

COURSE SYLLABUS

PREFIX & NUMBER: ESOC 210

TITLE: The History of Hacking and Open Source Culture

CREDITS: 3.0 semester credits

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COURSE DESCRIPTION:

This course is designed to provide students with an overview of hacking history and open source culture beginning with an analysis of the first MIT hackers in the late 1950's and moving on to examine the social, economic, and political implications of hacking and technology in our own contemporary situation. Using this foundation, the course explores the works, lives, and developments of the great early hackers and their influence on what has now become known as open source software. Finally, we will learn about the open source community itself and discover how this movement has impacted culture, technology and society. We will not be doing any programming in this course but we will learn about hacking and open source culture from a historical, social and cultural perspective.

PREREQUISITE/COREQUISITE: None

ACADEMIC POLICIES & PROCEDURES:

All academic and non-academic policies and procedures are available to students in the University of Arizona Catalog <http://catalog.arizona.edu/2013-14/policies/aaindex.html> For information on attendance, academic integrity, plagiarism, copyright infringement, or any other academic and non-academic policy or procedure, please refer to the University of Arizona code of academic integrity <http://deanofstudents.arizona.edu/policies-and-codes/code-academic-integrity>

COMPETENCY OBJECTIVES:

Upon completion of this course, the student will be competent in these areas and will have knowledge to:

- Discuss the relevance of technology and open source software in society.
- Explore the interdependent relationship between hacking and open source software.
- Evaluate the merits and demerits of open source software (including copyright issues).
- Explain the history, concepts, and terms related to hacking and open source culture.
- Analyze the importance of early hackers and their influence on software development.
- Assess the influence of early programming and developments on today's technological and cultural environment.
- Understand and appreciate the role and impact of open source and open access as alternatives to traditional intellectual property law and policy.
- Identify and critically evaluate issues that relate to how people share all kinds of information including news, data, music, photographs, code, and texts.

INSTRUCTIONAL METHODS:

This course is conducted including class assignments, quizzes, and exams through D2L. Enrolled students will be given accounts by the start of the semester.

During this session, I will provide readings, presentations, lectures, and perhaps some videos to augment our discussions. We will engage ourselves with the material primarily in the discussion forums of D2L. However, as the course unfolds, we may engage and utilize other instructional methods such as case studies, historical analysis, software and social media exercises, brainstorming, problem-solving, and individual projects. But again, our primary communication and educational platform will be D2L.

Note: Information about using D2L is available at <http://sirls.arizona.edu/resources/computing#d2l>. If you have trouble with D2L, you can contact the D2L Support Staff (d2l@email.arizona.edu). Send the D2L staff an email message explaining exactly what is happening.

I plan to post one lecture per week. These lectures will serve as an introduction to the week's readings and to clarify or augment key concepts. You will find them posted in the "Content" area of the D2L course.

Discussion/participation: There will be five required online discussion forums for this class. Online discussions of the content of the course will take place in these forums. The participation requirement for this course requires

active participation in these discussions (you'll find the rubric for these discussions posted in D2L).

The discussions will be based on prior reading and lecture material. The forum will be open for two weeks before it closes so everyone will have enough time to participate and make original and follow-up posts. There is no way to open a discussion for just one person so make sure you post before the forum closes.

To receive full credit for discussions, be sure to post one original comment answering the discussion questions and then two thoughtful replies. This is the minimum, however, so be sure to see the rubric for what qualifies as a thoughtful reply and to see what you need to accomplish full credit.

Note: I do not always post announcements on the D2L Course Home page. Most often, I post announcements in the Main discussion forum. That way, people can reply to the announcement if they have questions or need clarification. So, please be sure to check any postings to the "Main" discussion forum (or the other Administrative discussion forums, for that matter).

I have a couple of small requests with regard to the discussion forums. These forums will be our main mode of communication in this course. In order to keep this communication more or less organized, I will set up different forums for different purposes. For example, in addition to a forum for each lecture, I will also set up a "Greetings" forum for you to describe who you are and why you are taking this particular course. So, my first request is that you try to direct your comments to the appropriate forum. My second request is that you use email, instead of the forums, for any personal correspondence.

Requirements for the Course:

To succeed in this class, 4-6 hours a week of study time are needed in order to meet course expectations. These hours should be spent on reading texts, completing class assignments, writing papers, researching for new information, or thinking about course content. College-level reading and writing abilities are assumed. If you need to improve your college-level writing skills, be sure to visit the Think Tank on campus.

