

**History 411E**  
**Technology and Society in North America**

Mondays 12:30-2:30 SSC 8426

Professor Rob MacDougall

Department of History

Office Hours: **Mondays** 3:00-5:00 SSC 1003 or by appointment

### **Course Description**

This seminar explores the social history of technology in Canada and the United States from the colonial era to the present day. Our class will study the ways in which technology has been shaped by its social, cultural, and political contexts, and how technology has shaped North American society, culture, and politics in return. In the Fall Term, we will focus on the history of technology in North America before 1900, from European and Native American technologies at the time of first contact to the coming of the railroad, factory, telegraph, and telephone. In the Spring Term, we will examine such twentieth-century technologies as the automobile and the assembly line, radio and television, the atomic bomb, the birth control pill, computers and the internet. Our subject is not, primarily, the technical history of science or engineering. Although we will often discuss how machines work, our real subject is the history of human beings, and the interactions between people and the machines, systems, and tools they create.

### **Assignments and Evaluation**

Students will write one substantial **research paper** (20-25 pages) over the course of the year. A **written proposal** (2-3 pages) outlining a topic and sources to be used is due in early November. Students will present **oral reports** on their work in progress during class in January. A **rough draft** of the research paper will be due in March (this is not optional) and returned to the student with feedback for revision; the final draft is due in April. This paper accounts for 50% of the final grade in total: 10% for the proposal, 10% for the oral report, and 30% for the finished paper. Students will take turns **leading class discussion** (probably once each term, depending on class size) by introducing the required readings, posing questions to the class, and moderating discussion. These presentations are worth 20% of the final grade. Students will also **review one book per term**; these reviews will take the form of oral reports to the class, and they account for 10% of the final grade. Finally, students are expected to be active participants in every seminar. **Class participation** will account for 20% of the final grade. There will be no midterm or final exam.

Research proposal	10%	due November 7
Work-in-progress report	10%	in class January 16, 23, 30 and February 6
Research paper	30%	rough draft due March 13, final paper due April 10
Discussion leading	20%	weeks and topics will be chosen/assigned in class
In-class book reviews	10%	weeks and books will be chosen/assigned in class
Class participation	20%	

## Required Texts

The following texts are required for this course:

- Merrit Roe Smith and Gregory Clancey, eds. *Major Problems in the History of American Technology*. New York: Houghton Mifflin, 1998.
- Ruth Schwartz Cowan, *A Social History of American Technology*. Oxford: Oxford University Press, 1997.
- **History 411E Course Pack** (2 volumes).

## First Term

**Week 1      September 12      Introduction to the Course**

**Week 2      September 19      A Case Study: The Telephone**

- *Major Problems in the History of American Technology*, pp. 233-266.
- Additional primary sources (will be handed out in class).

**Week 3      September 26      Approaches to the History of Technology**

- *A Social History of American Technology*, pp. 1-4.
- *Major Problems in the History of American Technology*, pp. 1-25.
- William Ogburn, "How Technology Causes Social Change," Course Pack I.
- Claude Fischer, "Technology and Modern Life," Course Pack I.

**Week 4      October 3      Native American Technology**

- *A Social History of American Technology*, pp. 5-27.
- *Major Problems in the History of American Technology*, pp. 26-61.
- Jared Diamond, "Necessity's Mother," Course Pack I.

**Week 5      October 10      THANKSGIVING - NO CLASS**

**Week 6      October 17      The Farm**

- *A Social History of American Technology*, pp. 28-44.
- *Major Problems in the History of American Technology*, pp. 62-102.

**Week 7      October 24      The Factory**

- *A Social History of American Technology*, pp. 67-91.
- *Major Problems in the History of American Technology*, pp. 144-189.

**Week 8      October 31      Americans and Technology**

- *A Social History of American Technology*, pp. 201-219.
- John Kasson, "The Emergence of Republican Technology," Course Pack I.
- Thomas Hughes, "The Technological Torrent," Course Pack I.

**Week 9      November 7      The Railroad****RESEARCH PROPOSAL DUE NOVEMBER 7**

- *A Social History of American Technology*, pp. 93-118.
- *Major Problems in the History of American Technology*, pp. 191-221 (omit Adas).
- David Nye, "Let Us Conquer Space," Course Pack I.
- A.A. den Otter, "Technological Nationalism: The Backdrop." Course Pack I.

**Week 10      November 14      System**

- *A Social History of American Technology*, pp. 149-171.
- *Major Problems in the History of American Technology*, pp. 267-311.
- Alfred N. Chandler, "The Railroads: Pioneers in Modern Corporate Management," Course Pack I.

**Week 11      November 21      The Wire**

- Daniel Czitrom, "Lightning Lines and the Birth of Modern Communication, 1838-1900," Course Pack I.
- Sidney Aronson, "Bell's Electrical Toy: What's the Use? The Sociology of Early Telephone Usage," Course Pack I.
- Carolyn Marvin, "Community and Class Order," Course Pack I.
- Michèle Martin, "The Culture of the Telephone," Course Pack I.
- Ronald Kline, "(Re)inventing the Telephone," Course Pack I.

