Life After Computer Science E-1

With E-1 under your belt, you may be prepared to take one or more of the following computer-related courses at Harvard Extension School or Harvard Summer School. Your newfound expertise with computers and the Internet should satisfy most, if not all, of these courses’ prerequisites. Of course, you may have other expertise that would satisfy the prerequisites of courses not on this list!

Insofar as the list below is excerpted from 2006’s catalogues, realize that it is not guaranteed to be exhaustive or fully accurate for forthcoming terms!

Current information on Extension and Summer School offerings can be found online at http://www.dce.harvard.edu/ and at the schools’ main office at 51 Brattle Street.

COMM E-180 Technical Writing (12811)
Website (Print View)
Kalo Clarke, MA, Lecturer on English, Northeastern University.
Workshop. Course tuition: undergraduate credit $875, graduate credit $1,500. Limited enrollment.
Tuesday, Sept. 19, 7:35-9:35 pm, 53 Church Street, Room L01. Fall term
Online and on-campus options. See the Distance Education website. Lecture 1 video.
This workshop focuses on the development of marketable technical writing skills and the production of writing that illustrates these skills. Emphasis is on the selection and organization of technical data for presentation to a variety of audiences. We practice gathering, evaluating, and documenting information; organizing and drafting documents; revising document text; designing documents; and using illustrations. Assignments center on creating an instructional manual. (4 credits)

CSCI E-2 Bits (22388)
Print View
Harry R. Lewis, PhD, Harvard College Professor and Gordon McKay Professor of Computer Science, Harvard University.
Hal Abelson, PhD, Class of 1922 Professor of Computer Science and Engineering, Massachusetts Institute of Technology.
Course tuition: noncredit, undergraduate, and graduate credit $1,675.
Spring term
Online only, beginning Feb. 1. See the Distance Education website. Required sections to be arranged.
Information as quantity, resource, and property. Application of quantitative methods to understanding how information technologies inform issues of public policy, regulation, and law. How are music, images, and telephone conversations represented digitally, and how are they moved reliably from place to place through wires, glass fibers, and the air? Who owns information, who owns software, what forms of regulation and law restrict the communication and use of information, and does it matter? How can personal privacy be protected at the same time that society benefits from communicated or shared information? Mathematical methods are developed in the context of course material. The recorded lectures are from the Harvard Faculty of Arts and Sciences course Quantitative Reasoning 48. Prerequisite: high school algebra. Students must view sample online lectures before they register. (4 credits)

CSCI E-9 Computational Art: Explorations in Screen-Based and Physical Computing (22625)
Print View
Bakhtiar Mikhak, PhD, Visiting Scientist, Massachusetts Institute of Technology.
Course tuition: noncredit and graduate credit $1,675. Limited enrollment.
Saturday, Feb. 3, 10 am-1 pm, 53 Church Street, Room 202. Optional sections to be arranged. Spring term
This course is a practical introduction to computational art in a collaborative studio environment. Through creation, exhibition, and critique of a series of screen-based and physical computing artworks, students learn the three key elements of computational artwork: awareness (input or sensing), intention (processing or computation), and action (output or display). Prerequisite: experience with Macintosh or Windows operating systems. (4 credits)
CSCI E-11 Digital Multimedia Art (22124)  
(Print View)
Roy Pardi, MFA, Multimedia Developer.
Course tuition: noncredit and graduate credit $1,675. **Limited enrollment.**
Wednesday, Jan. 31, 5:30-7:30 pm, 53 Church Street, Room 104. Optional sections Wednesday, 7:35-8:35 pm. **Spring term**
This course examines the history, theory, and practice of digital multimedia as an art form. We investigate the current state of multimedia art practice through the work of numerous artists and theorists. The emphasis is on understanding the medium and finding intelligent and effective solutions to art-making problems. In the process, students receive a thorough exposure to timeline-based authoring and Actionscript programming in Macromedia Flash. Collaboration is encouraged, and students are expected to share their knowledge and expertise. Evaluation is based on participation in discussion and critiques, presentations, and quality of artwork produced. The software tools used are Macromedia Flash, and Adobe Photoshop, along with various sound and graphics editing programs. Prerequisite: experience with Macintosh or Windows operating systems. (4 credits)

