

Engineering 367: American Attitudes About Technology U 05

Spring Quarter 2005
Call Number 07837-6
M W 4:30 – 6:18 pm
Boltz Hall (BO) 0434

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Office hours: M 3:00 - 4:00 pm or by appointment

This course is an approved GEC second-level writing course and fulfills the Social Diversity in the United States component of the GEC.

Required materials:

- MacKenzie, Nancy R. (1995). *Science and Technology Today: Readings for Writers*. New York: St. Martin's Press.
- Packets of other required readings are on closed reserve in the Science / Engineering Library (<http://www.lib.ohio-state.edu/phyweb/>), indicated by a ► in the syllabus.
- About 15 letter-sized manila folders with tabs.
- A writing style guide. Suggested: Hacker, D. (2004). *A Pocket Style Manual* (4th ed.). New York: St. Martin's Press.

Welcome to Engineering 367

Engineering 367 is an expository writing class that fulfills the university's second writing requirement. The course designation "367" – the American Experience – is designed to encourage you to think critically about some aspect of American life.

This is an expository writing class, not a technical writing class. We will read about and discuss various issues about technology, and you will write. You will write argumentative essays, annotate sources, write responses to issue topics, and connect this writing to what is going on in the world around you.

Like all 367 classes, you will learn strategies for effective writing, for researching, and for effective oral communication.

Most importantly, you will write.

Course Objectives

During this course, you will:

- (1) learn to think critically about technology as one major component of American life,
- (2) explore the differential impacts of technology on racial, ethnic, gender, disabled, and socioeconomic cross-sections of the American population including the issues that

differential impact has on the attitude of these groups toward technology,
(3) discuss and write about the interaction of technology with race, ethnicity, disability, gender, and socioeconomic class,
(4) discuss and write about contemporary issues about technology, and
(5) demonstrate skills and strategies for effective writing, researching, and oral communication.

Course Assignments

This is a writing course. As with any skill you want or need to master – playing the flute, vacuuming the carpet, throwing a curveball, or learning to drive – writing takes practice. This quarter you will practice, and with diligent practice you will improve.

In fact, for the next 10 weeks, you should consider yourself a writer. The assigned readings are designed to stimulate your brain, to help you tap into your own creativity, to make you think critically, and to help you structure your work. You will explore the connection between thinking and writing, between speaking and writing, and between observing and writing.

As a writing course, you will write in class and out of class. In class, you will work mostly in groups to create responses to questions about the readings. Out of class, you will write your personal responses to a variety of topics, synopses of articles in the popular press that are relevant to the topics covered in the course, and two major papers.

Response Papers – 15% of your total grade

Four times during the quarter you will be assigned a topic to write about. You will take a position and argue your position in a one- to two-page paper. These are not research papers, but rather your best attempt to be persuasive in writing. Please try to avoid using the first person in these papers. The topics for these papers appear at the end of this syllabus.

Articles – 10% of your total grade

During the quarter, you will identify four articles in the popular press concerning topics that are relevant to the class. You will need to submit the articles along with a two-paragraph summary of each one. I will ask you to briefly talk about these articles in class, so these exercises will aid the discussions during the class. Only two articles will be accepted in any one week. If more than two articles are submitted in any one week, only two will count. TIP: Get these out of the way early in the quarter.

Major Papers – 50% of your total grade

Two major papers are worth a combined total of 50 percent of your grade. These are argumentative papers in which you are trying to convince the audience of a particular point. The second major paper is also a research paper and should be considered a quarter-long effort, one that you would do well to begin as soon as possible.

Major Paper #1 – 20% of your total grade

Write a four- to six-page paper in which you argue a thesis about the ways in which Americans have come to terms with technology or a specific aspect(s) of technology, focusing either on the historical American attitudes toward technology or current American attitudes toward technology. Possible topics include (but are not limited to):

- Argue a thesis about the ways in which recent technological changes were discussed in public forums when they were first discussed, and compare that to the ways in which they are discussed today, or to what we now know about a given technology. For example, you could compare the ways in which personal computers were discussed in computer-related magazines in the 1980s as compared to today. Be sure to focus on the cultural perceptions as much as the changes in technology.
- Argue a thesis about the ways in which changes in a specific technology were discussed in public forums (such as newspapers or science magazines), and discuss what this says about the perception of the technology in its given historical context. Or you could look at the ways in which overall changes in technology and science were discussed in public forums from the 1800s to early 1900s.
- Argue a thesis about the ways in which American citizens reacted to what may have been technology developing at a dizzying pace in the 1800s to early 1900s. How did technology change the lives of Americans? How did Americans adjust or react to these changes? Were the technologies received by Americans in the ways in which their inventors/developers expected?
- Argue a thesis about the ways in which Americans in a given field reacted to or react to the changes in technology associated with that field. Choose either a more historical perspective, or focus on current changes in a specific technological field. How did or do these changes affect the workplace, and how did or do workers react and adjust?

