

Ada Lives
The (Female) History of Computational Thought
1 credit
M,T,W, R, F: 10-12
Frost 103
Berea College
Berea, KY
Short Term 2009

GSTR 207/CSC 207/HIS 207/WST 207

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Who we are:

Katie is currently a graduate student in Computer Science at the University of Minnesota. She is a graduate of Berea College, with degrees in both Math and Computer Science. In her spare time she enjoys cooking, reading, and playing in the snow. Rebecca is a member of the History Department at Berea College. She is an avid flyfisher and enjoys swimming.

Prerequisites:

There are no prerequisites for this course. You are NOT expected to know anything about computer programming or the history of women. We are interested in having a diverse classroom with students from history, computer science, women's studies, and beyond. You will benefit most from this course if you are interested in women's issues or the development of technology. You are expected to have completed GSTR 110: Writing Seminar I: Critical Thinking in the Liberal Arts as this course is writing intensive.

Course Description:

This course was designed to appeal to a wide range of students. We will be learning about the history of computation through the eyes of women. Some of the topics that will be covered include: female pioneers in computing, history of computing, barriers to women in computing, historical events that have altered women's participation in technology development, and female computer scientists that have made significant research contributions to their fields. We hope that you will be able to take your interests and knowledge and relate them directly to the course topics. We are willing to work with you individually to find topics of interest to you. You will be doing relevant reading on the topics covered in class, more in-depth reading on a topic of your choice, a class presentation, a research paper, several other papers, and regular reading response blogs. This course is primarily a discussion course, so you will be expected to participate substantively on a regular basis.

Why to take this course if you are a Computer Science Major:

You will be able to gain an appreciation for the history of technology and the role that women have played in that history. You will also be expected to explore some research areas that you will not have studied much before and you will be encouraged to learn more about women in the areas that you are most interested in, focusing on the technology.

Why to take this course if you are a Women's Studies Major:

By taking this course, you will be learning about the role of women in the development of technology. Women have played a critical role in many aspects of the evolution of computing and these are often little known and unrecognized. There have also been substantial barriers to women participating in computing. We will be bringing these issues to the forefront and your background in women's studies will assist you in your analysis of these issues.

Why to take this course if you are a History Major:

The history of technology is often overlooked in history courses. We want to offer you a chance to learn more about this history: a history that is constantly changing and expanding as computing changes its face. By studying the history of technology, we hope that you will be better able to understand current trends in the field and be better able to analyze the changes that have occurred over the past 150 years.

Why to take this course if you are none of the above:

This course will expose you to many aspects of women's studies, history, and computer science. It will enable you to understand and analyze many complex issues that women have and are facing in the development of technology. We encourage you to bring in relevant issues that are of interest to you.

Goals and Objectives:

By the end of this class, we want you to be able to analyze and discuss women's roles in the development of technology over the past 150 years. More specifically you will be able to:

- Compare Female Technological Pioneers
- Explain barriers to women in computing careers
- Analyze historical events that have affected women's participation in technology development
- Recognize the contributions of female computer scientists

You will also be responsible for a class presentation and a related paper on a topic relating to the course that is of interest to you

Expectations:

Teaching Methods: As mentioned earlier, this course is primarily a discussion course. While there will be occasional lectures, primarily we will be leading discussions. This course will employ many active learning strategies such as discussion, one-minute-writes, and debates. Please be prepared to be engaged in class.

Student Roles: Students will be expected to substantively contribute to a majority of discussions. To facilitate this, there will be a number of response papers that will help you think through the issues prior to class. Since the class is centered on you, we hope that you will help to lead the class in directions that are of interest to you.

You are expected to complete all homework and to check the course Blackboard site and Wiki, as well as your email, on a daily basis. Students are not expected to bring computers to class except where noted. You will be expected to put at least 3 hours a day into the class (outside of class).

Attendance Policy: Attendance is mandatory. Each student is allowed one excused absence. Subsequent absences (or unexcused absences) will result in the student's grade being lowered. Missing three classes will lead to an incomplete.

Class Atmosphere: We foster an open and positive classroom environment. Putdowns and harassment will not be tolerated and could result in your expulsion from the class (for single or multiple class sessions). By remaining in this class after day one, you are agreeing to treat your classmates and professors with respect and to deal with issues in a professional manner.

Sexual Harassment: Berea College specifically prohibits sexual harassment of students, employees, or visitors, and is committed to investigating and resolving all such complaints. Such conduct will result in disciplinary action up to and including dismissal, whether the offender is faculty, staff, administrator, student, or trustee. The policy applies also to vendors, contractors, or other persons doing business with the College, in which case appropriate recommendations and business decisions will be made. Also prohibited is retaliation through discrimination, intimidation, threat, coercion, or any other means against anyone who has reported sexual harassment or filed a grievance alleging sexual harassment.