CSCI E-12 Fundamentals of Website Development (21144)  
(Print View)
David P. Heitmeyer, AM, Senior Software Product Architect/Engineer, iCommons, Central Administration Information Technology, Harvard University.
Course tuition: noncredit and graduate credit $1,975.
Tuesday, Jan. 30, 5:30-7:30 pm, Science Center, Hall D. Optional sections to be arranged. **Spring term**  
Online and on-campus options. See the Distance Education website.
This course provides a foundation in several facets of establishing and maintaining a website. The first part of the course is devoted to creating, designing, and publishing content on the Web (XHTML, HTML, CSS, JavaScript, GIF, JPEG, PNG, and PDF). The second part of the course covers configuring and maintaining a web server, including HTTP, access control, and security. Dynamically generated websites and database-driven websites are discussed (CGI, PHP, and JSP). In addition, tools and techniques for maintaining a website, such as log analysis, version control, document validation, and page and site analysis, are covered. Prerequisites: CSCI E-1, or the equivalent experience. (4 credits)

CSCI E-14 Understanding and Developing Multimedia
Course tuition: noncredit and graduate credit $1,975.
**Online and on-campus options. See the Distance Education website. Lecture 1 video. See course website for all other lectures.**

**Fall term, section 1 (12712) (Website) (Print View):** Rob Graham, BS, Director of Training, LearningCraft. Monday, Sept. 18, 5:30-7:30 pm, 53 Church Street, Room L01. **Limited enrollment.**

**Fall term, section 2 (12835) (Website) (Print View):** Rob Graham, BS, Director of Training, LearningCraft. Online only. See the Distance Education website. Students must view sample online lectures before they register.
This course provides a hands-on approach to the world of interactive communications; offers a solid overview of the creation of media elements like audio, video, interactive programming, and design; and focuses on planning final projects with the needs and expectations of users in mind. Using standard media development tools such as Macromedia Flash, Adobe Photoshop, Sound Forge, and Adobe Premiere, students discover the steps used to plan for and create interactive programs and develop the skills necessary to build interactive programs that effectively target and deliver information to the right people. Through exploration of educational entertainment and marketing channels, students learn the fundamentals of interactive media production and then use these tools to create unique and meaningful projects that illustrate the concepts learned. Prerequisites: a solid understanding of the Macintosh and Windows operating system environments; basic understanding of any computer-based painting or drawing program. (4 credits)
CSCI E-19 Video Field Production (12816)
(Syllabus) (Print View)
Allyson Sherlock, MA, Digital Software Specialist, Emerson College.
Course tuition: noncredit and graduate credit $1,975. Limited enrollment.
Saturday, Sept. 16, 10 am-1 pm, 53 Church Street, Room 104. Fall term
Please note: this course begins earlier in the term on Sept. 16.
Through lectures and hands-on projects, students learn the equipment and techniques used in single-camera field production. Students write and produce a variety of projects which they see through from preproduction to postproduction. Final Cut Pro is used to edit student projects and DVD Studio Pro is used to create basic DVD menus. Prerequisite: experience with Macintosh computers. (4 credits)

CSCI E-50a Introduction to Computer Science Using Java I (10701)
(Website) (Print View)
Henry H. Leitner, PhD, Senior Lecturer on Computer Science, Harvard University.
Course tuition: noncredit, undergraduate, and graduate credit $1,675.
Monday, Sept. 18, 5:30-7:30 pm, Science Center, Hall A. Optional sections to be arranged. Fall term
Online and on-campus options. See the Distance Education website. Lecture 1 video. See course website for all other lectures.
Intended for students with no previous programming background, this course introduces problem-solving methods and algorithm development using the high-level programming language Java. Students learn how to design, code, debug, and document programs using modern engineering techniques in the Unix environment. Related topics include programming using iterative constructs, the basic aspects of arrays and recursion, string manipulation, parameter passing, information hiding and encapsulation using classes, and the functional decomposition of methods to enable object-oriented design. Some applications are chosen for their relevance to more advanced coursework in computer science while others involve nonscientific and business-related areas. (4 credits)