University of Arizona Libraries:

Accessing the University of Arizona Libraries resources may be done by visiting one of the libraries on campus, or by accessing the UA library at

<http://www.library.arizona.edu> You will find articles and databases, subject guides, research and writing help, along with physical and digital books to guide you in this course.

GRADE SCALE:

Grade	Percentage	Rating
A	90-100%	Excellent
B	80-89%	Very Good
C	70-79%	Average
D	60-69%	Below Average
F	0-59%	Unsatisfactory

TEXTBOOKS:

Required (Not Available for purchase at the University of Arizona Bookstore):

Seng, Dave, *Hacking and Open Source Culture: Readings of the Ideas, Social Movements, and People Who Shaped the Information Society*. Cognella Press, 2018. For a less expensive price, purchase the book directly from Cognella: <https://students.universityreaders.com/store/>

Required Texts (Available for purchase at the University of Arizona Bookstore):

Steven Levy, *Hackers: Heroes of the Computer Revolution, 25th Anniversary Edition*. O'Reilly Media, 2010.

Walter Isaacson, *Innovators: How a Group of Hackers, Geniuses, and Geeks Created the Digital Revolution*. Simon & Schuster; 2014

Raymond, Eric. *The Cathedral and the Bazaar: Musings on Linux and Open Source by an Accidental Revolutionary*. O'Reilly Media, 2001

Gabriella Coleman, *Coding Freedom: The Ethics and Aesthetics of Hacking*. Princeton University Press, 2012.

Additional articles, videos, and Web pages will be assigned.

Selected Bibliography

Not required but will support your understanding of concepts in the course:

Garrett Hardin, "The Tragedy of the Commons." *Science* 162:3859 (13 December 1968): 1243-1248.

Lawrence Lessig. *The Future of Ideas: The Fate of the Commons in a Connected World*. Vintage, 2002.

Glyn Moody, *Rebel Code: Linux and the Open Source Revolution*. Basic Books, 2002.

Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press, 1990.

Joseph E. Stiglitz, "Knowledge as a Global Public Good," pp. 308-324, in Inge Kaul, Isabelle Grunberg, and Marc Stern, eds. *Global Public Goods: International Cooperation in the 21st Century* Oxford University Press, 1999.

Peter Suber. *Open Access*. MIT Press, 2012.

Steven Weber, *The Success of Open Source*. Harvard University Press, 2005.

John Willinsky, *The Access Principle: The Case for Open Access to Research and Scholarship*. MIT Press, 2009.

FINAL GRADE ELEMENTS:

DESCRIPTION	POINTS	FINAL GRADE %
<i>Quiz 1</i>	10	5%
<i>Quiz 2</i>	10	5%
<i>Quiz 3</i>	10	5%
<i>Quiz 4</i>	10	5%
<i>Works cited (research paper)</i>	10	5%
<i>Rough Draft (research paper)</i>	10	10%
<i>Final Draft (research paper)</i>	50	10%
<i>Critical Analysis paper 1</i>	50	5%
<i>Critical Analysis paper 2</i>	50	5%
<i>Critical Analysis paper 3</i>	50	5%
<i>Midterm</i>	20	10%
<i>Timeline</i>	20	10%
<i>Final Exam (covers entire course)</i>	20	10%
<i>Participation (five discussion forums and glossary forum)</i>	20	10%
Total	340	100%

Any class assignments that are not in the final grade elements, such as the infographic, will fall under the participation category.

Note: Some informal class activities, exercises, and projects will be assigned as we go along. These activities will be graded under the participation category along with the discussions. These learning activities are designed to help you better understand class content.

Be sure to see the class outline below for other assignment due dates.

Assignment details and grading policy:

For this class, assignments will consist of readings, class discussions, written

papers and various online projects. You will need to do research for all papers. Written papers are expected to use MLA citation style format. If you need to learn MLA citation format, go here:

<https://owl.english.purdue.edu/owl/resource/747/01/>

I will post more information about MLA citation format in D2L. Also, I will post details for the critical analysis paper, timeline, in D2L.

