Syllabus

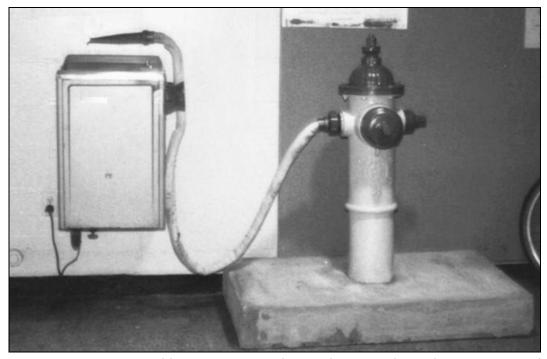
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Instructor

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Synopsis

This course is all about understanding: understanding what's going on inside your computer when you flip on the switch, why tech support has you constantly rebooting your computer, how everything you do on the Internet can be watched by others, and how your computer can become infected with a worm just by turning it on. In this course we demystify computers and the Internet, along with their jargon, so that students understand not only what they can do with each but also how it all works and why. Students leave this course armed with a new vocabulary and equipped for further exploration of computers and the Internet. Topics include hardware, software, the Internet, multimedia, security, website development, programming, and dotcoms. Through optional handson sections and workshops, local students have opportunities to dissect as well as upgrade a computer with additional hardware, search the Internet more effectively, build a wireless network, create digital images, eradicate spyware, and design webpages. Problem sets offer online students similar opportunities. This course is designed both for those with little, if any, computer experience and for those who use a computer every day.



http://hacks.mit.edu/Hacks/by_year/1991/fire_hydrant/

Table of Contents

1
1
2
4
4
9
10
12
12
13
14
14
14
15
15
15
16
16

Expectations

You are expected to attend or watch all lectures, complete nine problem sets, take two exams, and produce a final project.

Grades

Your final grade will be determined as follows.

Problem Sets	40%
Exam 1	20%
Exam 2	20%
Final Project	20%

Website

The address of this course's website follows.

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http://www.fas.harvard.edu/~cscie1/
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Visit this site to read course-wide announcements, access recordings of lectures, browse archives of course-wide discussions, download handouts and software, and follow links to other resources.

If you are taking this course via the Internet, this website will be your window into the course's classrooms. Everything that you will need to succeed in this course will be available for you there.

Staff

For current contact information for the course's staff, follow the appropriate link on the course's website.

For the sake of expediency, if you wish to pose a question or comment to the entire staff, simply email the address below.

csciel@fas.harvard.edu

Books

No books are required for this course.

However, we do recommend that you procure a set of four books; we offer you a choice of two such sets. A schedule of recommended readings from each set is provided in this document's discussion of lectures.

The first set is designed for true beginners—students relatively unfamiliar or uncomfortable with computers and the Internet. The second set is designed for students more savvy with computers the Internet. Both sets cover much of the course's material; the second set, however, provides additional technical detail which may appeal to students eager for additional challenge.

Each of the books in these sets is available for purchase either at the Harvard Coop, located in Harvard Square at 1400 Massachusetts Avenue, or at such sites as Amazon.com.

Set One: for True Beginners

Computers Are Your Future 2006, Complete Edition Bill Daley Prentice Hall, Inc., 2006 ISBN 0-13-148801-5

How the Internet Works, Seventh Edition Preston Gralla Que Publishing, 2003 ISBN 0-7897-2973-3

How to Use HTML and XHTML Gary Rebholz Sams Publishing, 2001 ISBN 0-672-32031-2

Teach Yourself VISUALLY Computers, Fourth Edition Paul McFedries John Wiley & Sons, Inc., 2005 ISBN 0-7645-9753-1

Set Two: for Students More Savvy

Computers Are Your Future 2006, Complete Edition Bill Daley Prentice Hall, Inc., 2006 ISBN 0-13-148801-5

How Computers Work, Eighth Edition Ron White Que Publishing, 2005 ISBN 0-7897-3424-9

How the Internet Works, Seventh Edition Preston Gralla Que Publishing, 2003 ISBN 0-7897-2973-3

HTML for the World Wide Web with XHTML and CSS: Visual QuickStart Guide, Fifth Edition Elizabeth Castro Peachpit Press, 2002 ISBN 0-321-13007-3

The following two books are also recommended for this course. Although not part of a recommended set, these texts may assist in your comprehension of course material and serve as valuable reference materials after the course's completion. Each is available for purchase either at the Harvard Coop, located in Harvard Square at 1400 Massachusetts Avenue, or at such sites as Amazon.com.