CSCI E-131b Communication Protocols and Internet Architectures
Course tuition: noncredit and graduate credit $1,675.
Fall term (11353) (Website) (Print View): Leonard Evenchik, SM, Lecturer in Extension, Harvard University. Monday, Sept. 18, 7:35-9:35 pm, Science Center, Hall A. Optional sections to be arranged. Online and on-campus options. See the Distance Education website. Lecture 1 video. See course website for all other lectures.
Spring term (21387) (Print View): Leonard Evenchik, SM, Lecturer in Extension, Harvard University. Online only, beginning Jan. 29. See the Distance Education website. Optional sections to be arranged. Students must view sample online lectures before they register.
Networks are now too large, complex, and diverse to be built on an ad hoc basis. This course provides a structured approach to the design, analysis, and implementation of networks and protocols. We study various protocols, including TCP/IP; WWW/HTTP; ATM; multimedia protocols for voice, data, and video; and the IEEE 802 LAN protocol suite. In each case, the protocol's functions and the underlying reference model are discussed. LAN architecture and design, internetworking using switches and routers, and the design and analysis of both private networks and the Internet are presented. The course discusses new areas of work, including network quality of service, voice and video on the Internet, policy-based networks, and broadband/gigabit networks. Prerequisites: programming or computer architecture experience; a basic understanding of the principles of communication protocols. (4 credits)

CSCI E-170 Security, Privacy, and Usability (12334)
(Website) (Print View)
Scott Bradner, University Technology Security Officer, Office of the Provost, Harvard University.
Course tuition: noncredit and graduate credit $1,675.
Friday, Sept. 22, 5:30-7:30 pm, Science Center, Hall A. Fall term
Online and on-campus options. See the Distance Education website. Lecture 1 video.
This course introduces computer and network security as it relates to enterprise and personal computing as well as to data networking. Special attention is paid to the implications of security technologies on enterprise and governmental policies including privacy policies, surveillance, and digital rights management. Topics include cryptography, forensics, human factors, watermarking, spyware, and privacy- and content-protecting technology. Students are expected to read a substantial amount of online material for each lecture. Prerequisites: basic knowledge of computer networks and systems. (4 credits)
CSCI S-1 Great Ideas in Computer Science (31441)

(Website) (Print View)

Henry H. Leitner and David J. Malan

(4 units: UN, GR, NC) T, Th 6-8:30 pm, Maxwell Dworkin, Room G125. Two required weekly sections to be arranged. Tuition $2,200.

Online and on-campus options. See the Distance Education website. Harvard College students see additional information.

This course is an introduction to the most important discoveries and intellectual paradigms in computer science, designed for students with little or no previous background. We explore problem-solving methods and algorithm development using such high-level programming languages as Java, Javascript, and Perl. Students learn how to design, code, debug, and document programs using techniques of good programming style in a Linux-based environment. This course presents an integrated view of computer systems, from switching circuits and machine language, up through compilers and GUI design. We examine theoretical and practical limitations related to unsolvable and intractable computational problems, and the social and ethical dilemmas presented by such issues as software unreliability and invasion of privacy.

CSCI S-111a Intensive Introduction to Computer Science Using Java (31840)

(Website) (Print View)

Henry H. Leitner

(4 units: UN, GR, NC) M-F 8:30-11 am, Science Center, Hall A. Required sections 12 noon-1 pm. Tuition $2,200.

This course meets during short session I: June 26-July 21. Harvard College students see additional information.

This course is a serious, fast-paced first course in computer science, designed for students who plan to work extensively with computers (for example, engineers, biologists, physicists, and economists), as well as future concentrators who plan to take more advanced courses in the field. Using the Java programming language, students learn problem-solving strategies through the development of algorithms that emphasize modern, object-oriented designs. Topics include iteration, recursion, parameter passing, array processing, file I/O, exception handling, and graphical-user interfaces. Problem sets require a minimum of 20 hours of programming each week in a Unix environment. Graduate-credit students are expected to complete additional work.

CSCI S-A Internet and Integrated Productivity Software (30030)

(Website) (Print View)

Stephan Kolitz

(4 units: UN, GR, NC) M, W 5-7:30 pm, Sever Hall, Room 103. Required sections 7:30-10 pm after each lecture. Tuition $2,200.

Harvard College students see additional information.

