



UMIACS

UNIVERSITY OF MARYLAND INSTITUTE FOR ADVANCED COMPUTER STUDIES

HONR 299B - Internet Technologies in the Information Era Fall 2010

INSTRUCTOR

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TIME AND PLACE

When: Mondays and Wednesdays, 3:00pm – 4:15pm
Where: EGR 0110 (Glen L. Martin Hall)
Office hours: After class or by appointment. I recommend office appointments for personal matters. I will attempt to answer all email inquiries within 48 hours. I will reply to the whole class if the inquiry has general relevance, hiding the identity of the student who originally submitted the request.

COURSE DESCRIPTION

The digital revolution has caused a shift towards an economy based on the manipulation of information, and the Internet has made a massive amount of information publicly available. The course offers a survey of the technologies and issues underlying the use of the Internet for communication, research, and dissemination of information.

Course topics include an introduction to Internet protocols, Internet history and development, the dot-com bubble, network security, and today's major applications (e.g., e-commerce) and trends. The course also covers legal and social issues related to the use of Internet, such as copyrights, intellectual property, and the emerging phenomenon of social networks. Finally, the course explores the importance, in today's economy, of building an online presence, and offers a survey of the existing tools and technologies that individuals and companies have available to build their own online presence.

COURSE OBJECTIVES

Upon successful completion of this course students will:

- become familiar with the technology that enables and supports the effective use of the Internet for research, communication, and dissemination of information,

- become familiar with the social and legal issues related to the advent and widespread use of the Internet in areas such as personal and professional communications, commercial applications, and research,
- acquire hands-on experience with most of the tools and technologies covered in the course,
- acquire experience in writing about Internet related issues,
- be able to build their online presence.

COURSE MATERIALS

TEXTBOOKS

Two textbooks are required for this course, and both titles are available in electronic format (eTextbook) through CourseSmart.com. The price of an eTextbook is typically 50% of the original list price of the equivalent print version. Alternatively, for those who prefer a hardcopy of the textbooks, Amazon.com offers convenient options for buying new or used books. An [Amazon.com Listmania!](#) list has been created for this course to give students easy access to available options. Please keep in mind that Amazon.com prices are subject to continuous changes. The two textbooks are listed below, along with their best prices as of August 18, 2010. The second textbook will not be required until week 9 (expect for a couple of sections), so it may be worth waiting for the price to drop (which is likely to happen two months after the semester has started).



The Internet Book: Everything You Need to Know About Computer Networking and How the Internet Works, Fourth Edition

Douglas E. Comer - Cisco Systems San Jose, CA and Department of Computer Sciences Purdue University
Prentice Hall, © 2007, Pages: 416

[eText](#) – \$37.00

ISBN-10 0-13-241116-4

ISBN-13 978-0-13-241116-5

[Print](#) – \$22.99 (used)

ISBN-10 0-13-233553-0

ISBN-13 978-0-13-233553-9



A Gift of Fire: Social, Legal, and Ethical Issues for Computing and the Internet, Third Edition

Sara Baase

Prentice Hall, © 2008, Pages: 528

[eText](#) – \$42.50

ISBN-10 0-13-600885-2

ISBN-13 978-0-13-600885-9

[Print](#) – \$52.71 (used)

ISBN-10 0-13-600848-8

ISBN-13 978-0-13-600848-4

ADDITIONAL READINGS AND LECTURE SLIDES

Additional readings and lecture slides will be made available by the instructor on BlackBoard (<https://elms.umd.edu/>) before class.

ONLINE RESOURCES

- **Class website:** <http://www.umiacs.umd.edu/~albanese/HONR299B.htm>
General course information
- **Facebook Group:** <http://www.facebook.com/#!/group.php?gid=109651932400378&ref=ts>
Links to relevant news, discussions
- **YouTube Channel:** <http://www.youtube.com/user/UMDHONR299B>

CLASS PARTICIPATION

Classes are intended to encourage the development of analytical skills; thus, it is expected that all students will read the assigned readings before each class and will be prepared to actively participate in class discussions. Active participation includes, but is not limited to, the contribution of substantive ideas, provocative questions, and novel insights.

Regular attendance is strongly recommended. Students will be held responsible for all material covered in class. Quizzes and final exam are given on the dates specified below under the course schedule section. Absence from taking any quiz/exam will result in a score of zero, unless cleared in advance with the instructor and arranged for a makeup session. Excusable absences are normally related to unavoidable and documented emergency situations.

A class debate on recent news from the Internet world (e.g. [New Facebook feature raises more privacy concerns](#), August 19, 2010) is scheduled after each of the 4 short quizzes. During this time the class will discuss news articles posted on the Facebook group's page by either the instructors or the students. If needed, the first 10 minutes of each class can also be devoted on commenting recent relevant news. Class discussions will earn point toward the final grade and will be a useful exercise in preparation of the term paper.