After you receive Major Paper #1 back from your instructor, you may choose to rewrite it and submit it for regrading. All resubmissions must be received no later than the end of the seventh week of the quarter.

Major Paper #2 – 30% of your total grade

Write a substantial eight- to ten-page argumentative essay on technology and some aspect of gender, ethnicity, equality, access, regionalism, or democracy in American culture. **Please do not write about the Internet.** Statements you make that are factual must be supported by an outside source and must be accompanied by a citation.

Possible topics for Major Paper #2 include (but are not limited to):

- Explore the ways in which technology is defined by gender, ethnicity, or economic class. Is technology masculine? Are technologies defined (by their developer) to appeal to specific socio-economic groups (i.e., "mainstream", "middle-class", "white-male")? Conversely, how are genders, ethnicities, or socio-economic classes defined in relation to technology and science?
- Explore an issue of access and technology. How does gender, socio-economic status, ethnicity, or physical ability contribute to access of technology, and what are the cultural and social implications of such access or lack of access?
- Explore the relationship between technology and American art, focusing on some aspect of social difference. Move beyond how technology produces art toward a discussion of how technology informs art or American attitudes toward art.
- Explore some aspect of the implications of the idea of technology as the great democratizer. It has been argued that technology knows no color, race, or gender. How true is this? Does technology "equalize"? Can technology provide for a more "level playing field" in the workplace? How does technology contribute to making Americans equals? How does technology contribute to dividing Americans?

Interim Deliverables

You will be asked to write various components of each major paper along the way for evaluation by your peers or by the instructor. Examples of these components include the thesis statement, an outline, one or two sample paragraphs, an annotated bibliography, and a draft. The due dates for the particular components are listed in the schedule of the syllabus and the grades for these components will be incorporated into the grade for the assignment as described in the grading strategy.

Group Presentation – 15% of your total grade

In addition to writing as an individual author, you will also gain experience writing as a group and fine-tuning your presentation skills. For this assignment, your group will lead class for forty-five minutes. Each group will select a technology from the list below that has had an impact on American life and will research its origin, its uses, its impact, and the future of the technology. You will prepare a PowerPoint presentation and a one-page research report. Each person in the group will speak for no less than 5 minutes, no more than 10. After everyone has spoken, you will lead a class discussion about your technology and its place in our culture, including perceptions by people of various races, ethnicities, gender, and other constructs of difference. You will also give each person in the class a copy of your one-page report that includes bibliographic information on a second page.

- | | |
|--------------------------------|-------------------------|
| 1. air traffic control | 7. electric cars |
| 2. automobile passenger safety | 8. smart homes |
| 3. oral birth control | 9. in-home video gaming |
| 4. nanotechnology | 10. pacemakers |
| 5. contact lenses | 11. jet engines |
| 6. grain modification | 12. prenatal evaluation |

Your presentation must include: introduction and definition of the technology, timeline of its development, the need it filled, its uses, its impact on American society (positive and negative), and projected developments for the future.

You will be responsible for providing any technology needed for your presentation. A laptop computer and a projector can be reserved by calling the Office of Information Technology – Classroom Services (<http://classroom.osu.edu/equip.html>) at 292-3131. *****Reserve your equipment as soon as you know what date you will be presenting.***** You will need a signed permission slip from me to pick up your equipment on the day of your presentation.

Format of Assignments – ***THIS IS EXTREMELY IMPORTANT*******

All papers must be typed and formatted using Times New Roman font, with a font size of 12 points, with one-inch margins around the page, double spaced, using flush left justification. Pages must be numbered. Consult a style guide for writing guidelines and formats of references. Everything you turn in must include a cover page that follows the example cover page included in this syllabus. All pages of a particular assignment other than the cover page must be numbered. All pages including the cover page must be stapled together. The title of your paper must appear on both the title page and the first page of your text. *****Assignment page counts do not include the cover page or the bibliography.*****

I do not accept electronic versions of assignments. All assignments must be inserted into a manila file folder the tab on which you have written your name (last name, first name), the assignment (e.g., Response Paper #1, Article #3, Major Paper #2 – Draft), and the due date.