This course provides a solid foundation in end-user productivity software for word processing, spreadsheet analysis and modeling, charting, database management, presentations, and appropriate applications for interacting with the Internet. Students learn the conceptual basis of each of these tools, how they are used in organizations today, the limitations of current technology, and possible future developments. The emphasis is on using software in an integrated manner to organize, analyze, and communicate information. Students should expect to spend significant time each week, including time in sections, working on assignments in Harvard University computer labs. Prerequisite: Experience using either Windows or the Macintosh operating system and Microsoft Word, or the equivalent.

CSCI S-H Fundamentals of Website Development (31515)

(Syllabus) (Print View)

Robert Irie

(4 units: UN, GR, NC) T, Th 6-8:30 pm, Harvard Hall, Room 202. Optional sections to be arranged. Tuition $2,200.

Harvard College students see additional information.

This course provides a foundation for developing dynamic websites and web applications. The first part covers the front-end aspects of web development: creating, designing, and publishing content using HTML, CSS, and Javascript. The second covers the back-end aspects: using programming languages to generate, manipulate, and manage content (CGI, cookies, server-side scripting), and accessing a database using SQL for common website tasks (forms, user registration). While this course covers web development concepts that are applicable to most popular platforms, it is significantly hands-on using the web application server Zope and the content management system Plone. A major component is a final project involving implementing a dynamic website. Prerequisite: Familiarity with basic programming language concepts.
CSCI S-I Communication Protocols and Internet Architectures (31516)

(Website) (Print View)
Leonard Evenchik
(4 units: UN, GR, NC) M,W 6-8:30 pm, Harvard Hall, Room 104. Optional sections to be arranged. Tuition $2,200. Harvard College students see additional information.

This course provides a structured technical approach to the design, analysis, and implementation of Internet protocols and network architectures. We study various protocols, including TCP/IP, WWW/HTTP, LAN protocols, and client/server protocols. The course also discusses new areas of work, including voice and video over the Internet, network QoS, and enterprise network management. Prerequisites: Some programming and Internet experience.

CSCI S-Y Video Field Production (31872)

(Syllabus) (Print View)
Christine Dehne
(4 units: UN, GR, NC) M,W 6-8:30 pm, 53 Church Street, Room 104. Required sections W 8:30-9:30 pm. Tuition $2,200. Limited enrollment. Harvard College students see additional information.

Through hands-on projects, students learn the equipment and techniques used in single-camera field production and postproduction. Students write and produce a variety of projects, edit them in digital nonlinear mode, and then burn them to DVD for review in class. Prerequisite: Experience with Macintosh computers.

EDUC E-102 Introduction to Educational Technologies (11986)

(Syllabus) (Print View)
Stacie Cassat Green, MEd, Principal, 64 Crayons.
Course tuition: noncredit and undergraduate credit $725, graduate credit $1,675. Limited enrollment.

This course meets Saturday, Sept. 30, Oct. 14, Oct. 28, Nov. 18, Dec. 2, Dec. 16, Jan. 6, and Jan. 13, 10 am-4 pm, in 53 Church Street, Room 201, with a 1-hour lunch break.

How can computers best support classroom instruction? This course demystifies computers and networks by giving participants hands-on experience with several software packages and the Internet. Participants create pamphlets, spreadsheets, and web-based portfolios, and participate in an online community, all with the goal of enhancing classroom teaching and learning. Participants look at the best practices of technology use and then develop technology-rich lesson plans in their own fields. While this course is geared toward K-12 education, students interested in adult education and training may adapt the assignments to meet their needs. (4 credits)

EDUC E-108 Technological Tools for Science, Mathematics, and Engineering Education (12794)

(Website) (Print View)
Bakhtiar Mikhak, PhD, Visiting Scientist, Massachusetts Institute of Technology.
Course tuition: noncredit and undergraduate credit $725, graduate credit $1,675. Limited enrollment.
Saturday, Sept. 16, 10 am-1 pm, 53 Church Street, Room 106. Optional sections to be arranged. Fall term Please note: this course begins earlier in the term on Sept. 16.

