CS 407H: The Evolution of Computing and its Impact on History
Fall 2011

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Office hours: Monday and Wednesday, 10:30 - 11:30 a.m., or by appointment

Class meets: Monday and Wednesday, 9:00 - 9:50 a.m., 9/26/11 - 11/30/11
Location: STAG 237
Credits: 2
Website/Blog: http://www.wkiri.com/comphist/
Mailing list: cs407h@wkiri.com

Textbook: *Jacquard's Web*, by James Essinger; additional readings will be provided.

Description:
This course covers the origins and evolution of computing, beginning with early manual computation and going through today (when we even have computers on Mars!). It follows the series of innovations and discoveries that led to the modern computer, the Internet, the Web, and new computing devices such as tablet computers and smart phones. Along the way we will meet several luminaries of the field, including Charles Babbage, Ada Lovelace, Alan Turing, Claude Shannon, Grace Hopper, John von Neumann, and others. We will discuss the role of computers in issues such as privacy, communication, job automation, warfare, artificial intelligence, and more. We will explore these issues with classroom activities such as mock debates, historical figure impersonation, and alternate history "what if" exercises. Assignments will include investigating other connections between computers and historical events, creative writing, building (or simulating) replicas of devices such as the Enigma machine, and speculating about what the future of computing may hold.

Prerequisites: An interest in learning about the significance of computers in historical context, good writing skills, and a willingness to think creatively.

Objectives: After completing this course, you should be able to:
• Discuss the historical importance of major computing innovations
• Identify key figures from the history of computing and explain their contributions
• List ways in which computing technology shapes your life (activities, habits, expectations)
• Read and understand relevant journal articles (e.g., IEEE Annals of Computing History)
• Create, edit, and comment on blog posts using WordPress

Schedule: (Subject to change; consult the website for readings and the latest schedule)

Date	Topic	Due
Mon., Sept. 26	What is computing? What history do we care about?	
Wed., Sept. 28	Looms and Engines	
Mon., Oct. 3	Babbage and the Analytical Engine	Assignment 1
Wed., Oct. 5	Lovelace, the First Programmer	
Fri., Oct. 7	*Add/drop deadline (by web)* ***Ada Lovelace Day***	
Mon., Oct. 10	Hollerith and the Census	Assignment 2
Wed., Oct. 12	Codes & Ciphers	
Mon., Oct. 17	Turing and Computation	Computers & History paper selection
Wed., Oct. 19	Shannon and Information ***Loebner Prize Competition***	
Mon., Oct. 24	Hopper and Compilers	Assignment 3
Wed., Oct. 26	Electronic Machines	
Mon., Oct. 31	Humans vs. Machines	Assignment 4
Wed., Nov. 2	Artificial Intelligence	
Mon., Nov. 7	Microcomputers and Software	Computers & History paper draft
Wed., Nov. 9	Computers and Property	
Mon., Nov. 14	Communication and Attention	Assignment 5
Wed., Nov. 16	Identity and Privacy	
Mon., Nov. 21	Collaboration	
Wed., Nov. 23	Student choice or guest lecture	Assignment 6
Mon., Nov. 28	Space Exploration	Computers & History presentations
Wed., Nov. 30	The Future of Computing	Computers & History presentations

Note: Final papers are due (electronically) on **Tuesday, Dec. 6, at midnight.**

Grading:

Breakdown:
• 20% Two posts to our class blog
    • Either two class summaries, or a class summary and a reading summary
        • Advance sign-up for class summaries
            • Post summary before the next class
        • Advance approval for reading selection if it isn't one on the syllabus
    • For full credit, each post should:
        • Be 3-5 paragraphs in length (~150-250 words)
        • Capture the content of the class or reading <u>objectively</u>:
            • Class: What topics did we talk about? What activities did we do?
            • Reading: What technology is discussed? What is its historical context?
        • Use good grammar and spelling
    • You can add comments to your posts to express <u>opinions or subjective assessments</u> of the class or reading content.
• 30% 6 homework assignments [generally due on Mondays at start of class]
• 20% In-class activities
• 10% Computers & History presentation
• 20% Computers & History paper (5% draft, 15% final)

Scale: Grades are absolute, not relative. Scores are truncated, not rounded.
A-: 90-93   A: 94-100
B-: 80-82   B: 83-86   B+: 87-89
C-: 70-72   C: 73-76   C+: 77-79
F : 0-59   D: 60-66   D+: 67-69

Submitting assignments: Assignments will usually be submitted electronically via email to wkiri@eecs.orst.edu. You are encouraged, but not required, to also post writing assignments to the class blog, and to comment on other students' posts.

Late work: No late work is accepted, unless by prior arrangement (at least one day before the due date). Late work will incur a 50% penalty.

Extra credit: During the course, there will be opportunities to go beyond the basic course material and earn some extra credit. Each such option will be worth 0.5% of your final grade. You can complete a maximum of 8 of these options (4%), enough to raise your final grade by one category.

Civility: This is a discussion-oriented class, in which we will listen to all comments and opinions with respect, even if we disagree. Disruptive, hostile, offensive, or intimidating behavior will not be tolerated and will be referred to the Student Conduct Program for disciplinary action.

Academic Integrity: All work that you submit should be yours alone. You are welcome to discuss assignments with other students, but you are expected to write and submit your assignments independently. When quoting content from a book or other resource written by someone else, you must properly attribute the source. Please ensure that you are familiar with the OSU Statement of Expectations for Student Conduct:
http://oregonstate.edu/admin/stucon/achon.htm
and the examples of plagiarism available here:
http://oregonstate.edu/instruct/cssa556/CIVHON556.htm

Students with Disabilities:
Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098.

Other Policies:
- You are responsible for completing the assigned reading before class.
- Check your email periodically to stay current with class announcements (via the mailing list).
- Please set your cell phone to "off" or "vibrate". Step outside if you must take a call. No texting during class.

Connecting with other students:
You may like to exchange contact information with other students, in case you miss a class and want to catch up, or discuss material or study together.

_____   _____
Name   Phone/email

_____   _____
Name   Phone/email

_____   _____
Name   Phone/email

Acknowledgements: The Lovelace/Babbage logo used in the header of this syllabus is the excellent work of Sydney Padua, and it is reproduced here with her permission.