**Week 12      November 28      Invention**

- *A Social History of American Technology*, pp. 119-147.
- Thomas Hughes, "A Gigantic Tidal Wave of Human Ingenuity," Course Pack I.
- Malcolm Gladwell, "The Televisionary," Course Pack I.

**Week 13      December 5      Canadians and Technology**

- Bruce Sinclair, ed., Excerpts from *Let Us Be Honest and Modest: Technology and Society in Canadian History*, Course Pack I.
- George M. Grant, Excerpt from *Ocean to Ocean: Sandford Fleming's Expedition Through Canada in 1872*, Course Pack I.
- George Johnson, Excerpt from *The All-Red Line: The Annals and Aims of the Pacific Cable Project*, Course Pack I.
- Bruce Sinclair, "Canadian Technology: British Traditions and American Influences," Course Pack I.
- J.J. Brown, Excerpt from *Ideas in Exile: A History of Canadian Invention*, Course Pack I.
- Christian deBresson, "Have Canadians Failed to Innovate? The Brown Thesis Revisited," Course Pack I.
- Maurice Charland, "Technological Nationalism," Course Pack I.

**Second Term****Week 14      January 9                      The Automobile**

- *A Social History of American Technology*, pp. 221-248.
- *Major Problems in the History of American Technology*, pp. 312-354.
- Robert and Helen Lynd, “Inventions Re-making Leisure,” Course Pack II.
- Kathleen Franz, “The Open Road: Automobility and Racial Uplift in the Interwar Years,” Course Pack II.

**Week 15      January 16                      Student Presentations****Week 16      January 23                      Student Presentations****Week 17      January 30                      Student Presentations****Week 18      February 6                      Student Presentations****Week 19      February 13                      The Radio**

- *A Social History of American Technology*, pp. 273-300.
- *Major Problems in the History of American Technology*, pp. 355-372 (omit Oldenziel).
- Paul Starr, “The Constitution of the Air,” Course Pack II.
- Mary Vipond, “The Beginnings of Radio Broadcasting in Canada,” Course Pack II.

**Week 20      February 20                      Gender and Technology**

- *Major Problems in the History of American Technology*, pp. 372-382 (just Oldenziel).
- Nina Lerman, “Interrogating Boundaries,” Course Pack II.
- Judith McGaw, “Why Feminine Technologies Matter,” Course Pack II.
- Gail Cooper, “Love, War, and Chocolate: Gender and the American Candy Industry, 1880-1930,” Course Pack II.
- Jeffrey Sconce, “Mediums and Media,” Course Pack II.

**NO CLASS FEBRUARY 27 (CONFERENCE WEEK)****Week 21      March 6                      Domestic Technologies**

- Ruth Schwartz Cowan, “The Industrial Revolution in the Home: Household Technology and Social Change in the 20<sup>th</sup> Century,” Course Pack II.
- David Nye, “A Clean, Well-Lighted Hearth,” Course Pack II.
- Joy Parr, “Economics and Homes: Agency,” Course Pack II.
- Lynn Spigel, “Women’s Work,” Course Pack II.

**Week 22      March 13                      Military Technologies**  
**ROUGH DRAFT OF RESEARCH PAPER DUE MARCH 13**

- *A Social History of American Technology*, pp. 249-271.
- *Major Problems in the History of American Technology*, pp. 427-469.
- Thomas Misa, “The Means of Destruction,” Course Pack II.

**Week 23      March 20                      Failed Technologies**

- Paul David, “Clio and the Economics of QWERTY,” Course Pack II.
- David Kirsch, “The Electric Vehicle and the Burden of History,” Course Pack II.
- Ruth Schwartz Cowan, “The Roads Not Taken: Alternative Social and Technical Approaches to Housework,” Course Pack II.
- Denis Smith, Excerpt from *Rogue Tory: The Life and Legend of John G. Diefenbaker*, Course Pack II.
- Kenneth Lipartito, “Picturephone and the Information Age: The Social Meaning of Failure,” Course Pack II.

**Week 24      March 27                      The Pill**

- *A Social History of American Technology*, pp. 301-327.
- Elizabeth Siegel Watkins, “Genesis of the Pill,” Course Pack II.
- Andrea Tone, “The Pill in Practice,” Course Pack II.

**Week 25      April 3                              The Internet**

- *Major Problems in the History of American Technology*, pp. 471-502, 516-518 (omit Davis and Hallek).
- Janet Abbate, Excerpts from *Inventing the Internet*, Course Pack II.
- George Gilder, “The Lifespan Limit,” Course Pack II.
- Lawrence Lessig, “The Internet Under Siege,” Course Pack II.

**Week 26      April 10                              The Future**  
**RESEARCH PAPER DUE APRIL 10**

- Howard Segal, “The Technological Utopians,” Course Pack II.
- Charles Jonscher, “Digital Technologies of Tomorrow,” Course Pack II.
- Ziauddin Sardar, “Western Colonization of the Future,” Course Pack II.
- Bill Joy, “Why the Future Doesn’t Need Us,” Course Pack II.
- John Seely Brown and Paul Duguid. “A Response to Bill Joy and the Doom-and-Gloom Technofuturists,” Course Pack II.