of society?

Topic 2 (social and ethical background): How do we allocate ethical importance to individual and to society? What are our rights in relation to IT? Does today’s IT embody values from the social environment; or is it neutral and value free? Have IT and globalization decreased or increased social polarization?

How are social values shaped by how IT operates and is used? Does information technology, acting on itself, accelerate the rate of social change? Has IT enabled a global economy? Is the world “flat” and is that good? Does connectedness of all people via IT raise social issues and enable changes in society?

Topic 3 (privacy): Is privacy about power?
Do IT-enabled security and privacy intrusions assert power over individuals? Do privacy safeguards protect the power of individuals?

Topic 4 (free expression): What are our rights?
Do computer systems widen freedom of expression, or limit and constrain it? Does the global information infrastructure embody democratic values? What expression is not protected? How does IT cause limits of freedom to be tested?

Topic 5 (intellectual property): Does the direct sharing of information and culture enabled by information technology outpace efforts to enforce intellectual-property rights? Does current law sufficiently protect legitimate intellectual-property rights? Does it go too far?

Topic 6 (work, education, and culture): Does the information revolution result in individualization of work; increased fragmentation of society; increased social connectedness and cohesion; radical changes in education; radical changes in our culture?

Topic 7 (risks in IT systems): Is the reliability of software today at an advanced or primitive stage? Could computer systems be much better than the ones we have? What are the ethical responsibilities of people whose work is with technology?

Topic 8 (network structures): In shaping our world, are we enabled by the ubiquity of computing and the connectivity of people? Does the IT revolution make possible centralization or decentralization of power and production, or both? Is IT associated with a new non-hierarchical organizational logic?

Meeting times

MWF 11:30–12:20, Hemenway Hall 119

Contacting me

Please visit to talk or to ask questions!
Office hours (Hemenway Hall 318A):
M 3:30–4:30 p.m.; W 10:30–11:30 a.m.;
F 9:30–10:20 a.m.; others by appointment
Telephone: (508) 626-4724
Email: dkeil@framingham.edu
URL: www.framingham.edu/~dkeil/its-mats.htm
Catalog course description
An exploration of the impact of computing and information technology (IT) on individuals and society in the United States and the world. The course addresses the impact of IT on areas such as: digital technology at home; personal devices; rapid unregulated spread of (mis) information; political processes of dissemination and polling capabilities; empowering individuals and families with information included in medical and other databases; personal and workplace communication; the networked information economy and globalization. Other topics may include the interaction of IT with intellectual property, privacy, ethics, security concerns and freedom of expression.

It is expected that students have high-school-level knowledge of reading, writing, and social studies.

How the course delivers what it offers
For each of the eight topics, we will have presentations by me, discussion, group work, blackboard work, report backs from each student, and in-class and out-of-class written exercises. Exercises and questions help to assess attainment of learning objectives.

Our classroom environment emphasizes active inquiry, participation, respect, and support among all participants. Learning is seen as the interactive construction of knowledge by the learner. We ask each other questions and investigate problems together.

A semester project brings together the learning from the different topics and assignments. Frequent exercises and quizzes monitor progress and enable second chances.

Eight measures show the results of student efforts to learn: application of concepts; knowledge of facts; written contribution; presentation of results in person; group activity; summary and reflection; and attendance.

Application of concepts on ten core topic objectives, as shown in quizzes in class, is the strongest measure. Students have three opportunities to show that they have mastered each objective. I score each item of work, or grading criterion, on a scale of 0 to 1.0.

The essay, “What we do in my classroom,” is part of this syllabus. It has detailed guidelines for assignments, collaboration, and grading.

Strongly recommended reading
Slides and handouts, including study questions.

The slides and handouts provide a summary and study guide. Learning about our course topic includes reading about it and thinking critically about the reading. I like the textbook by Sara Baase because it’s easily read and because it looks at both the problems and the opportunities created by IT.

