

History of American Invention
Section 001
Dr. Jason Krupar
15 HIST 3019
Fall Semester 2019
University of Cincinnati, McMicken College of Arts and Science, Department of
History
McMicken 354
Tuesday-Thursday, 12:30-1:50 pm
Office hours: 2-3 pm Tuesday and Thursday or by appointment
Office: McMicken 310E, 556-3021, kruparjn@ucmail.uc.edu

This class provides students an opportunity to study the development of invention, technology and engineering in the United States from the colonial period to the modern era. It considers the intertwining social, economic, and political issues that influenced technology policy choices as the nation developed. The class examines the methods used by scholars to explore American technological growth.

This course requires the following books:

Cassidy, John, *dot.com: How America Lost its Mind and Money in the Internet Era*, Perennial, 2003.

Cowan, Ruth Schwartz, *A Social History of American Technology*, Oxford University Press, 2018.

Pursell, Carroll, Jr. (ed.), *Technology in America: A History of Individuals and Ideas*, MIT Press, Third Edition, 2018.

Sinclair, Bruce, *Technology and the African-American Experience*, MIT Press, 2004.

In addition, there will be additional articles/chapters from other sources that will be provided via the class Black Board site as pdfs.

Strategies for Reading History:

History is not just about learning facts and dates. It is also about understanding how and why things happened. So do not get bogged down in facts and dates at the expense of understanding the larger picture, the context, in which events took place. You will need to ask yourself throughout this course a series of questions; what is the historical significance of this person, this decision, and these events. It is not untypical for history readings to provide you more information than you need to remember. Historians include details to make their cases more persuasive or memorable. Your goal is not to memorize every single fact, but rather to develop an appreciation for the historical context being presented to you. Most historical stories are complicated affairs and not the neat one hour presentations you might find on The History Channel. History courses involve more

reading than you are likely use to, so pay close attention to the documents you will be reading and your time. Also keep in mind that doing history means offering interpretations of past events—this is what historians do and why history can be so fascinating. Historians can tell different stories, come to conflicting conclusions, or place emphasis on different evidence all while analyzing the same event, person, or decision. So do not be surprised about inconsistencies that you might find in your readings. Instead, make note of these, ask yourself how these came to be, and be prepared to talk about them in class.

Student Learning Outcomes:

1. Understand the roots of American innovation, the distinctiveness of American technology, and the development of concrete technological innovations and technology policy over time.
2. Understand the establishment of the American profession(s) of engineering in its modern forms.
3. Master the reading of scholarship by contemporary historians, including the substance and analyses of that scholarship.
4. Master the reading of original sources, understanding their importance in documenting the past and as evidence for current scholarship.
5. Master skills associated with historical thinking, which analyzes change over time and clarifies the importance of place as well as period to understanding the past.

Course Requirements:

The requirements for this course include the following:

1. **One Comprehensive essay examination worth 25 percent of the final grade.**
2. **One full twelve page paper with bibliography and citations worth 30 percent of the final grade.** Your paper must be a minimum of twelve, full, double-spaced pages—this does not include your title page or required bibliography. **Your research paper must relate to the development of a technology/engineering innovation, technology/engineering policy or inventor/innovator from 1870 to the 2000. Your paper must explain the socio-economic and cultural implications of your topic upon American society.** The paper must include a clearly stated thesis and conclusion, footnotes/endnotes/parenthetical in Chicago Manual of Style, MLA or APA, and bibliography in a recognized format. You are to avoid using first person perspective/narrative when writing your paper. **Your paper must incorporated three primary and three secondary sources. Your paper must be submitted to SafeAssign via Black Board and a paper copy submitted at the start of class on the assignment due date.**