Research Paper: The research paper will be 4-5 pages long and utilize five academic resources. It is to be double spaced using 12 pt. Times New Roman font. It can be a research paper about a particular hacker we are reading about and his or her influence on the development of future software and impact on the broader computer community. Or ... you could research and describe a certain game or software tool we are learning about in class - perhaps one of the early games or software programs mentioned in Levy's text. If you think of something else you would like to write about, send me an enquiry via email and I will examine the topic with you and discuss how it relates to the class content. Just be sure it relates directly to what we are learning in class. And be aware, you must use scholarly, academic resources.

See the course outline, below, for the due dates of these papers.

As stated, the research paper will be 4-5 pages long and will use five scholarly sources. If you don't know the difference between scholarly and popular level resources, take a look at this tutorial:

http://www.library.arizona.edu/tutorials/scholarly_sources/

The definition of a scholarly journal is: "a journal that requires an article to be subjected to a process of critical evaluation by one or more experts on the subject, known as referees, responsible for determining if the subject of the article falls within the scope of the publication and for evaluating originality, quality of research, clarity of presentation, etc... synonymous with *juried* and *refereed*". A "peer reviewed" journal is a scholarly journal. You may use scholarly books as well, but a portion of your paper should draw upon scholarly articles. News articles are not considered scholarly. If you have any questions about this, feel free to consult a librarian or myself.

The research paper will have due dates for the works cited, rough draft, and final paper. The final paper will include the works cited. The rough draft will include in-text citations. Further directions about the the works cited and rough draft will be posted on D2L.

This assignment will be submitted into the assignments section in D2L.

How to avoid plagiarism.

In college courses, you're continually engaged with other people's ideas. You might read them in texts, hear them in lectures, discuss them in class, and incorporate them into your own writing. It's important that you give credit where credit is due. When you do not properly cite your sources, you are committing plagiarism. Always use in-text parenthetical citation when you use someone else's ideas and reference all your sources in a proper works cited page.

What is plagiarism?

Plagiarism is using other people's ideas and words without clearly acknowledging the source of that information. It can be intentional, but you might do it without even realizing it.

There can be serious consequences for plagiarizing, from getting a zero on a paper to a full-blown lawsuit. But, don't worry! Here's how you can learn what needs to be cited and how to avoid plagiarism.

To avoid plagiarism, you must give credit whenever you:

- use another person's idea, opinion, or thought.
- use any information that isn't common knowledge.
- quote or paraphrase another person's actual spoken or written words.

Further information regarding plagiarism can be found here:

<http://new.library.arizona.edu/research/citing/plagiarism>

A note on parenthetical citation (From Online Writing Lab):

Basic in-text citation rules

In MLA style, referring to the works of others in your text is done by using what is known as **parenthetical citation**. This method involves placing relevant source information in parentheses after a quote or a paraphrase.

General Guidelines

- The source information required in a parenthetical citation depends (1.) upon the source medium (e.g. Print, Web, DVD) and (2.) upon the source's entry on the Works Cited (bibliography) page.
- Any source information that you provide in-text must correspond to the source information on the Works Cited page. More specifically, whatever signal word or phrase you provide to your readers in the text, must be the first thing that appears on the left-hand margin of the corresponding entry in the Works Cited List.

Grading policy: All written assignments will be graded on completion of the assignment requirements, neatness, and writing mechanics (spelling, sentence structure, punctuation, etc.). Again, college-level reading and writing abilities are assumed. If you need help with writing or would like to improve your writing skills, see <http://www.library.arizona.edu/search/research-writing/index.html>

Another helpful resource is the writing lab found on campus at the “think tank” <http://thinktank.arizona.edu/>

Written papers will be graded on:

- 50% - **Content Development:** Follows assignment requirements and all elements of the assignment are present in the paper. Uses at least five scholarly sources / content is comprehensive as major points are clearly stated and discussed/ paper length requirements are met/ properly cites all sources within the paper using MLA citation (use of in-text, parenthetical MLA citation)/ all sources used are stated on an MLA style works cited page/ attention is given to correct formatting details.
- 20% - **Organization:** topic sentences guide the reader through the discussion points/ ideas flow logically and are fully developed / paragraphs are well formed and developed/transitions are smooth, clear, and precise.
- 30% - **Writing Mechanics:** appropriate college level writing is demonstrated/ correct spelling, grammar, sentences structure, and punctuation/ tone and vocabulary are academic in nature/ words used are precise and unambiguous.

Quizzes and exams: We will have four quizzes, a midterm, and one final exam all taken on D2L. The dates for the quizzes and exams are found in the course outline below.