Texts and Materials:

Women and Information Technology: Research on Underrepresentation edited by J. McGrath Cohoon and William Aspray. MIT Press, 2006

Unlocking the Clubhouse: Women in Computing by Jane Margolis and Allan Fisher. MIT Press, 2003

Internet readings TBD

Technology-enhanced learning:

Basic Technology Information: As a computer science class, this course will be employing several different types of technology. The course has a Blackboard page which will have a copy of the syllabus and other course resources. You will also each be responsible for a blog. This is a sort of online journal. We want you to be writing in it daily and will be grading it periodically. We will discuss this more in class.

Communication: The instructors can both be reached via email and will hand back homework turned in through Blackboard on Blackboard (paper homework will be handed back in class).

Online Materials: If materials are available online, the instructors will place a link to them on Blackboard.

Electronic Assignments: Most assignments will be placed on the wiki or will be submitted through blackboard. These will be announced in the syllabus, in class, and on Blackboard.

Grading:

Discussion	20%	
Attendance	5%	
Research Paper		
Topic	required (not graded)	
Outline	5%	
Draft	8%	
Final	12%	
Research Presentation	10%	
Industry Research Paper	5%	
Industry Research Presentation		5%
Computer Science Education Paper	5%	
Other Assignments	5%	
Daily Blog	10%	
Debate	10%	

Grading Standard:

A	>96	B-	>80	D+	>66
A-	>92	C+	>76	D	>64
B+	>88	C	>72	D-	>62
B	>84	C-	>68	F	<=62

Policies:

Since this is a Short-Term class, there will be no make-up work or extra credit. Most work will be accepted for 48 hours after the deadline with a penalty of 12 points (one letter grade). Blogs will be considered late if they are posted after the beginning of class. They are not accepted late.

Academic Integrity:

Plagiarism is the use of anyone else's work or ideas without adequate citation. Ideas taken from other people include those from published or unpublished books, articles, websites, TAs, or friends' homework. The best way to avoid plagiarism is to cite ALL your sources! If you are not sure whether or not to cite a source, you should cite it! Simply put, plagiarism is not only cheating, it is stealing because it constitutes theft of someone else's ideas. It's a serious offense, and Berea College takes it seriously. *Plagiarism will not be tolerated!* At the first offense, the student will receive an F for that assignment. At the second offense, the student will fail the course. In addition, ALL offenses of plagiarism will be reported to the Associate Provost for Academic Services as detailed in the Berea College *Student Handbook*.

Special Circumstances:

Students with special needs or circumstances should contact me as soon as possible to make any necessary arrangements. Arrangements may be made to obtain assignment handouts in advance if needed. Other accommodations, including sign language interpreters, large-print exams and private exam rooms can be arranged in cooperation with Student Life.

COURSE SCHEDULE**Week One: History of the Computer****Monday January 5****Outcomes:**

- Students will be familiar with the syllabus and course goals and expectations
- Students will get to know the instructors and fellow classmates
- Students will be motivated to learn more about women's history in relation to computers and technology
- Students will learn about the history of pre-computerized technology
- Students will be able to understand how history will affect what they are able to write about

Activities:

- Introductions/Icebreakers
- Review Syllabus
- Writing Seminar 1: Limitations of History
- History of the Industrial Revolution
- Technology in the Industrial Revolution
- Sign up for meetings on Jan 5 or 6
- Meetings

Assignments:

- Review Syllabus and bring questions to class
- Blog

Tuesday January 6

Outcomes:

- Students will learn more about computer programming, algorithms, and Ada Lovelace
- Students will be able to apply new skills for note-taking
- Students will understand the context in which Ada Lovelace was working

Activities:

- History of the 1840s
- Writing Seminar 2: Note-taking Skills
- Introduction to Programming
- Ada Lovelace
- Meetings

Assignments:

- Due Today
 - One page (single spaced, 12 pt, Arial) on your experience in computing or with computers (bring paper copy to class)
 - Pick a research topic (in conjunction with the instructors)
- Blog

Wednesday January 7

Outcomes:

- Students will gain more knowledge about the pre WWII era and the daily technologies used by women
- Students will learn about suffrage
- Students will be able to construct an outline useful for drafting their papers

Activities:

- History of Suffrage
- Writing Seminar 3: Outlining of Project
- Daily Technology pre-WWII
- Excerpt from the 1900s House (Video)
- Sign up for debates and industry research

Assignments:

- Reading for Jan 8
 - Excerpts from Charles Babbage Institute Interviews (see Blackboard)
- Blog

Thursday January 8

Outcomes:

- Students will discover more information about the first computer and the women who programmed it
- Students will understand the reasoning behind women's involvement with ENIAC from the historical perspective

Activities:

- History of WWII Women
- History of ENIAC
- The Computer and the Skateboard (Video)

Assignments:

- Blog

Friday January 9

Outcomes:

- Students will learn about women's lives Post WWII
- Students will discuss several Post WWII technological inventions that altered the lives of women

Activities:

- History of the Post WWII Women
- Daily Technology Post WWII
- Signup for meetings during the week of Jan 12

Assignments:

- Due Today:
 - Outline of Research Paper
- Blog

Week Two: Women in the Workplace

Monday January 12

Outcomes:

- Students will learn more about the role of women as assistants
- Students will discover how the inventions of certain office technologies altered the role of women in the office
- Students will debate the benefits and drawbacks of being a woman on the ENIAC programming team

Activities:

- History of Women as assistants
- Office Technology
- ENIAC Debates
- Meetings

Assignments:

- Due Today
 - Essay on women's roles on the ENIAC Computer
 - ENIAC Debates
- Blog

Tuesday January 13

Outcomes:

- Students will learn about the entry of women into mainstream workforces, both technical and non-technical
- Students will be able to craft a good first draft of their research paper

Activities:

- Women in Men's Roles in general
- Women in Men's Roles in technical areas
- Writing Seminar 4: Drafting
- Meetings

Assignments:

- Due Today
 - Research Paper Outline
- Blog

Wednesday January 14

Outcomes:

- Students will learn about women in academia and the glass-ceiling concept
- Students will demonstrate their knowledge by debating the Larry Summers speech on women in science
- Students will survey issues in Computer Science Educations

Activities:

- Women in Academia in general
- Women in academia in technical areas
- Summers Debate
- Introduction to issues in CS Education
- Meetings

Assignments:

- Blog

Thursday January 15

Outcomes:

- Students will identify top business women in technical and non-technical fields
- Students will gain an appreciation for the development of the corporate community
- Students will be able to construct a meaningful works cited list

Activities:

- Women as Leaders in general
- Women as Leaders in technology
- History of Business
- Writing Seminar 5: Citations
- Meetings

Assignments:

- Blog

Friday January 16

Outcomes:

- Students will deepen their understanding of barriers to women in corporate culture

Activities:

- Issues in the Workplace Discussion
- Benefits
- Wage Discrepancies
- Outsourcing
- Parental Benefits

Assignments:

- Due Today
 - Research Paper Draft Due
- Blog

Week Three: Technologies and Companies

Monday January 19

NO CLASS

Martin Luther King, Jr. Day

Tuesday January 20

Outcomes:

- Students will demonstrate their knowledge of the corporate culture at their chosen company
- Students will learn about the history of the internet and how it has changed over time

Activities:

- Industry Research Presentations
- The Birth of the Internet
- The Evolution of the Internet
- Meetings

Assignments:

- Due Today
 - Industry Research Presentations
 - Industry Research Report Due
- Blog

Wednesday January 21

Outcomes:

- Students will gain understanding of Assistive and Accessible Technologies

Activities:

- Industry Research Presentations
- Assistive Technology
- Accessible Technology
- Meetings

Assignments:

- Blog

Thursday January 22

Outcomes:

- Students will learn about the electronic discrepancies in and outside of the US
- Students will compare the digital divide to similar divides (health insurance)
- Students will gain an understanding of fundamental concepts in Human-Computer Interaction

Activities:

- The Digital Divide
- Demographics and the Digital Divide
- Similar Discrepancies (health insurance, education)
- Human-Computer Interaction
- Meetings

Assignments:

- Blog

Friday January 23

Outcomes:

- Students will learn more about the history of robotics through discussion, lecture, and the reading of the play RUR
- Students will get to experience robotics hands-on (LEGO Mindstorms and Sony AIBOs)

Activities:

- History of Robotics
- RUR Reading
- Introduction to Robotics
- Robotics Activity

Assignments:

- Due Today
 - Research Paper Revision
- Blog

Week Four: Where are we going?

Monday January 26

Outcomes:

- Students will understand the ties feminism and technology have
- Students will analyze the difference between gender and sex
- Students will determine the effect of reproductive technologies on women

Activities:

- Feminism and Technology
- Gender vs. Sex
- Reproductive Technologies

Assignments:

- Blog

Tuesday January 27

Outcomes:

- Students will present their research papers and demonstrate their knowledge

Activities:

- Research Presentations
- Meetings

Assignments:

- Due Today
 - Research Presentations
 - Draft of Opinion paper on CS Education
- Blog

Wednesday January 28

Outcomes:

- Students will present their research papers and demonstrate their knowledge

Activities:

- Research Presentations

Assignments:

- Due Today
 - Research Presentations
- Blog

Thursday January 29

Outcomes:

- Students will imagine the future of Computer Science Education
- Students will judge current changes in curricula and debate their effects
- Students will learn about the changes in cyberspace since women have become more involved

Activities:

- Discussion of Computer Science Education and changes that should be made
- How has cyberspace changed due to the involvement of women?

Assignments:

- Blog

Friday January 30

Outcomes:

- Students will imagine women's role in the future of technology
- Students will evaluate the course and their instructors
- Students will extract the major issues and points from the course

Activities:

- Future for Women in Technology
- Course Evaluations
- Instructor Evaluations
- Concluding Activities.

Assignments:

- Due Today
 - Course Conclusions (one page, single spaced, 12 pt, Arial)
 - Final Revisions of papers