Students who wish to recover credits lost in other course activities can also volunteer to give short presentations (3-5 slides, 10 minutes) on a topic of their choice during the time allocated to class debate. Each short presentation will earn up to 25 points, for a maximum of two presentations per student during the whole course, and students must notify the instructor in advance of their intention to give a short presentation.

IN-CLASS QUIZZES

Four short quizzes will be administered during the course (see Schedule of classes for exact dates). Short quizzes will cover topics discussed in the previous weeks, and will be a useful tool to assess progress of each student. Each in-class quiz will take no more than 30 minutes and will consist of 10 to 25 multiple-choice questions. All quizzes will be closed book/notes.

TEAM PROJECT

Student will team into 6 groups of 3-4 members. The team project will consist in building a comprehensive and coherent online presence for a fictional company¹, using the tools and technologies described in the course. Teams can start working on the project as soon as they like, and can build on it as the course progresses and new topics are covered. The successful project will encompass both the technical aspects covered in the first portion of the course and the legal and ethical aspects covered in the second part of the course. Each team will prepare a short project report (about 3-4 pages, 12pt font, 1.5 spaced) and a PowerPoint presentation (15-20 slides) to present the project to the class at the end of the course. Each team will have 25 minutes to present, including Q&A, and each team member will be required to do part of the presentation.

¹ Any type of company or organization is acceptable for the project, e.g. an organic farm, a language school. A real company or organization is also acceptable if a team has the opportunity to interact with it and gather information and requirements.

Groups must be formed and titles/abstract of the projects must be submitted to the instructor by the beginning of week 7 (see schedule). Reports and slides must be submitted to the instructor by the beginning of week 14.

TERM PAPER AND FINAL EXAM

For this term paper assignment, students will investigate and report on some recent issue related to the course material that involves some controversy – that is, some social, legal, or ethical aspect of internet or computing technology. If the selected topic is covered in the text, students cannot use the text as a main source, and must report in more depth and/or on newer or other aspects of the topic. The paper should cover the background/history of the topic, state the different sides of the issue with arguments and counter arguments, and draw conclusions.

The paper should be approximately 5-6 pages in length (12pt font, 1.5 spaced). The grade is based on the quality of the paper and how well students present the different sides of the issue as well as the conclusions. Detailed guidelines for writing a successful term paper will be provided during the course. The instructor will provide a list of possible topics, but students are welcome to propose their own. An example of term paper topic could be the following:

“On January 13, 2010 many news outlets reported this breaking news: Google may end its operations in China due to China’s human right violation and cyber attacks. On March 22, 2010 Google closed its internet search service in China and began redirecting its Chinese users to its uncensored search engine in Hong Kong. Evaluate Google’s decision, options, and future development in the China market.”

The final exam will be cumulative, and will consist of a mix of multiple choice and open answer questions. Students will have 1¼ hours to complete the exam, which will be closed book/notes.

GRADING

Grading will be based on class participation, in-class quizzes, team project, term paper, and final exam. Points for course activities will accrue as follow:

Activity	Point
Class participation	150
In-class quiz n. 1	50
In-class quiz n. 2	50
In-class quiz n. 3	50
In-class quiz n. 4	50
Team project	200
Term paper	200
Final exam	250
Total	1000

Final letter grades are assigned as follows. Breakpoints may be adjusted depending on overall class performance.

Point range	Letter grade
970-1000	A+
930-969	A
900-929	A-
870-899	B+
830-869	B
800-829	B-
770-799	C-
730-769	C
700-729	C+
670-699	D+
630-669	D
600-629	D-
0-599	F

PREREQUISITES

This course assumes that students have familiarity with computers, but no in-depth or specific knowledge is required.

FEEDBACK ON INSTRUCTOR PERFORMANCE

At the conclusion of the course students will be requested to provide feedback regarding various aspects of the course through CourseEvalUM (www.courseevalum.umd.edu). CourseEvalUM will be open for students to complete evaluations for fall semester courses during the first half of December. Feedback is confidential and important to the improvement of teaching and learning at the University. While this is useful, it obviously comes too late to address any concern or correct any problems that are occurring during the course. In order to address any concerns during the course, the instructor strongly encourages students to provide feedback throughout the classes, either written or oral. Constructive criticism will be also welcome.

CORE DISTRIBUTIVE STUDIES

This course satisfies the CORE: Interdisciplinary and emerging issues [IE] distributive studies requirement. To see the Student Learning Outcomes for CORE, please visit: <http://www.ugst.umd.edu/core/LearningOutcome.htm>. No one CORE course will address all of the Learning Outcome Goals listed for its category. Some courses may contribute to general education in important ways not directly covered by the learning outcomes listed.