If the format for the papers and the folders is not followed, the assignment will be returned to you ungraded. You might want to use removable folder labels (please, do not use Post-It notes) so you can reuse your folders for several assignments.

All assignments except for the final paper are to be turned in during class time. **If you need to turn in a paper outside of class time**, please take it to 122 Hitchcock Hall and ask that it be put in my mailbox.

Rough drafts of the two major papers will be reviewed in class on the day they are due. They must, therefore, be printed off and brought to class on their due dates. I will review electronic versions of drafts of any assignment submitted at least three days prior to their due date.

Class Participation and Quizzes

Class discussions are a major component of this course, so attendance will be taken every day. If you miss more than two classes without an excuse that is deemed legitimate by the

instructor, your grade will be negatively influenced. Quizzes and in-class work will be given without warning. Quizzes cannot be made up.

Late Assignments

One point will be deducted per class that an assignment is late. The final paper will not be accepted past the deadline.

Course Policy on Incompletes

Per the *Rules of the University Faculty*, "an 'I' indicates that the student has completed a major portion of the work in the course in a satisfactory manner, but for reasons judged by the instructor to be legitimate, a portion of the course requirements remains to be completed" (Section 3335-8-21(G)). Attendance in class, written assignments, ex temporaneous in-class assignments and quizzes, and participation in class discussions are all integral to the work of this course.

Academic Integrity

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct* and this syllabus may constitute "academic misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an "excuse" for academic misconduct, so your review of the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct is recommended.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic integrity to which you can refer include:

- The Committee on Academic Misconduct web pages (oaa.osu.edu/coam/home.html)
- *Ten Suggestions for Preserving Academic Integrity* (oaa.osu.edu/coam/ten-suggestions.html)
- *Eight Cardinal Rules of Academic Integrity* (www.northwestern.edu/uacc/8cards.html)

Plagiarism

Plagiarism is the use – intentionally or unintentionally – of someone else's words, ideas, or thoughts, without proper attribution. Plagiarism is a serious offense, and incidents of plagiarism will be dealt with through the Council on Academic Misconduct. You must remember to cite any information that is not of your own creation, even if it is just "in your brain." See Hacker (2004) or your preferred style guide for more information about citing information. I will be happy to answer any questions you have about citing sources upon request.

Ground Rules

As a member of our class, you have obligations to yourself, to your classmates, and to your instructor. If you choose to be a responsible student, these ground rules will be easy to follow.

1. Be ready for class. Come to class having read the assigned material. Be prepared to turn in writing and homework assignments the moment you walk in the door.
2. Come to class prepared to contribute. You will be expected to discuss in class. Quiet students are encouraged to speak up. I am not shy about calling on quiet students. Remember, class participation is a component of your grade.
3. Come to class with respect for yourself, your peers, and your instructor. At some point in the quarter, others in the room will disagree with something you think or say or you will disagree with something someone else in the room thinks or says. Have a little regard for everybody's right to free speech.
4. We discuss some controversial topics in this class. To create a safe environment for speaking your mind, the most important ground rule is: **That which is said in class stays in class.** If you want to discuss anything with me personally, please stop by my office during my office hours, snag me after class, or contact me to make an appointment.

Students with Disabilities

Any student who feels the need for an accommodation based on the impact of a disability should contact me privately to discuss your specific needs.

Alternate Formats

This syllabus is available on the Internet on OSU's WebCT server at <http://class.osu.edu> and is also available in alternate formats on request.

Grading Strategy

	%	+	✓+	✓	✓-	-
Major Paper #1						
thesis statement	5%	5.5	5.0	4.0	3.0	2.0
outline	5%	5.5	5.0	4.0	3.0	2.0
rough draft		OK		NOT OK		
final draft	10%	10.5	10.0	9.0	8.0	7.0
Major Paper #2						
thesis statement	5%	5.5	5.0	4.0	3.0	2.0
outline	5%	5.5	5.0	4.0	3.0	2.0
annotated bibliography	5%	5.5	5.0	4.0	3.0	2.0
rough draft		OK		NOT OK		
final draft	15%	15.5	15.0	14.0	13.0	12.0
Response Papers						
#1	3.5%	4.0	3.5	3.0	2.5	2.0
#2	3.5%	4.0	3.5	3.0	2.5	2.0
#3	4%	4.5	4.0	3.5	3.0	2.5
#4	4%	4.5	4.0	3.5	3.0	2.5
Group Presentation	15%	15.5	15.0	14.0	13.0	12.0
Articles		OK		Not OK		
Article 1	2.5%	2.5		0.0		
Article 2	2.5%	2.5		0.0		
Article 3	2.5%	2.5		0.0		
Article 4	2.5%	2.5		0.0		
Quizzes and Class Participation	10%	0.0 to 10.0				