Discussion forums: As noted earlier, the rubric for the discussion portion of the class will be posted in D2L. Read the rubric carefully paying attention to the participation section. I believe that effort equals success in pretty much everything we do. That means in this class, minimal effort will result in a minimal grade. You will write one original post answering a question and

make at least two thoughtful replies. The rubric will help guide you in what qualifies as a thoughtful and articulate post and reply.

Glossary assignment – We will encounter some technical terminology in this class related to hacking and computer programming. Part of mastering any field of study is to understand the key terms and concepts related to that field. This is no different for our course together. As a class, we will build a community glossary we can use to understand the words and terms we encounter in our readings. The goal is that by understanding the terms we encounter, we will be better able to digest and synthesize the information we are working with. This is a participatory class project and will be factored into your class participation grade. I'll have more details about how this will work in D2L.

LATE WRITTEN ASSIGNMENTS: For each day a written assignment is late, it will be reduced by five points.

Quiz and exam deadlines are firm. This is because I view quizzes and exams as teaching opportunities. I will review each quiz and exam with the class so, be sure to take the quizzes and exams on time. If, you miss an exam due to a health issue, you will need to provide a note from your doctor.

Note - As the class progresses I may find it necessary to adjust our daily schedule (see below). This change can happen for a variety of reasons. I like to monitor and adjust the course to meet your educational goals. When this happens, I will provide assignments and expectations in class. Always feel free to ask me if you have any questions or need any concerns addressed, I'm happy to help any way I can.

As the course includes in-class discussion, it is vitally important for us to create an educational environment of inclusion and mutual respect. I will do my best to respect you, and I hope to foster a virtual classroom of mutual respect for one another.

COURSE OUTLINE

Note: additional readings will be posted as needed to augment certain ideas and concepts and will be announced in D2L. Also, discussion questions may change as the course develops, but if they do, I'll let you know in D2L. Also, after gaining a foundational knowledge of the development of computing and open source software, we'll view some films that speak to both the technical and social sides of computing.

Assignments are due Sunday night at midnight of each week. The course schedule begins on Monday and ends on Sunday. Assignment due dates are also posted in D2L.

Week 1 (Week of 8/26) The Tech Model Railroad Club

- Topics: discuss the development of hacking in the very first hacking communities in America. It all started at MIT in the late fifties. We'll discuss the famous tech model railroad club, the hacker ethic, one of the first computer games called spacewar, and the foundational figures of Ricky Greenblatt and Bill Gosper.
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - Reading: Chapter 1 of Hackers: Heroes of the computer revolution
 - Reading: Chapter 2 of The Innovators
 - Reading: The Early History of Software, Hacking and Open Source Culture
 - *Review key concepts in the readings. Know – the significance of the TMRC and the significant members of this early hacking community. Review concepts such as assembler/assembly language/machine language – we'll develop a glossary in class that we can share in true hacker ethos. Also understand the tenets of the hacker ethic as Levy presents it. As needed, utilize UA library for resources/research to complete this assignment.*
 - Questions we might explore in class - describe/analyze Levy's conception of the hacker ethic. Is it still relevant today? Are there examples of it in today's digital culture?
- Online assignment: post introduction to D2L

Week 2 (Week of 9/2) The Hacker Ethic

- Topics: The power of imaginary literature on the hacker community. The significance of the Community Memory Project. BASIC, FORTRAN, other commands. The concept of the self as understood in the hacker community. Why was hacking considered a purer form of democracy. Intellectual property, OSS, and open access.
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - Reading: chapter 2 of Hackers: Heroes of the computer revolution
 - Reading: chapter 3 of The Innovators
 - Reading: The Chip and Its Impact, 1965 - 1975 Hacking and Open Source Culture

- o *Be ready to contribute to our glossary. Review key concepts in our readings. Know – the roles of Lee Felsenstein and Bob Albrecht in the early hacker community. Understand the role of the Homebrew Computer Club in the development of the hacker movement and its political underpinnings. Do we see seeds of OSS? As needed utilize the UA library for resources/research to complete this assignment.*
 - o Questions we might explore in class - What eventually became of the first TMRC hackers? List pros and cons of the hacker ethic. Was Bill Gates correct in his understanding of intellectual property?
- Online Assignments: Glossary, discussion 1.