3. **Three book review search assignments worth 15 percent of the final grade.** Students are required to collect, print, and turn into class three book reviews (3 reviews per book) of the three of the class texts. The book reviews must come from scholarly/academic history journals. **These will be collected every Tuesday during the semester. You may only turn in one set of reviews per week. Book reviews may be found using the JSTOR data bank available via the UC Library online system, <https://guides.libraries.uc.edu/az.php?q=jstor>.**
4. **Three historiography essays worth 20 percent of the final grade.** Students are required to write three book historiography essays, three full pages in length, that include citations when appropriate, for three of the five required course texts. You are expected to incorporate into your essays criticisms or praise from your three collected book review assignments. You will provide your own insights into the book, your evaluation of its strengths and weaknesses along with supporting evidence. You are to avoid using first person perspective/narrative when writing your reviews. **These will be collected every Thursday during the semester. You may only turn in one per week.**
5. Students are expected to attend class and to be prepared to discuss assigned readings. **Attendance, discussion and randomly assigned homework assignments represent 10 percent of the final grade.**

NOTE: WIKIPEDIA IS NOT AN ACCEPTABLE SOURCE. STUDENTS ARE ONLY PERMITTED TO USE INTERNET SOURCES THAT ARE .EDU, .ORG, .GOV AND/OR MAJOR NEWSPAPER/MAGAZINE SOURCES. ALL OTHER SOURCES ARE UNACCEPTABLE AND WILL BE REJECTED BY THE INSTRUCTOR RESULTING IN SEVERE PENALTIES ON PAPERS

NOTE: All assignments are expected to be turned in on time. If you fail to meet an assigned deadline and have not discussed beforehand with the instructor why you cannot fulfill the assignment on time, you will be penalized a half-grade for every day your paper is late.

Students are expected to attend all class periods, to arrive on time, and to act in a mature fashion. Students who repeatedly disrupt class will be asked to leave. If you need to leave class in the middle of a lecture or examination you are expected to ask the instructor permission otherwise you will be penalized for disrupting class time. Students with excessive absences will need to meet with the instructor. Smart phones and other electronic devices will be turned off during class time unless authorized beforehand by the instructor. Computers may only be used in class for note taking, all other uses will be reprimanded.

Posting of Grades: Grades will not be posted via Black Board. You are encouraged to schedule an appointment with the class instructor to review your grades either during office hours, or if needed outside those hours. The course instructor uses an up-to-date Excel spreadsheet with formulas that can provide you an approximate evaluation of your performance in class at the time of the meeting. The instructor does not believe it is appropriate for a third-party outside contractor to have access to students' grades.

BoK Coding: HP & TI

Transferable Skills: Beyond the information presented, in this history course you will learn to:

- Organize and manage diverse and complex information
- Express strong and persuasive evidence-based arguments in writing and speech
- Build unparalleled research skills through deep and broad inquiry
- Explore the complexity of the human experience across time and space
- Use the lessons of the past to understand the present

These are valuable transferable skills that will make you highly adaptable in a rapidly changing global economy, and make you an astute participant in politics and society. And, of course, you will have the wisdom that comes with learning how we got to this moment in history so that you are better prepared to interpret the extraordinary complexity of the present and future.

Americans with Disabilities Act: Students desiring a reasonable accommodation under the Americans with Disabilities Act must contact the instructor immediately to discuss their needs. Failure to notify the instructor in a timely manner of the need for a reasonable accommodation may hinder the college's ability to assist students in successfully completing the course.

Title IX: Title IX is a federal civil rights law that prohibits discrimination on the basis of your actual or perceived sex, gender, gender identity, gender expression, or sexual orientation. Title IX also covers sexual violence, dating or domestic violence, and stalking. If you disclose a Title IX issue to me, I am required forward that information to the Title IX Office. They will follow up with you about how the University can take steps to address the impact on you and the community and make you aware of your rights and resources. Their priority is to make sure you are safe and successful here. You are not required to talk with the Title IX Office. If you would like to make a report of sex or gender-based discrimination, harassment or violence, or if you would like to know more about your rights and resources on campus, you can consult the website www.uc.edu/titleix or contact the office at 556-3349.

