

**IS 122 Technology and European Society**  
**Europe Semester, Fall 2008**  
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**Major Themes for 2008 Europe Semester**

Technology  
War and Peace  
Narrative

**Overview of Course**

This course considers social phenomena and the development of technology, particularly in Europe. We will look at how technology has affected social structures such as religion and the family. We will examine technology and innovation as a factor in economics, commerce, and government. We will discuss ethical issues in technology from a Christian perspective.

We will examine cathedrals, castles, bridges, and canals as examples of technology. These achievements, along with code-breaking work done during World War II and newer technologies such as the Internet, will be studied in enough technical detail to broaden appreciation for the innovation and complexity required, and to facilitate the understanding of related societal effects.

We will read and evaluate studies in the area of technology and society, and discuss the credibility of various information sources. We will trace the history of the Internet and World Wide Web, and look at current phenomena such as social networks and blogs. We will gain fluency in the use of technology by performing online research, submitting assignments electronically, creating online portfolios, and posting to online journals.

**Sites**

Visits to historical sites and museums will be integral. Example sites include:

- Edinburgh computer history project; Edinburgh Castle, Castle Rock, Royal Mile
- Hadrian's wall
- National Railway Museum, York
- Coventry and ethical issues related to prior knowledge of bombing due to Enigma code; Coventry cathedral
- Warwick castle
- Bletchley Park (early work in computing, breaking of Enigma code)
- Great Fire Monument as scientific instrument and zenith telescope
- Dover Castle and underground tunnels used in World War II
- Roman baths
- Stonehenge
- Science Museum in London
- Imperial War Museum, *Secret War* exhibition
- The Channel Tunnel
- Eiffel Tower, Notre Dame, Louvre
- Château de Versailles

- L'Observatoire de Paris (book *The Sun in the Church*, J.L. Heilbron, church as scientific instrument, measure of time, Cassini)
- Nato Headquarters, European Union
- Brugge canals
- Amsterdam canals, dykes, windmills, battle with the sea
- Vasa Museum (Viking boat), University of Stockholm; The Nobel Museum and the Royal Swedish Academy of Science
- Helsinki University of Technology; Linux, open source, Linus Torvalds
- Warsaw Palace of Culture and Science
- German Museum of Technology in Berlin
- Prague Castle, Charles IV Bridge, Prague Astronomical Clock
- Schloss Mittersill
- Canals in Venice
- Brunelleschi's Dome in Florence (Book *Brunelleschi's Dome: How a Renaissance Genius Reinvented Architecture*, Ross King)
- Colosseum, Catacombs of Rome
- St. Peter's Basilica, Apostolic Palace, Sistine Chapel
- The Duomo, Bartolomeo Ammanati's Fountain of Neptune, Roman aqueduct
- Pompeii and early technology (aqueducts, road crossings, etc.)
- Parthenon in Athens

<b>Date</b>	<b>Day</b>	<b>Location</b>	<b>Lecture Topic</b>
21-Aug	Thu	Edinburgh	8:30-9:30am Introduction; Architecture; Construction of castles, cathedrals, towers, bridges, and canals
23-Aug	Sat	Edinburgh	8:30-9:30am Early computer development, breaking of Enigma code at Bletchley Park; Coventry and ethical issues related to Enigma code
27-Aug	Wed	Stratford	8:30-9:30am The industrial revolution part 1: Transportation - rail, air, sea, and automobile
29-Aug	Fri	Bletchley Park	2 hour on-site class at Bletchley Park (guest speaker), book <i>Code Breakers: The Inside Story of Bletchley Park</i> , Sir F. H. Hinsley and Alan Stripp, editors
1-Sep	Mon	London	8:30-9:30am The industrial revolution part 2: Effects of industrialization on family structure
4-Sep	Thu	London	8:30-9:30am Disasters in technology: <i>Titanic</i> (1912), <i>Hindenberg</i> , 1937
6-Sep	Sat	Paris	8:30-9:30am, (book <i>The Sun in the Church</i> , J.L. Heilbron, church as scientific instrument, measure of time, Cassini, universal time, clocks
9-Sep	Tues	Paris	8:30-9:30am Gender issues in the development of technology
15-Sep	Mon	Caen	8:30-9:30am Technological developments during World War II; development of the atomic bomb