Through hands-on activities and extended case studies, this course explores the principles underlying the design of technologies for supporting critical and creative thinking in mathematics, science, and engineering education. Special projects provide teachers with concrete starting points for integrating technology in their own classrooms in a hands-on way. (4 credits)
EDUC E-126 Teaching for Understanding with New Technologies (12280)

Lisa Breit, EdM.
Course tuition: noncredit and undergraduate credit $725, graduate credit $1,675. Limited enrollment.
Thursday, Sept. 21, 5:30-7:30 pm, 53 Church Street, Room 201. Required sections Thursday, 4:30-5:30 pm. Fall term

Technological developments and globalization have transformed the nature of knowledge and work. Today, educators must think beyond traditional approaches to instruction in order to cultivate the kind of learning and deep understanding required for success in the twenty-first century. What is most important for students to understand? How can educators design curriculum and instruction that taps into students’ curiosity and promotes investigation and critical thinking? How can assessment be used to deepen understanding? How can new technologies and sources of information support this kind of learning? This course explores the theory and practice of a curriculum design framework that helps educators keep understanding up front while designing instruction for today’s learners. (4 credits)

ENSC E-123 Laboratory Electronics: Digital Circuit Design (22098)

Thomas C. Hayes, JD, Lecturer on Physics, Harvard University.
Course tuition: noncredit, undergraduate, and graduate credit $1,675. Limited enrollment.
Thursday, Feb. 1, 6-9:30 pm, Science Center, Room 206. Spring term

Students need proof of registration to be admitted to Science Center classrooms above the first floor.

This course forms the digital half of a two-semester sequence that provides a lab-intensive survey of electronics (the analog half of the sequence is PHYS E-123a). It covers digital design, emphasizing microprocessors and microcontrollers as well as programmable logic devices, and provides an understanding of the fundamentals of computer circuitry. After examining analog-digital interfacing issues, students build a microcomputer from the chip level. They apply this computer first to assigned tasks, later to individual projects. The student's microcomputer is based on an 8051-derivative microcontroller, chosen because it allows an easy transition after the course is completed from the course's pedagogically useful "transparent" design (using external buses and memory) to practical single-chip implementations. Each meeting includes a laboratory session. Prerequisites: high school algebra and some familiarity with analog electronics. PHYS E-123a is not a prerequisite. (4 credits)

ISMT E-100 Information Systems Management (12528)

Jeffrey E. Francis, MS, Consultant.
Course tuition: graduate credit $1,500.
Monday, Sept. 18, 7:35-9:35 pm, Maxwell Dworkin, Room G115. Fall term

This course provides a broad overview of the issues managers face in the selection, use, and management of information technology (IT). Increasingly, IT is being used as a tool to implement business strategies and gain competitive advantage, not merely to support business operations. Using a case study approach, topics include information technology and strategy, information technology and organization, and information technology assets management. The course takes a management rather than a technical approach to the material presented. As such, it should be of use to students of general management interested in information technology and to students of information technology interested in management. Prerequisite: knowledge of the use of information systems in business settings. (4 credits)
ISMT E-110 Internet and Integrated Productivity Software for Managers
Course tuition: graduate credit $1,675.

Fall term (12555) (Website) (Print View): Stephan Kolitz, PhD, Lecturer in Extension, Harvard University. Thursday, Sept. 21, 5:30-7:30 pm, Emerson Hall, Room 101. Required sections to be arranged.

Spring term (22314) (Print View): Teresa J. Chisholm, MBA, Consultant. Antoinette M. Trainor, CSS, Department Administrator, Faculty of Arts and Sciences Registrar's Office, Harvard University. Wednesday, Jan. 31, 5:30-7:30 pm, Science Center, Room B-09. Optional sections to be arranged.

This course provides a solid foundation in end-user office productivity software for word processing, spreadsheet analysis and modeling, database management, charting, presentations, and appropriate applications for interacting with the Web (including development of webpages) and the rest of the Internet. Students learn the conceptual basis of each of these tools and apply them to representative tasks in business and in the home. The emphasis is on using software to organize, analyze, and communicate information. Students should expect to spend 10 or more hours each week working on assignments, usually in Harvard University computer labs. The course demands a high level of commitment to keep up with class assignments and learn the use of the software tools. Prerequisites: basic experience using either Windows or the Macintosh operating system and some experience using a word processing program such as Microsoft Word. (4 credits)

ISMT E-120 Desktop Applications for Managers
Course tuition: graduate credit $1,675. Limited enrollment.