ACADEMIC ACCOMMODATIONS

If you have a documented disability, you should contact Disability Support Services. Each semester students with documented disabilities should apply to DSS for accommodation request forms which they can provide to professors as proof of their eligibility for accommodations. The rules for eligibility and the types of accommodations a student may request can be reviewed on the DSS web site at http://www.counseling.umd.edu/DSS/receiving_serv.html.

RELIGIOUS OBSERVANCES

The University System of Maryland policy provides that students should not be penalized because of observances of their religious beliefs. Students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the responsibility of the student to inform the instructor of any intended absences for religious observances in advance. Notice should be provided as soon as possible but no later than the end of the schedule adjustment period. Prior notification is especially important in connection with final exams, since failure to reschedule a final exam before the conclusion of the final examination period may result in loss of credits during the semester.

ACADEMIC INTEGRITY

The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student, you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://www.studenthonorcouncil.umd.edu/whatis.html>. The University of Maryland is one of a small number of universities with a student-administered Honors Code and an Honors Pledge, available on the web at <http://www.jpo.umd.edu/Info/Students/AcadHonorPledge.aspx>. The code prohibits students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents, and forging signatures. The University Senate encourages instructors to ask students to write the following signed statement on each examination or assignment: "I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment)." If you need further explanation about plagiarism and how to avoid it, please see the library resources at <http://www.lib.umd.edu/guides/honesty.html>. Of particular relevance are the guide at <http://www.lib.umd.edu/guides/honesty.pdf> and the definition of plagiarism at http://www.lib.umd.edu/UES/plag_stud_what.html.

COURSE SCHEDULE AND OUTLINE

The following is a tentative schedule of classes, and may be subject to change due to circumstances unforeseen at the time of planning. Changes, if necessary, will be timely announced by the instructor.

Week	Date	Class activity	Assignments and readings
1	08/30/10	Lecture. Introduction to the Internet	Chapters 1 and 2 of IB ² Sections 1.1 and 1.2 of GoF ³
	09/01/10	Lecture. Before the Internet: analog vs. digital	Chapters 3, 4, and 5 of IB
2	09/06/10	Labor Day – No class	
	09/08/10	Lecture. Basic communication and Local Area Networks	Chapters 6 and 7 of IB
3	09/13/10	Lecture. The early years of the Internet	Chapters 8 and 9 of IB
	09/15/10	Lecture. Internet becomes a global information infrastructure	Chapters 10 and 11 of IB
4	09/20/10	Quiz n. 1 (30 minutes) Class debate on recent news from the Internet world	
	09/22/10	Lecture. Introduction to network protocols: the OSI model. Packet switching	OSI_Model.pdf on BB ⁴ Chapters 12 of IB
5	09/27/10	Lecture. Internet: a network of networks	Chapters 13 and 14 of IB
	09/29/10	Lecture. TCP/IP	Chapters 15, 16, and 19 of IB
6	10/04/10	Lecture. Distributed computing. Domain Name System.	Chapters 17 and 18 of IB
	10/06/10	Tour of UMIACS computing facilities (tentative)	
7	10/11/10	Quiz n. 2 (30 minutes) Class debate on recent news from the Internet world	Team project titles/abstract due
	10/13/10	Lecture. Overview of current Internet applications. Social Networks and Virtual Worlds	Chapters 23, 26, and 27 of IB

² The Internet Book

³ A Gift of Fire

⁴ BlackBoard

8	10/18/10	Lecture. HTML and advanced web technologies	Chapters 24 and 25 of IB
	10/20/10	Hands-on session. Building your online presence	
9	10/25/10	Lecture. Electronic commerce and advertisement	Chapters 33 of IB
	10/27/10	Lecture. Privacy	Chapters 2 of GoF
10	11/01/10	Lecture. Freedom of speech	Chapters 3 of GoF
	11/03/10	Quiz n. 3 (30 minutes) Class debate on recent news from the Internet world	
11	11/08/10	Lecture. Intellectual property	Chapters 4 of GoF
	11/10/10	Lecture. Cyber crime	Chapters 31 and 32 of IB Chapters 5 of GoF
12	11/15/10	Lecture. Impact of technology on the workplace	Chapters 6 of GoF
	11/17/10	Lecture. Evaluating and controlling technology	Chapters 7 of GoF
13	11/22/10	Lecture. Errors, failures, and risks	Chapters 8 of GoF
	11/24/10	Quiz n. 4 (30 minutes) Class debate on recent news from the Internet world	
14	11/29/10	Lecture. Professional ethics and responsibilities	Chapters 9 of GoF Team project reports and slides due
	12/01/10	Team project presentation. Groups 1,2,3	
15	12/06/10	Team project presentation. Groups 4,5,6	
	12/08/10	Last day of class – Review session	
16	12/13/10	Office hours 2-4pm	Term paper due
	12/15/10	Final Exam	