17-Sep	Wed	Brugge	8:30-9:30am The European Central Bank and technological challenges in conversion to the Euro currency system
25-Sep	Thu	Stockholm	8:30-9:30am Education and technological development
30-Sep	Tues	Helsinki	8:30-9:30am The digital divide; Linux, open source, Linus Torvalds
4-Oct	Sat	Berlin	8:30-9:30am Technological developments during World War I
6-Oct	Mon	Berlin	8:30-9:30am Ethical issues in technology
8-Oct	Wed	Berlin	8:30-9:30am Technology and communication
22-Oct	Wed	Mittersill	8:30-9:30am The information age: Trans-Atlantic cables, development of the Internet and World Wide Web, book <i>How the Web Was Born</i> , James Gillies and Robert Cailliau
23-Oct	Thu	Mittersill	8:30-9:30am Technocapitalism; book <i>The Virtue of Prosperity: Finding Values in an Age of Techno-Affluence</i> , Dinesh D'Souza
25-Oct	Sat	Mittersill	8:30-9:30am The global economy
27-Oct	Mon	Venice	8:30-9:30am Engineering, invention, and architecture of Leonardo da Vinci
1-Nov	Sat	Florence	8:30-9:30am Book <i>Brunelleschi's Dome: How a Renaissance Genius Reinvented Architecture</i> , Ross King
3-Nov	Mon	Florence	8:30-9:30am Technology in worship and in the church
6-Nov	Thu	Rome	2:00-4:00pm Final Exam

### Topics

Topics for reading, writing, and discussion will include:

- Ethical issues in technology
- Gender issues in the development of technology
- The digital divide
- Education and technological development
- Technology and communication
- Early development of science and technology in Europe (pre-1760)
  - Engineering, invention, and architecture of Leonardo da Vinci
  - Construction of castles, cathedrals, towers, bridges, and canals
  - Universal time, clocks
- The industrial revolution (c.1760-1830)
  - Transportation: rail, air, sea, and automobile
  - Effects of industrialization on family structure
- The *Titanic* (1912)
- Technological developments during World War I (1914-1918)
- The *Hindenburg* (1937)

- Technological developments during World War II (1939-1945)
  - Early computer development at Bletchley Park
  - The development of the atomic bomb
- The information age
  - Trans-Atlantic cables
  - The development of the Internet and World Wide Web
- The European Central Bank and technological challenges in conversion to the Euro currency system
- Technocapitalism
- The global economy

### **General Education**

This course satisfies the General Education requirement “Understanding Society.” The core objectives, as described by General Education documents and tailored for this course, are:

- Students will have a basic understanding of social or cultural phenomena examining, in particular, basic social institutions such as: Family and Marriage, Religion, Education, Gender, Government, and the Economy.
- Students should be able to analyze social situations using the framework of technology as a lens.
- Students will acquire basic competence to read studies and understand claims about social phenomena and technology.

Several desired extensions, also taken from the General Education documents, are:

- Students should understand the processes of the political economy, the nature of technology and innovation as social phenomena, and the interaction of the private and public spheres.
- Students should be able to identify ways in which gender and ethnicity play a role in social structures and access to technological resources.
- Students should reflect on the applications of contemporary technological advances and their impact on personal relationships, research methodologies, the inquiry process, and the accumulation and dissemination of new knowledge.
- Students can identify instances and possible causes of inequity and stratification, including the digital divide along socio-economic and ethnic boundaries, and the under-representation of women and people of color in technological development.