Fall term (12531) (Website) (Print View): Jean A. Pfeifer, CSS, Senior Project Manager, Office of Administrative Systems, Harvard University. Tuesday, Sept. 19, 5:30-7:30 pm, 53 Church Street, Room 202. Optional sections Tuesday, 7:35-9:35 pm.

Spring term (22333) (Print View): Jean A. Pfeifer, CSS, Senior Project Manager, Office of Administrative Systems, Harvard University. Tuesday, Jan. 30, 5:30-7:30 pm, Science Center, Room B-09. Optional sections Tuesday, 7:35-9:35 pm.

This course presents an advanced treatment of desktop software useful for managers at all levels. It emphasizes the use of desktop software to increase office productivity. Topics include automating repetitive tasks, streamlining work processes, sharing information via the Internet, collaborating within work groups, and learning techniques for integrating and combining applications and for sharing best practices among co-workers. All assignments require Windows 2000 or higher; class demonstrations are done with Microsoft Office XP. Not all assignments can be completed using Macintosh systems. Prerequisite: ISMT E-110, or the equivalent experience. (4 credits)

ISMT E-123 Interactive Online Marketing (22564)
(Print View)
Rob Graham, BS, Director of Training, LearningCraft.
Course tuition: noncredit and graduate credit $1,675. Limited enrollment.
Thursday, Feb. 1, 5:30-7:30 pm, 53 Church Street, Room 202. Spring term

From e-mail marketing to rich media advertising, search engine optimization to behavioral targeting, this course explores the process of planning for, targeting, and creating interactive marketing tools designed to reach the right audience with the right message at the right time. Students learn the fundamentals of interactive communication design, human behavior models, interface development, and intuitive interactive design through hands-on creation of sample online marketing campaigns. In addition, the course provides an overview of the online marketing industry. Prerequisites: basic understanding of Macromedia Flash and Macintosh and Windows operating systems. (4 credits)

ISMT E-125 e-Commerce Strategies for Managers and Entrepreneurs (12569)
(Syllabus) (Print View)
Kishan Mallur, MS, Director, IT Infrastructure Services, University Information Systems, Harvard University.
Course tuition: graduate credit $1,675. Limited enrollment.
Wednesday, Sept. 20, 5:30-7:30 pm, 53 Church Street, Room 202. Optional sections Wednesday, 7:35-8:35 pm. Fall term

Intended for managers or entrepreneurs interested in e-commerce strategies, this course defines facets of business-to-consumer (B2C) and business-to-business (B2B) e-commerce, including business strategy, business models, distribution channels, entrepreneurship issues, legal issues, and market strategy and highlights opportunities and risks. Students collaborate on a project proposing a new e-commerce venture, present a business case, and create a website demonstrating critical functions of the new venture. Prerequisite: some web design experience preferred. (4 credits)
ISMT E-127 Understanding Identity Management (22544)
(Print View)
Kishan Mallur, MS, Director, IT Infrastructure Services, University Information Systems, Harvard University. Jane E. Hill, BA, Directory Services Product Manager, University Information Systems, Harvard University.
Course tuition: graduate credit $1,675. Limited enrollment.
Wednesday, Jan. 31, 5:30-7:30 pm, 53 Church Street, Room 202. Optional sections Wednesday, 7:35-8:35 pm. Spring term
With the growth of e-business, organizations are wrestling with the challenge of managing secure access to information and applications scattered across internal and external computing systems. This course talks about processes, systems, laws, organizational structure, solutions, and governance models that help or hinder the creation of effective identity management solutions for an enterprise. Prerequisites: courses or experience with security, e-business, or marketing. (4 credits)

ISMT E-130 Spreadsheet Models for Managers (12515)
(Website) (Print View)
Richard Brenner, SM, Principal, Chaco Canyon Consulting.
Course tuition: graduate credit $1,675. Limited enrollment.
Thursday, Sept. 21, 7:35-9:35 pm, 53 Church Street, Room 202. Optional sections to be arranged. Fall term
Using commercial spreadsheets, this course explores practical approaches to business modeling, emphasizing the needs of retail, wholesale, service, publishing, or software concerns ranging in size from start-ups to global enterprises. Students learn to model costs, revenue, cash flow, equipment, and employee costs and productivity. Students develop a business model and use it to study how a business responds to change. Prerequisite: ISMT E-110, or the equivalent experience with Excel. (4 credits)