Core objectives
After taking this course, successful students will show the capabilities to do the following:
0a. Participate in written exercises throughout 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
0i. Apply ethical principles to problems of IT in society
1. Explain basic principles of computing, including hardware, systems, applications, networking, and the Internet
2. Describe social/economic forces that have driven the information revolution, technological factors that have generated social issues, and relevant theories of ethics
3. Explain security and privacy issues raised by IT, referring to values, theories, and solutions
4. Discuss trade-offs between conflicting legitimate concerns about freedom of expression generated by technological changes
5. Explain intellectual property rights and how the informational society has created and addressed social and legal issues in this area.
6. Explain how changes in IT influence work, education, and culture
7. Describe human and system risks related to IT and ways to manage them ethically today and in the future
8. Explain how IT enables less centralized structures and new business models that operate via multiple information flows

For other objectives, see topic slides.

Semester grading weights
The following categories group course objectives and outcomes (see previous page), which are assessed by means of assignments, quizzes, exams, and records of classroom discussion and presentations.

Application of concepts
Core topic objectives 35
Other topic objectives 10
Summary and reflection 5
Knowledge of facts 10

Contribution
Research 10
Presenting results in person 10
Group activity 10
Individual written exercises 5
Attendance 5

100
## Accommodations

“Students with disabilities who request accommodations are to provide Documentation Confirmation from the Office of Academic Support within the first two weeks of class. Academic Support is located in the Center for Academic Support and Advising (CASA). Please call (508) 626-4906 if you have questions or if you need to schedule an appointment.” (See [www.framingham.edu/CASA/Accommodations/accomm.htm](http://www.framingham.edu/CASA/Accommodations/accomm.htm).)

## Course Plan

<table>
<thead>
<tr>
<th>Dates</th>
<th>Topic or activity</th>
<th>Reading</th>
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<tr>
<td>1/23—1/28</td>
<td><em>Introduction</em></td>
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<tr>
<td>1/30—2/4</td>
<td>1. Technical background</td>
<td>Handouts&lt;sup&gt;1, 2, 3&lt;/sup&gt;</td>
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<tr>
<td>2/6—2/13</td>
<td>2. Social, ethical, and economic background</td>
<td>Baase, Ch. 1; handouts&lt;sup&gt;4, 5&lt;/sup&gt;</td>
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<tr>
<td>2/20</td>
<td><em>Quizzes on topic 1</em></td>
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<td>2/27—3/4</td>
<td>4. Freedom of expression</td>
<td>Ch. 3; handout&lt;sup&gt;6&lt;/sup&gt;</td>
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<tr>
<td>3/4</td>
<td><em>Reports on research proposals and abstracts</em></td>
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<td>3/6</td>
<td><em>Quizzes on topics 2-3</em></td>
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<td>3/7—3/13</td>
<td>5. Intellectual property</td>
<td>Ch. 4</td>
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<td>3/20—3/29</td>
<td>6. Work, culture, and education</td>
<td>Ch. 6</td>
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<td>3/25</td>
<td><em>Make-up quizzes on topics 1-3</em></td>
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<td>4/8</td>
<td><em>Longer-answer quizzes on topics 4-5</em></td>
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<td>4/3—4/5</td>
<td>7. Risks, ethics, and evaluation of IT</td>
<td>Chs. 7-8</td>
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<td><em>Reports on research; preliminary drafts due</em></td>
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<td>4/10—4/18</td>
<td>8. Decentralized structures and the network enterprise</td>
<td>Handouts&lt;sup&gt;7&lt;/sup&gt;</td>
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<tr>
<td>4/19—5/2</td>
<td><em>Quizzes on topics 6-8</em></td>
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<tr>
<td>4/25</td>
<td><em>Course summary and review</em></td>
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<td>5/4</td>
<td><em>Make-up quizzes on topics 1-5</em></td>
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<tr>
<td>5/4</td>
<td><em>Make-up quizzes on topics 6-8</em></td>
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<td></td>
<td><em>Review of multiple topics</em></td>
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<tr>
<td>5/3</td>
<td><em>Final exam (longer-answer and multiple choice)</em></td>
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<td>Wed., May 8, 11:30am</td>
<td><em>Research reports</em></td>
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<td><em>Debate on unresolved issues</em></td>
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<td><em>Optional objectives questions</em></td>
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<sup>1</sup> D. Keil, Text-formatting concepts; D. Keil, Spreadsheet concepts

<sup>2</sup> Shelley and Frydenberg, Web 2.0

<sup>3</sup> T. Friedman, “The World is Flat,” book talk


<sup>6</sup> D. Johnson, Is the Global Information Infrastructure a Democratic Technology?