Week 3 (Week of 9/9) Spacewar

- Topics: The Wizard and the Princess, The Brotherhood, The Third Generation, Summer Camp
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Homework Assignment
 - o Reading: chapter 3 of Hackers: Heroes of the computer revolution
 - o Reading: Workstations, UNIX, and the Net, 1981-1995, Hacking and Open Source Culture
 - o Read chapter 4 of The Innovators
 - o *Review key concepts listed in D2L*
 - o How is intellectual freedom served with OSS. Should source code be closed or open? Are there good reasons for strict copyright policy?
- Online assignments: Submit works cited to assignment folder. Submit Critical Analysis 1 to assignment folder.

Week 4 (Week of 9/16) Greenblatt and Gosper

- Topics: describe what happened to the hacker ethos and movement. Has it changed? Has it improved?
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading assignment:
 - o Reading: Chapter 4 of Hackers: Heroes of the computer revolution
 - o Reading: The Internet, Hacking and Open Source Culture
 - o Reading: Chapter 5 of The Innovators
 - o *Review each question or set of questions as directed immediately below. Prepare and submit a response and post it in D2L:*
 - o Describe and then evaluate the nature of information

- licensing and give examples involving copyleft and the creative commons.
 - o Describe and evaluate the various academic perspectives on aspects of the open society including open-access institutional repositories and massive online open courses (MOOCS).
- Online assignments: Quiz 1

Week 5 (Week of 9/23) The Midnight Computer Wiring Society

- Topics: This week we'll take a glimpse at our contemporary information environment and the "open society". We've just begun to work on these ideas but we'll dig in a little more. We've seen all of these ideas foreshadowed in Levy's text.
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - o Reading: Chapter 5 of Hackers: Heroes of the computer revolution
 - o Reading: Hackers: Loving the Machine itself, Hacking and Open Source Culture
 - o Reading: Chapter 6 of The Innovators
 - o *Review each question or set of prompts as directed immediately below. Prepare and submit a response and post it in D2L:*
 - o Describe the evolution of hackers, hacking, and hactivism. Give examples of each.
 - o Present and describe what open source code is and explain the history of Linux.
 - o Describe and present the Open Access movement and its impact on scientific data, scholarship, and education.
- Online assignments: Discussion 2

Week 6 (Week of 9/30) Winners and Losers

- Topics: Who are the winners and losers? Possible flaws in the hacker ethic? The hacker world view. Was it political naiveté that lost it for the MIT hackers? Can hacker ideals survive in the world today?
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - o Reading: Chapter 6 of Hackers: Heroes of the computer revolution
 - o Reading: Don't Get Mad, Get Open, Hacking and Open Source Culture
 - o Reading: Chapter 7 of The Innovators

- o *Review key concepts in the readings. Also understand the tenets of the hacker ethic as Levy presents it. As needed, utilize UA library for resources/research to complete this assignment.*
- o Questions we might explore in class – re-examine levy's conception of the hacker ethic. In light of this chapter did it change? Does it need to?
- Online assignments: Critical Analysis 2, Rough draft with works cited page and proper in-text citation.

Week 7 (Week of 10/7) Life

- Topics: What was life like inside the MIT labs? What was going on in society outside of the labs? What was the hacker 'gospel'?
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - o Reading: Chapter 7 of Hackers: Heroes of the computer revolution
 - o Reading: Essence of Distributed Work: The Case of the Linux Kernel, Hacking and Open Source Culture
 - o Reading: Chapter 8 of The Innovators
 - o *Review key concepts in the readings. As needed, utilize UA library for resources/research to complete this assignment.*
 - o Questions we might explore in class – how did financial concerns impact the hacking community at MIT?
- Online assignments: Quiz 2, Discussion 3

Week 8 (Week of 10/14) Revolt in 2100

- Topics: What was the power of imaginary literature for hackers? Why did these hackers want to combine technology with politics?
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - o Reading: Chapter 8 of Hackers: Heroes of the computer revolution
 - o Reading: Critical Tensions in the Evolution of Open Source Software, Hacking and Open Source Culture
 - o Reading: Chapter 9 of The Innovators
 - o *Review key concepts in the readings. As needed, utilize UA library for resources/research to complete this assignment.*
 - o Questions we might explore in class – what was the impact or importance of the community memory project?
- Online assignments: Midterm posted in D2L

Week 9 (Week of 10/21) A short investigation of net neutrality

- Topics: What everyone gets wrong about net neutrality, policy issues regarding net neutrality
 - Readings will be posted in D2L
 - Online assignments: work on your upcoming timeline or critical analysis, participate in discussion 4