ISMT E-140 Using Databases for Information Management (22360)
(Print View)
Maria R. Garcia, ALM, Associate Professor of Graduate Studies, Franklin Pierce College.
Course tuition: graduate credit $1,675. Limited enrollment.
Tuesday, Jan. 30, 7:35-9:35 pm, 53 Church Street, Room 202. Optional sections to be arranged. Spring term
Managers encounter information management requirements both for personal use and as a company-wide resource. This course provides the fundamental concepts necessary to understand, develop, analyze, evaluate, and manage computerized database applications. Students become acquainted with the terminology associated with discrete field data collection, entry, conversion, querying, reporting, and development using Microsoft Access. Students build a working database using Microsoft Access to serve the information needs of an enterprise. Through research and hands-on projects, students develop an appreciation for the adaptability, scalability, and practical utilization of databases. As a final project, students build a business database application. Prerequisites: ISMT E-110 or familiarity with office productivity software, such as word processors and spreadsheets. (4 credits)

ISMT E-150 Introduction to GIS (22645)
(Print View)
Wendy Guan, PhD, Director of GIS Research Services, Center for Geographic Analysis, Harvard University.
Course tuition: noncredit and graduate credit $1,675. Limited enrollment.
Thursday, Feb. 1, 5:30-7:30 pm, 53 Church Street, Room 201. Optional sections Thursday, 7:35-8:35 pm. Spring term
This course introduces the concepts and components of a geographic information system (GIS). It also teaches the essential skills of operating a functional GIS through the use of ArcGIS software package. By the end of the course, students understand the operational processes of spatial data acquisition, editing and QA/QC, metadata development, geodatabase design, spatial query and display, spatial analysis and modeling, preliminary GIS application development, cartographic mapping and dynamic visualization, and GIS implementation basics. GIS technology has broad applications in natural and social sciences, humanities, environmental studies, engineering, and management. Examples include wildlife habitat study, urban and regional planning, contagious disease monitoring, agriculture and forestry, environmental quality assessment, emergency management, transportation planning, consumer and competitor analysis, and many more. This course introduces a few selected cases of GIS application in different disciplines. Prerequisite: familiarity with Word documents, spreadsheets, and browsing the Internet. (4 credits)
ISMT E-160 How to Manage and Succeed with IT in a Global Delivery Environment (12805)
(Syllabus) (Print View)
Christopher Robert Merlan, MS, Publication Director, MIT OpenCourseWare, Massachusetts Institute of Technology.
Course tuition: noncredit and graduate credit $1,875.
Wednesday, Sept. 20, 7:35-9:35 pm, Maxwell Dworkin, Room G135. Fall term
This course is designed for IT professionals who may be working with or are interested in learning more about global delivery, also known as outsourcing. Students learn how to identify elements of an IT infrastructure that would be good candidates for global delivery, how to develop and properly evaluate a business case, and how to set up a successful global delivery team and technical environment. We also address delivery partners, risks, common pitfalls, and the latest trends.
The goal of this course is to better prepare IT professionals to excel in global delivery environments. (4 credits)