DHTML and CSS for the World Wide Web: Visual QuickStart Guide, Third Edition Jason Cranford Teague Peachpit Press, 2004
ISBN 0-321-19958-8

How the Mac Works, Millennium Edition John Rizzo and K. Daniel Clark Que Publishing, 2000 ISBN 0-7897-2428-6

Grossman Library

Grossman Library, located in Sever Hall 311, is a reserve-reading and study library open to all Extension School students. Each of this course's recommended texts has been placed on reserve in this library for you to read within the comfort of the library; books may not be checked out.

Grossman Library is open Monday, 18 September 2006, through Monday, 22 January 2007, according to the following schedule.

 Monday through Thursday
 12:00 P.M. ET – 10:00 P.M. ET

 Friday
 12:00 P.M. ET – 6:00 P.M. ET

 Saturday
 10:00 A.M. ET – 6:00 P.M. ET

 Sunday
 12:00 P.M. ET – 6:00 P.M. ET

Grossman Library is closed on University holidays. The library's phone number is (617) 495-4163.

Lectures

Lectures will take place in Science Center A on most Wednesdays from 5:30 P.M. ET until 7:30 P.M. ET.

With the exception of Lectures 3 and 13, each lecture will be recorded, digitized, and made available within days of its delivery via podcast (for download to iTunes and iPods) and via the course's website in MP3, RealAudio, RealVideo, and QuickTime formats. Once posted, these recordings will remain available until semester's end. Although the recordings are intended to be used by students taking the course via the Internet, students taking the course on campus are welcome to watch or listen to the recordings in the event that their attendance at one or more lectures is not possible. All students are welcome to watch or listen to the recordings for the purpose of reviewing the content of particular lectures.

These recordings are best downloaded or played via a high-speed (e.g., cable or DSL) connection to the Internet. Dial-up connections, though possible (especially for audio-only recordings), are not ideal.

A schedule of lectures and recommended readings follows.

Lecture 1: Hardware

Wednesday, 20 September 2006

Lecture topics. Computation. Overview. Bits and bytes. ASCII. Processors. Motherboards: buses, connectors, ports, slots, and sockets. Memory: ROM, RAM, and cache.

Recommended readings from Set One. Computers Are Your Future 2006: Chapters 1 and 6. Teach Yourself VISUALLY Computers: Chapters 1 and 2.

Recommended readings from Set Two. Computers Are Your Future 2006: Chapters 1 and 6. How Computers Work: Chapters 1, 2, 4, 5, 14, 15, and 19.

Lecture 2: Hardware, Continued

Wednesday, 27 September 2006

Lecture topics. Secondary storage: floppy disks, hard disks (PATA and SATA), CDs, and DVDs. Virtual Memory. Expansion buses and cards: AGP, ISA, PCI, PCI Express, and SCSI. I/O devices. Peripherals. How to shop for a computer. History.

Recommended readings from Set One. Computers Are Your Future 2006: Chapter 7 and Spotlight 6. Teach Yourself VISUALLY Computers: Chapters 3, 4, 10, and 15.

Recommended readings from Set Two. Computers Are Your Future 2006: Chapter 7 and Spotlight 6. How Computers Work: Chapters 9, 10, 11, 12, 13, 16, 17, 32, and 33.

Lecture 3: Software*

Wednesday, 4 October 2006

Lecture topics. It's the first of two movie nights for Computer Science E-1! A look at "how modern day visionaries Bill Gates and Steve Jobs changed the world" by way of *Pirates of Silicon V alley*, a dramatization of the history of Microsoft Corporation and Apple Computer, Inc.

Recommended readings from Set One. Computers Are Your Future 2006: Chapters 4 and 5 and Spotlights 4 and 5. Teach Yourself VISUALLY Computers: Chapters 5, 6, and 7.

Recommended readings from Set Two. Computers Are Your Future 2006: Chapters 4 and 5 and Spotlights 4 and 5. How Computers Work: Chapters 3, 7, 8, and 16.

^{*} Distant students should please try to borrow or rent Pirates of Silicon Valley.