Counseling Services: Clifton Campus Students have access to counseling and mental health care through the University Health Services (UHS), which can provide both psychotherapy and psychiatric services. In addition, Counseling and Psychological Services (CAPS) can provide professional counseling upon request; students may receive

five free counseling sessions through CAPS without insurance. Students are encouraged to seek assistance for anxiety, depression, trauma/assault, adjustment to college life, interpersonal/relational difficulty, sexuality, family conflict, grief and loss, disordered eating and body image, alcohol and substance abuse, anger management, identity development and issues related to diversity, concerns associated with sexual orientation and spirituality concerns, as well as any other issue of concerns. After hours, students may call UHS at 513-556-2564 or CAPS Cares at 513-556-0648. For urgent physician consultation after-hours students may call 513-584-7777.

Counseling Services, Clifton Campus: Students have access to counseling and mental health care through the University Health Services (UHS), which can provide both psychotherapy and psychiatric services. In addition, Counseling and Psychological Services (CAPS) can provide professional counseling upon request; students may receive five free counseling sessions through CAPS without insurance. Students are encouraged to seek assistance for anxiety, depression, trauma/assault, adjustment to college life, interpersonal/relational difficulty, sexuality, family conflict, grief and loss, disordered eating and body image, alcohol and substance abuse, anger management, identity development and issues related to diversity, concerns associated with sexual orientation and spirituality concerns, as well as any other issue of concerns. After hours, students may call UHS at 513-556-2564 or CAPS Cares at 513-556-0648. For urgent physician consultation after-hours students may call 513-584-7777.

Incomplete Grades: Students may request a grade of INCOMPLETE. Requirements for an Incomplete are as follows:

- *The student must have maintained a grade of C or higher
- *Met all other class requirements up to the date of the request
- *The request must be approved by the instructor in writing
- *The student then has one calendar year to make up the remainder of the course requirements
- *If the student does not do so in the time allotted, the grade of Incomplete automatically becomes an "F."

Religious Holidays: UC/A&S students, who, because of their sincerely held religious beliefs, are unable to attend classes, take examinations, participate in grade activities, or submit graded assignments on particular days shall, without penalty, be excused from such classes and be given a meaningful opportunity to make up such examinations and graded activities or assignments provided that advance written notice of their absence is given to faculty members during the first two weeks of the semester.

Faculty members are not required to reschedule classes, repeat lectures or other ungraded activities or provide individualized instruction solely for the benefit of a student who is unable to attend regularly scheduled classes or activities.

Make-up Policy: In order for a make-up exam to be permitted, the student must have cleared the absence with the professor, not the discussion leader, well in advance of the scheduled test date. If the absence results from an unexpected illness, the student must

provide verification from the attending physician—a note simply stating you went to the health service is not sufficient.

Plagiarism: Whether from printed, unprinted, or web sources, plagiarism is a serious violation of ethical conduct and will not be tolerated in this class. Even if you are paraphrasing an author(s) work you are expected to properly cite the original source since it was not your idea. **To not do so is unethical and will result in severe penalties in this class. Cutting and pasting from multiple texts off of the Internet and not citing those sites will be treated as plagiarism. Submitting a paper either copied or bought from a third party will result in a zero grade.**

The current UC Student Code of Conduct defines plagiarism as: 1. Submitting another's published or unpublished work in whole, in part or in paraphrase, as one's own without fully and properly crediting the author with footnotes, quotation marks, citations, or bibliographic references; 2. Submitting as one's own original work, material obtained from an individual, agency, or the internet without reference to the person, agency or webpage as the source of the material; 3. Submitting as one's own original work material that has been produced through unacknowledged collaboration with others without release in writing from collaborators. *The Department of History's plagiarism policy, adopted in 2007, states that students who plagiarize will receive zero (0) credit for the plagiarized assignment and for a second offense will fail the entire course. If in doubt, students should consult the department's policy and/or the course instructor.* For those who wish to consult the University's policy and the procedures for when an instance of academic misconduct occurs, like plagiarism, the following link will direct you to the UC Student Code of Conduct: http://www.uc.edu/conduct/Code_of_Conduct.html

Withdrawal Policy: I will accept only signed paper withdrawals; I will not accept Electronic Withdrawals unless you come discuss with me beforehand your reasons for withdrawing from the class.