### **Required textbooks:**

- ***Introduction to Sociology***  
Anthony Giddens, Mitchell Duneier, and Richard P. Appelbaum  
W. W. Norton; 6<sup>th</sup> edition, 2007  
ISBN: 0-393-92921-3
- ***Bringing technology home: Gender and technology in a changing Europe***  
Cynthia Cockburn and Ruza Fürst-Dilic, editors  
Open University Press, 1994  
ISBN: 0-335-19158-4
- ***The information society in Europe: Work and life in an age of globalization***  
Ken Ducatel, Juliet Webster, and Werner Herrmann, editors

Rowman & Littlefield Publishers, 2000  
ISBN: 0-8476-9590-5

- ***The World Is Flat: A Brief History of the Twenty-First Century***  
Thomas L. Friedman  
Expanded Edition, Picador, July 2007  
ISBN: 0-312-42507-4

**Supplementary readings to be chosen from:**

- ***Code Breakers: The Inside Story of Bletchley Park***  
Sir F. H. Hinsley and Alan Stripp, editors  
Oxford University Press, 1993  
ISBN: 0-19-285304-X
- ***The Pinball Effect***  
James Burke  
Little, Brown and Company, 1996  
ISBN: 0-316-11602-5
- ***The Sun in the Church***  
J.L. Heilbron  
Harvard University Press, 2001  
ISBN: 0-674-00536-8
- ***A History of Western Technology***  
Freidrich Klemm (Translated by Dorothea Waley Singer)  
The M.I.T. Press, 1964  
ISBN: 0-262-61001-9
- ***The Social Shaping of Technology***  
Donald MacKenzie and Judy Wajcman, editors  
Open University Press, 1985  
ISBN: 0-335-15026-8
- ***Brunelleschi's Dome: How a Renaissance Genius Reinvented Architecture***  
Ross King  
Penguin, 2001  
ISBN: 0-14-200015-9
- ***Turning Points in Western Technology: A Study of Technology, Science, and History***  
D. S. L. Cardwell  
Science History Publications, Neale Watson Academic Publications, Inc., 1972  
ISBN: 0-88202-003-X
- ***The Virtue of Prosperity: Finding Values in an Age of Techno-Affluence***  
Dinesh D'Souza  
The Free Press, 2000  
ISBN: 0-684-86814-8
- ***How the Web Was Born***  
James Gillies and Robert Cailliau  
Oxford University Press, 2000  
ISBN: 0-19-286207-3

**Assignments (completed primarily during the summer)**

- Students will use sociological methods to conduct a study and prepare a research paper on a topic of relevance to technology in society. They will define the problem, review the literature, formulate a hypothesis, conduct ethnographic interviews with three culturally diverse people, interpret the results, and report the research findings in a 2500-word paper. The topic, the literature review, and the paper will all be submitted to Eureka <<https://eureka.westmont.edu/>> during the summer.
- Students will keep an online journal using Eureka<<https://eureka.westmont.edu/>>. Over the summer, they will record reflections and critique on each of five different studies chosen from the Cockburn and Ducatel texts. While in Europe, students will record reflections relating that which they have seen and experienced back to their preparatory assignments.
- Students will use Optimal Resume <<https://westmont.optimalresume.com/>> to develop an online resume, website, and portfolio. Over the summer, they will create the resume, website, and a portfolio that includes the assignments above and other Europe semester assignments. While in Europe, students will add photos and reflections to the portfolio.

**Exam**

- Final exam will take place on November 6, 2008 (in Rome), 2-4 pm.

**Grading**

- Sociological research paper 25%
- Online journal 20%
- Resume, website, and portfolio 20%
- Class participation 15%
- Final exam 20%

**Academic Honesty**

Plagiarism will not be tolerated and will result in an F for the assignment. Repeated or major violations will result in an F for the course.

“To plagiarize is to present someone else's work—his or her words, line of thought, or organizational structure—as our own. This occurs when sources are not cited properly, or when permission is not obtained from the original author to use his or her work. By not acknowledging the sources that are used in our work, we are wrongfully taking material that is not our own. Plagiarism is thus an insidious and disruptive form of dishonesty. It violates relationships with known classmates and professors, and it violates the legal rights of people we may never meet.

“Another person's ‘work’ can take many forms: printed or electronic copies of computer programs, musical compositions, drawings, paintings, oral presentations, papers, essays, articles or chapters, statistical data, tables or figures, etc. (The Learning Skills Centre, 1999). In short, if any information that can be considered the intellectual property of another is used without acknowledging the original source properly, this is plagiarism.”

From *Westmont College Plagiarism Policy*,

[http://www.westmont.edu/\\_academics/pages/provost/curriculum/plagiarism/](http://www.westmont.edu/_academics/pages/provost/curriculum/plagiarism/).