Lecture 4: The Internet

Wednesday, 11 October 2006

Lecture topics. Networks: clients and servers, peer-to-peer, LANs and WLANs, the Internet, and domains. Email: addresses; IMAP, POP and SMTP; netiquette; spam; emoticons; snail mail; and listservs. SSH. The World Wide Web: URLs and HTTP. Blogs. Instant messaging. SFTP. Usenet.

Recommended readings from Set One. Computers Are Your Future 2006: Chapters 2 and 8 and Spotlight 2. How the Internet Works: Chapters 1, 4, 14, 15, 16, 17, 18, 19, 23, 25, 30, 31, 32, and 42. Teach Yourself VISUALLY Computers: Chapters 12 and 13.

Recommended readings from Set Two. Computers Are Your Future 2006: Chapters 2 and 8 and Spotlight 2. How Computers Work: Chapters 24, 28, and 30. How the Internet Works: Chapters 1, 4, 14, 15, 16, 17, 18, 19, 23, 25, 30, 31, 32, and 42.

Lecture 5: The Internet, Continued

Wednesday, 18 October 2006

Lecture topics. Network topologies. The Internet: backbones, TCP/IP, DHCP, and DNS. NAT. Ethernet: NICs, cabling, switches, routers, and access points. Wireless: IR, RF, Bluetooth, and WiFi. ISPs. Modems: dialup, cable, and DSL.

Recommended readings from Set One. Computers Are Your Future 2006: Chapter 3 and Spotlight 3. How the Internet Works: Chapters 2, 3, 5, 6, 7, 8, 10, 11, 12, and 13. Teach Yourself VISUALLY Computers: Chapters 8, 11, and 14.

Recommended readings from Set Two. *Computers Are Your Future 2006:* Chapter 3 and Spotlight 3. *How Computers Work:* Chapters 25, 26, and 27. *How the Internet Works:* Chapters 2, 3, 5, 6, 7, 8, 10, 11, 12, and 13.

Lecture 6: Jeopardy![†]

Wednesday, 25 October 2006

Lecture topics this week. Students versus teaching fellows!

Recommended readings from Set One. None.

Recommended readings from Set Two. None.

[†] This lecture will take place from 6:30 P.M. ET until 7:30 P.M. ET, immediately following Exam 1.

Lecture 7: Multimedia

Wednesday, 1 November 2006

Lecture topics this week. Graphics: file formats, bitmaps and vectors, and compression. Audio: file formats and compression. Video (and audio): file formats and compression. Streaming.

Recommended readings from Set One. Computers Are Your Future 2006: Spotlight 7. How the Internet Works: Chapters 35, 36, 37, and 40. Teach Yourself VISUALLY Computers: Chapter 9.

Recommended readings from Set Two. Computers Are Your Future 2006: Spotlight 7. How Computers Work: Chapters 18, 20, 21, 22, 23, and 29. How the Internet Works: Chapters 35, 36, 37, and 40.

Lecture 8: Security

Wednesday, 8 November 2006

Lecture topics this week. Threats to privacy: cookies, forms, logs, and data recovery. Security risks: packet sniffing, passwords, phishing, hacking, viruses and worms, spyware, and zombies. Piracy: WaReZ and cracking.

Recommended readings from Set One. Computers Are Your Future 2006: Chapter 9 and Spotlight 1. How the Internet Works: Chapters 41, 43, 44, 45, 46, 47, 48, and 49. Teach Yourself VISUALLY Computers: Chapter 16.

Recommended readings from Set Two. Computers Are Your Future 2006: Chapter 9 and Spotlight 1. How Computers Work: Chapter 31. How the Internet Works: Chapters 41, 43, 44, 45, 46, 47, 48, and 49.

Lecture 9: Security, Continued

Wednesday, 15 November 2006

Lecture topics this week. Defenses: scrubbing, firewalls, proxy servers, VPNs, cryptography, virus scanners, product registration and activation.

Recommended readings from Set One. None.

Recommended readings from Set Two. None.

Lecture 10: Website Development

Wednesday, 29 November 2006

Lecture topics this week. Web servers: structure, permissions, and implementations. Static webpages: XHTML, well-formedness, and validity. Dynamic webpages: SSIs, DHTML, AJAX, CGI, ASPs, and JSPs.

Recommended readings from Set One. *How the Internet Works:* Chapters 20, 21, 22, 24, 26, and 34.