LSTU E-118 Cyberlaw: Law in the Court of Public Opinion (12821)
(Website) (Print View)
Charles R. Nesson, JD, Weld Professor of Law and Faculty Co-director, Berkman Center for Internet and Society, Harvard Law School. Rebecca Nesson, JD, Gene Koo, JD, Director of Online Education, Legal Aid University.
Course tuition: noncredit and undergraduate credit $650, graduate credit $1,575. Limited enrollment.
Fall term
Online only. Please note this course begins earlier in the term on Sept. 12. The deadline for withdrawing from this course for a WD (withdrawal) grade and no tuition refund is Nov. 26. See the Distance Education website. Required online sections to be arranged. Lecture 1 video. See course website for all other lectures.
We take a lawyer's approach to determining the elements of a persuasive argument in the court of public opinion. Our court is the world audience on the Internet. Our hypothesis is that the medium of the Internet permits the aggregation of willing energy around an idea, allowing individuals and non-corporate groups of individuals to speak as loudly as their for-profit counterparts. We study examples of successful argumentation and resource creation in various Internet media including wiki, blog, podcast, and other audio, video, and machinima. In addition to taped lectures from the Harvard Law School course, the class is conducted in Second Life, a 3D virtual world. One of the major goals of this course is to try to enhance the online education experience of the students by enriching the mode of their participation. Students are encouraged to come for scheduled showings of the lectures in the Second Life environment where we watch the videos together and discuss the topics of the class. In some weeks we do not watch the Law School lectures and instead have our classes entirely separate from the Law School class and entirely in Second Life. Students also do group work and other projects in Second Life as part of their work for the course. We give ample instruction and support for all the technologies we use in the course and do not expect any prior familiarity with them. Prerequisite: all students must be proficient computer and Internet users with access to a computer with a good video card and a high-bandwidth Internet connection. See the Second Life website, http://secondlife.com/corporate/sysreqs.php for system requirements. Students must view sample online lectures before they register. (4 credits)

LSTU E-120 Internet and Society: Technologies and Politics of Control (22054)
(Print View)
Colin M. Maclay, MPP, Managing Director of the Berkman Center for Internet and Society, Harvard University. Robert Faris, PhD, Research Director of the Berkman Center for Internet and Society, Harvard Law School.
Course tuition: undergraduate credit $650, graduate credit $1,575. Limited enrollment.
Tuesday, Jan. 30, 7:35-9:35 pm, Sever Hall, Room 213. Spring term
Online and on-campus options. See the Distance Education website.
This course examines current legal, political, and technical struggles for the control and ownership of the global Internet and its content, drawing upon a growing body of cyberlaw cases and commentary. The course focuses on three main themes: Internet governance, constitutional rights online, and intellectual property. Prerequisite: willingness to experiment with new technologies. (4 credits)

LSTU E-125 Law and Technology (12277)
(Website) (Print View)
Robert Silverman, PhD, JD, Associate General Counsel, Millennium Pharmaceuticals.
Course tuition: noncredit $350, undergraduate credit $575, graduate credit $1,500.
Tuesday, Sept. 19, 7:35-9:35 pm, Sever Hall, Room 102. Fall term
This course describes how the law aims to balance competing interests and resolve conflicts concerning new technology. These conflicts arise in areas such as product safety, environmental protection, intellectual property rights, healthcare, telecommunications, and ethics. Technology issues of current debate—global warming, stem cell research, drug safety, music file sharing, and other topical issues—are discussed to illustrate how basic legal frameworks are designed to protect various interests while promoting societal goals. (4 credits)
MGMT E-120 Project Management of Information Technology (22327)

Jeffrey E. Francis, MS, Consultant.
Course tuition: graduate credit $1,500. Limited enrollment.
Monday, Jan. 29, 7:35-9:35 pm, Maxwell Dworkin, Room G115. Spring term
This course explores and defines project management techniques for keeping management informed and engaged during the implementation of IT projects, which often involve significant organizational change. Discussion topics include project scope, business benefits, work and schedule, the project team, mitigating risks, project delivery, and the identification of stakeholders. (4 credits)

PHYS E-123a Laboratory Electronics: Analog Circuit Design (10228)

Thomas C. Hayes, JD, Lecturer on Physics, Harvard University.
Course tuition: noncredit, undergraduate, and graduate credit $1,675. Limited enrollment.
Thursday, Sept. 21, 6-9:30 pm, Science Center, Room 206. Fall term
Students need proof of registration to be admitted to Science Center classrooms above the first floor.
This course forms the analog half of a two-semester sequence that provides a lab-intensive survey of electronics (the digital half of this sequence is ENSC E-123). The course introduces analog electronics, with little mathematical or physical analysis and much opportunity to design and build circuits. The treatment moves quickly from fundamentals (for example, passive circuits made with resistors, capacitors) to designs with transistors and then gives most of its attention to the design of circuits using operational amplifiers: circuits such as integrators, amplifiers, oscillators, filters, and a servo loop. Students apply amplitude and frequency modulation in both transmission and reception. Each meeting includes a lab session. Prerequisites: high school algebra; some knowledge of elementary electrical concepts is helpful but not essential. (4 credits)