Course Schedule

August 27-29

Introduction-What is Technology?

Leo Marx, "The Invention of Technology"
Langdon Winner, "Do Artifacts Have Politics?"
Nina Lerman, "Problems with Skill"
Carroll Pursell, "Masculinity and Technology"
Carroll Pursell, Chapter 1
Ruth Schwartz Cowen, Introduction
Bruce Sinclair, Chapter 1, "Integrating the Histories of Race and Technology"

September 3-5

Pre-Contact Technologies

Cowen, Chapter 1
Malone, Patrick. *The Skulking Way of War*, Chapters 1 and 2

Cronon, William. *Changes in the Land*, Chapter 2

September 10-12

Colonial Agricultural Technologies

Cowan, Chapter 2

Sinclair, Chapter 2, “Landscapes of Technology Transfer: Rice Cultivation and African Continuities”

Peter H. Wood, “Slavery and Arts in South Carolina”

Cronon, Chapter 4

September 17-19

Colonial Manufacturers

Pursell, Chapter 2 and 3

Judith A. McGaw, “So Much Depends upon a Red Wheelbarrow”

Michael McMahon, “Publick Service” versus “Mans Properties”

Cronon, Chapter 5

September 24-26

Importing Industrialism into the Republic

Cowen, Chapter 3

Pursell, Chapter 4

Thomas Jefferson, “Notes on Virginia” (Excerpts), 1785

Tench Coxe Speaks for Factories, 1787

Alexander Hamilton’s “Report on Manufacturers,” 1791

October 1-3

Transportation Revolutions

Cowen, Chapter 4

Robert F. Hunter, “Turnpike Construction in Antebellum Virginia.”

John G. Burke, “Bursting Boilers and Federal Power”

October 8-10

American Factory Systems

Cowen, Chapter 5

Pursell, Chapter 5

Charles Dew, “Slave Ironworkers in Virginia”

Patrick W. O’Bannon, “Inconsiderable Progress: Commercial Brewing in Philadelphia before 1840”

FALL READING DAYS OCTOBER 10-11

October 15-17

Engineering Education, Invention and Civil War

Sinclair, Chapter 3, “Invention and Innovation, 1619-1930.”

Pursell, Chapter 6

Thomas Army, *Engineering Victory: How Technology Won the Civil War*, Chapters 2 and 4

- October 22-24 Technological Systems and Society**
 Cowan, Chapter 5
 Pursell, Chapters 10 and 11
 Terry S. Reynolds, "The Engineer in 19th Century America"
- October 29-31 Mechanization of Labor**
 Cowen, Chapter 6
 Pursell, Chapters 7, 12 and 14
 Sinclair, Chapter 5, "New South, New North: Region, Ideology, and Access in Industrial Education"
- November 5-7 Inventors, Entrepreneurs and Industrialization**
 Cowen, Chapter 7
 Pursell, Chapters 8, 13 and 16
- November 12-14 Automobility and Car Culture**
 Cowen, Chapter 8
 Pursell, Chapter 17
 Sinclair, Chapter 8, "The Open Road: Automobility and Racial Uplift in the Interwar Years"
 Ronald Kline and Trevor Pinch, "The Social Construction of the Automobile in the Rural United States"
- November 19-21 Entertainment, Depression and War**
 Cowen, Chapter 9
 Pursell, 19, 20 and 21
 Start John Cassidy, *dot.com*, Prologue to Chapter 5

Paper is Due November 19th in Class

- November 26-28 Challenges of the Cold War Era**
 Cowen, Chapter 10
 Sinclair, Chapter 10, "Minority Engineering Education in the United States Since 1945: A Research Proposal."
 Pursell, Chapters 23 and 24
 Cassidy, Chapters 6-11

THANKSGIVING BREAK NOVEMBER 28-29

- December 3-5 The Online/Wired New Nation**
 Cowen, Chapter 11
 Cassidy, Chapter 12-21
- December 9-14 Final Exams Week**