Recommended readings from Set Two. How the Internet Works: Chapters 20, 21, 22, 24, 26, and 34.

Lecture 11: Programming

Wednesday, 6 December 2006

Lecture topics this week. Pseudocode. Constructs: instructions, variables, conditions, branches, and loops. Languages: interpreted and compiled. Scratch.

Recommended readings from Set One. *Computers Are Your Future 2006:* Chapter 11. *How the Internet Works:* Chapter 33.

Recommended readings from Set Two. Computers Are Your Future 2006: Chapter 11. How Computers Work: Chapter 6. How the Internet Works: Chapter 33.

Lecture 12: Pictionary![‡]

Wednesday, 13 December 2006

Lecture topics this week. Students versus teaching fellows!

Recommended readings from Set One. None.

Recommended readings from Set Two. None.

[†] This lecture will take place from 6:30 P.M. ET until 7:30 P.M. ET, immediately following Exam 2.

Lecture 13: Dotcoms**

Wednesday, 3 January 2007

Lecture topics this week. It's the second of two movie nights for Computer Science E-1! A look at the rise and fall of the dotcom era by way of *Startup.com*, a documentary that traces the history of govWorks.com.

Recommended readings from Set One. None.

Recommended readings from Set Two. None.

Lecture 14: Exciting Conclusion

Wednesday, 10 January 2007

Lecture topics this week. Where were you? Where are you? Where can you go?

Recommended readings from Set One. Computers Are Your Future 2006: Chapter 10 and Spotlight 8. How the Internet Works: Chapter 27.

Recommended readings from Set Two. Computers Are Your Future 2006: Chapter 10 and Spotlight 8. How the Internet Works: Chapter 27.

Sections

Sections provide local students with opportunities to work hands-on with computers and the Internet with a teaching fellow by their side. Some sections may, like lectures, be recorded, albeit in audio-only format.

Sections take place weekly, with some exceptions. During the course's first lecture, local students sign up for a specific section (*i.e.*, day, time, and location). Sections begin meeting following the second lecture.

Distant students unable to travel to campus cannot enjoy these opportunities to work hands-on with computers and the Internet with a teaching fellow. But this course is as conceptual as it is practical. It is designed to arm local and distant students alike with a new vocabulary and to equip both for further exploration of computers and the Internet.

A schedule of sections follows.

Section 1: Dissecting a PC

27 September 2006 – 3 October 2006

^{**} Distant students should please try to borrow or rent Startup.com.

Section 2: Upgrading a PC

4 October 2006 – 10 October 2006

Section 3: Exploring the Internet

11 October 2006 – 17 October 2006

Section 4: Treasure Hunting

18 October – 24 October 2006

Section 5: Building and Configuring a LAN and WLAN

25 October 2006 – 31 October 2006

Section 6: Designing GIFs, JPEGs, and PNGs

1 November 2006 – 7 November 2006

Section 7: TF's Choice

8 November 2006 – 14 November 2006

Section 8: Disinfecting a PC

15 November 2006 – 21 November 2006

Section 9: Building Websites with XHTML

29 November 2006 – 5 December 2006

Section 10: Enhancing Websites with CSS

6 December 2006 – 12 December 2006

Section 11: Programming with Scratch

13 December 2006 – 19 December 2006

Section 12: Working on Final Projects

3 January 2007 – 9 January 2007

Section 13: Exciting Conclusion

10 January 2007 – 16 January 2007

Workshops

Mastering computers takes time. Although weekly sections afford local students the opportunity for guided exploration, there is always more to learn. To supplement weekly section activities, then, we offer workshops on various topics on most weekends during the term. Some workshops may, like lectures, be recorded. Workshops' locations will be announced. Attendance at these workshops is optional but encouraged.

Distant students unable to travel to campus cannot enjoy these opportunities to work hands-on with computers and the Internet with the teaching fellows. But this course is as conceptual as it is practical. It is designed to arm local and distant students alike with a new vocabulary and to equip both for further exploration of computer science.

A schedule of workshops follows.