Week 10 (Week of 10/28) The Homebrew Computer Club

- Topics: The main figures involved in the homebrew computer club and their significance in computing history. What did these hackers seek to accomplish? Did they in fact succeed?
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - Reading: Chapter 10 of Hackers: Heroes of the computer revolution
 - Reading: How Deep is Your Love? On Open Source Hardware, Hacking and Open Source Culture
 - Reading: Chapter 10 of The Innovators
 - *Review key concepts in the readings. As needed, utilize UA library for resources/research to complete this assignment.*
 - Questions we might explore in class – what was the significance of the homebrew computer club to the development of Apple Computers? What kind of synergy existed between the members of the homebrew computer club and how does that reflect open source values and commitments?
- Online assignments: timeline. Quiz 3 posted on D2L

Week 11 (Week of 11/4) Tiny BASIC

- Topics: What is BASIC and why is it significant to the development of the computer? What role did Paul Allen and Bill Gates have with the development of BASIC? The famous “software flap” of Bill Gates and issues of intellectual property rights.
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - Reading: Chapter 11 of Hackers: Heroes of the computer revolution
 - Reading: Chapter 1 of Cathedral and the Bazaar
 - *Review key concepts in the readings. As needed, utilize UA library for resources/research to complete this assignment.*
 - Questions we might explore in class – what is the proper understanding of intellectual property as it relates to our digital world?

- Online assignment: Final draft: research paper due. Post in assignment folder.

Week 12 (Week of 11/11) Woz

- Topics: Who is Steve Wozniak and what is his significance to the computer world? Why is an entire chapter devoted to Wozniak?
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - o Reading: Chapter 12 of Hackers: Heroes of the computer revolution
 - o Reading: Chapter 2 of Cathedral and the Bazaar
 - o *Review key concepts in the readings. As needed, utilize UA library for resources/research to complete this assignment.*
 - o Questions we might explore in class – What did Wozniak do to change how the computer was received in society and culture? What do Greenblatt and Wozniak have in common?
- Online assignment: Critical Analysis 3 due. Submit to assignment folder.

Week 13 (Week of 11/18) Secrets

- Topics: The development of the early computing companies. What happened to the hacker ethic?
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - o Reading: Chapter 13 of Hackers: Heroes of the computer revolution
 - o Reading: Chapter 3 of Cathedral and the Bazaar
 - o *Review key concepts in the readings. As needed, utilize UA library for resources/research to complete this assignment.*
 - o Questions we might explore in class – as the early computer companies developed, how did the impulse to maintain market share influence the hacker ethic? Can or will the hacker ethic survive?
- Online assignments: Discussion 5, Quiz 4 posted on D2L

Week 14 (Week of 11/25) The Wizard and the Princess

- Topics: Ken Williams and early computer games. What influence did gaming have on the computer industry?
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:

- o Reading: Chapter 14 of Hackers: Heroes of the computer revolution
- o Reading: Chapter 4 of Cathedral and the Bazaar
- o *Review key concepts in the readings. As needed, utilize UA library for resources/research to complete this assignment.*
 - o Questions we might explore in class – what was the impact or importance of Ken and Roberta Williams on the computing industry?
- Online assignments: No assignments. Enjoy your Thanksgiving break.

Week 15 (Week of 12/2) The Brotherhood

- Topics: What happened to the hacker ethic? How does our basic commitments and understanding of the world affect what we do and the projects we set ourselves about? The hacker ethic is a result of basic commitments and understandings.
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - o Reading: Chapter 15 of Hackers: Heroes of the computer revolution
 - o Reading: Chapter 5 of Cathedral and the Bazaar
 - o *Review key concepts in the readings. As needed, utilize UA library for resources/research to complete this assignment.*
 - o Questions we might explore in class – what was the “the brotherhood” and its impact to the developing computer industry?
- Online assignments: Study for upcoming final!

Week 16 (Week of 12/9) The Third Generation

- Topics: Revisit issues of intellectual property and the hacker ethic. Tie up loose ends. Review for the final.
- Instruction: lecture, readings, discussion, additional material posted on D2L as needed.
- Reading Assignment:
 - o Reading: Chapter 16 of Hackers: Heroes of the computer revolution
 - o Reading: Afterword in Cathedral and the Bazaar
 - o *Review key concepts in the readings.*
- Online assignment: Take final posted on D2L. Final will be on 12/13.