Workshop 1: Using a PC and the Course's Website

Saturday, 30 September 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 2: Mastering Windows

Saturday, 7 October 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 3: Mastering Mac OS

Saturday, 14 October 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 4: Swapfest

Sunday, 15 October 2006, 11:00 A.M. ET – 1:00 P.M. ET

Workshop 5: Tour of a NOC

Saturday, 21 October 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 6: Building a PC

Saturday, 28 October 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 7: (Teaching HILR Members to) Master the Internet

Sunday, 29 October 2006, 1:00 P.M. ET – 3:00 P.M. ET

Workshop 8: Sound Editing

Saturday, 4 November 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 9: Computer Games

Saturday, 11 November 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 10: Digital Photos

Saturday, 18 November 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 11: Digital Videos

Saturday, 2 December 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 12: Enhancing Websites with Flash

Saturday, 9 December 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 13: Enhancing Websites with JavaScript

Saturday, 16 December 2006, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 14: Stress-Free Web Development

Saturday, 6 January 2007, 3:00 P.M. ET – 5:00 P.M. ET

Workshop 15: Tooling around on the Web

Saturday, 13 January 2007, 3:00 P.M. ET – 5:00 P.M. ET

Videos of the Week

In addition to videos of lectures, the course will also release on most Wednesdays a volume of "videos of the week," bite-sized segments produced by the staff on topics related to the most recent lecture. These videos will be available via podcast (for download to iTunes and iPods) and via the course's website in Flash and QuickTime formats.

Problem Sets

Problem sets will be distributed most weeks and be due two or more weeks later. Problem sets must be submitted electronically via the dropboxes on the course's website unless a problem set permits submission on paper. Extensions for problem sets will not be granted, except in cases of emergency. Technical difficulties will not constitute emergencies. Problem sets submitted late without extension will be penalized as follows: submissions up to one hour late will incur a penalty of 5%; submissions up to two hours late will incur a penalty of 10%; submissions up to three hours late will incur a penalty of 25%; submissions up to four hours late will incur a penalty of 50%; submissions more than four hours late will incur a penalty of 100%. Lateness of submissions will be determined by server-side timestamps.

When computing your final grade, we will drop your lowest score.

Be aware that many questions in problem sets require Internet access, some problem sets may require (of students not taking the course via the Internet) a trip to campus, and one problem set will require a trip to a computer store local to you.

A schedule of problem sets follows.

Problem Set 1: Hardware

Distributed: Wednesday, 27 September 2006

Due: Wednesday, 11 October 2006, by 5:30 P.M. ET

Problem Set 2: Hardware and Software

Distributed: Wednesday, 4 October 2006

Due: Wednesday, 18 October 2006, by 5:30 P.M. ET

Problem Set 3: The Internet

Distributed: Wednesday, 11 October 2006

Due: Wednesday, 25 October 2006, by 5:30 P.M. ET

Problem Set 4: Hardware, Software, and the Internet

Distributed: Wednesday, 18 October 2006

Due: Wednesday, 8 November 2006, by 5:30 P.M. ET

Problem Set 5: Multimedia

Distributed: Wednesday, 1 November 2006

Due: Wednesday, 22 November 2006, by 5:30 P.M. ET

Problem Set 6: Security

Distributed: Wednesday, 15 November 2006

Due: Wednesday, 6 December 2006, by 5:30 P.M. ET

Problem Set 7: Website Development

Distributed: Wednesday, 29 November 2006

Due: Wednesday, 20 December 2006, by 5:30 P.M. ET

Problem Set 8: Programming

Distributed: Wednesday, 6 December 2006

Due: Wednesday, 3 January 2007, by 5:30 P.M. ET

Problem Set 9: Farewell

Distributed: Wednesday, 3 January 2007

Due: Wednesday, 17 January 2007, by 5:30 P.M. ET

Exams

This course has two, 60-minute exams. The first exam will take place in lieu of the first hour of lecture on Wednesday, 25 October 2006, and will cover lecture topics from Wednesday, 22 September 2006 through Wednesday, 18 October 2006. The second exam will take place in lieu of the first hour of lecture on Wednesday, 13 December 2006, and will cover lecture topics from Wednesday, 1 November 2006 through Wednesday, 6 December 2006.

These exams begin promptly at 5:30 P.M. ET. Each exam will be followed by a 60-minute lecture.

Distant students who live outside of New England and cannot travel to campus for an exam are required to find a school local to them that is willing to administer that exam to them in a secure fashion. The Extension School's Registrar will handle the logistics of sending the exam to that school and retrieving it once taken. However, all such students are required to contact their teaching fellow regarding these logistics no fewer than four weeks prior to an exam's date. Moreover, they are required to complete and submit the form available at the address below at least two weeks prior to each exam.

https://ac-web.dce.harvard.edu/procx/

Review Sessions

On Saturday, 21 October 2006, from 11:00 A.M. ET until 1:00 P.M. ET, the teaching fellows will hold a review session for the first exam. On Saturday, 9 December 2006, from 11:00 A.M. ET until 1:00 P.M. ET, they will hold a review session for the second exam.

The locations of these review sessions will be announced.

Attendance at these review sessions is optional but encouraged.

Final Project

This course requires that you produce a final project in the form of a website with a prescribed set of features.

The final project involves two parts. The first part, due by 5:30 P.M. ET on Wednesday, 29 November 2006, requires a written proposal for your project's content. The second part, due by 9:35 P.M. ET on Monday, 22 January 2007, requires actual production of your project.

Extensions for the final project will not be granted. Technical difficulties will not constitute emergencies. Final projects submitted late will be penalized as follows: submissions up to one hour late will incur a penalty of 5%; submissions up to two hours late will incur a penalty of 10%; submissions up to three hours late will incur a penalty of 25%; submissions up to four hours late will incur a penalty of 50%; submissions more than four hours late will incur a penalty of 100%. Lateness of submissions will be determined by files' timestamps.

Guidelines for the final project will be distributed on Wednesday, 1 November 2006.

Staff's Picks

Becoming a computer person (read: nerd) doesn't happen overnight. But certain movies can help. In fact, watch any of the staff's picks listed on the course's website in its entirety during this semester, write a review of at least 200 words, email your review to csciel@fas.harvard.edu, and

you'll earn five points of extra credit on the most recently due problem set! Be sure your review includes a thumb's up or down! And be sure to explain how the movie's content relates to E-1! You may watch as many of these picks as you wish during the term, but you may submit no more than one review per problem set. You are welcome to watch picks with other students, but each student must submit his or her own review.

Look for these picks at your local library or video store, but don't forget such sites as Blockbuster.com and Netflix.com!

Distance Education

If you are taking this course via the Internet, realize that it is our intention that you be as much a part of this course as are students taking the course on campus. However, given the distance between us, we cannot see the occasional perplexed look on your face. And we can't see you raising your hand. So, we ask that you help us help you as much as possible. Please do not ever hesitate to drop us a note, give us a call, or request a call. Though we may never shake hands, we would like very much to get to know you too.

Academic Honesty

All work that you do toward fulfillment of this course's expectations must be your own. Viewing or copying another individual's work (even if published in a world-accessible directory) or lifting material from a book, magazine, website, or other publication—even in part—and presenting said matter as your own constitutes academic dishonesty, as does showing or giving your work, even in part, to another student.

Similarly is dual submission academic dishonesty: you may not submit the same or similar work both to this class and to another. Similarly is submitting for extra credit a review of a pick that you have not watched in its entirety during this semester academic dishonesty.

All forms of cheating will be dealt with harshly.

You are welcome to discuss course material with others in order to better understand that material. However, you must do all problem sets, the exams, and the final project on your own. Contact me or a teaching fellow for help with a specific question on a problem set, an exam, or the final project.

Platforms

This course is designed to be largely independent of particular computing platforms: it does not matter if you are a user of Linux, Mac OS, or Windows. Almost all of the software taught and used by this course is available for all three platforms in some form.

Inclement Weather

In the event of inclement weather, you may call the Extension School's general information line at (617) 495-4024 or the Harvard University Newsline at (617) 496-6397 to find out whether a class has been cancelled.

Alternatively, you may visit the course's website or the address below.

http://www.extension.harvard.edu/

Announcements will also be broadcast on local radio stations WKRO-AM (680 kHz), WBZ-AM (1030 kHz), WBUR-FM (90.9 MHz), and WCRB-FM (102.5 MHz) as well as on local television stations WBZ (channel 4), WCVB (channel 5), and WHDH (channel 7).

You are advised to consult more than one of these sources, lest one or more not be current.

Noncredit

If you are not taking this course for credit, you are not expected to submit problem sets, take the exams, or produce a final project. However, all of the work in this course is designed to facilitate your comprehension and retention of lecture materials. Consequently, you are encouraged to complete as much of the work as possible. In return, the staff will correct and comment on any work that you submit.