Grading Scale		
A	93 and above	
A-	90 - 92	
B+	87 - 89	
B	83 - 86	
B-	80 - 82	
C+	77 - 79	
C	73 - 76	
C-	70 - 72	
D+	67 - 69	
D	63 - 66	
E	62 and below	

Syllabus

WEEK 1

History of Science

M 3/28 First day of class – Introductions, syllabus, grading

Sidebar: Your voice as a writer

http://owl.english.purdue.edu/handouts/print/pw/PDFs/p_tone.pdf

Sidebar: What is a thesis statement?

http://owl.english.purdue.edu/handouts/general/gl_thesis.html

W 3/30 ► Cowan, Ruth Schwartz. “American Ideas about Technology.” *A Social History of American Technology*. New York: Oxford UP, 1997. 201-19.

MacKenzie, N.:

pp.165-174: Kuhn, Thomas S. “The Route to Normal Science.”

Sidebar: Acknowledging your sources

<http://web.uvic.ca/wguide/Pages/CitationsTOC.html>

WEEK 2

M 4/4 **Due: Major Paper #1 – Thesis**
Group membership - No more than four per group, please

► Arthur, Brian. “Competing Technologies and Economic Prediction.” *A Social History of American Technology*. New York: Oxford UP, 1997. 106-112.

Sidebar: Effective presentations

<http://web.cba.neu.edu/~ewertheim/skills/oral.htm>

W 4/6 **Due: Response Paper #1**

► Hughes, Thomas. “Edison and the Electric Light.” *A Social History of American Technology*. New York: Oxford UP, 1997. 50-63.

(continued on next page)

► Sclove, Richard. "Making Technology Democratic." *Resisting the Virtual Life: The Culture and Politics of Information*. Eds. James Brooks and Iain A. Boal. San Francisco: City Lights, 1995. 85-101.

Sidebar: What is an outline?

http://owl.english.purdue.edu/handouts/general/gl_outlin.html

http://owl.english.purdue.edu/handouts/general/gl_outlinS.html

WEEK 3

Social Engineering through Technology

M 4/11 ► Kluger, Jeffrey and Dorfman, Andrea. "The Challenges We Face." *Time* 26 Aug. 2002. A7-A19.

MacKenzie, N.

pp. 71-80: Weinberg, Alvin M. "Can Technology Replace Social Engineering?"

pp. 149-56: Thomas, Lewis. "The Hazards of Science."

W 4/13 **Due: Major Paper #1 – Outline**

Group #1 Presentation

WEEK 4

Biases in Science

M 4/18 **Due: Major Paper #1 – Rough Draft**

MacKenzie, N.

pp. 186-97: Gould, Stephen Jay. "Blacks and Indians Treated as Separate, Inferior Species."

pp. 198-206: Hardison, O.B. Jr., "Charles Darwin's Tree of Life."

Sidebar: What is a peer review?

<http://writing2.richmond.edu/writing/wweb/peeredit.html>

W 4/20 **Group #2 Presentation**

► Barondess, Jeremiah A. "Care of the Medical Ethos, with Some Comments on Research: Reflections after the Holocaust." *Perspectives in Biology and Medicine*. 43 (2000). 308-324.

WEEK 5 Mid-quarter Course Evaluation

Women & Technology

M 4/25 Due: Major Paper #1

► Cowan, Ruth Schwartz. "The Industrial Revolution in the Home."

W 4/27 Group #3 Presentation

MacKenzie, N.

pp. 238-46: Florman, Samuel C. "The Feminist Face of Antitechnology."

pp. 247-60: Cowan, Ruth Schwartz. "From Virginia Dare to Virginia Slim: Women and Technology in American Life."

WEEK 6

Ethics & Animal Rights

M 5/2 Due: Response Paper #2

MacKenzie, N.

pp. 405-409 Ehrenreich, Barbara. "Science, Lies, and the Ultimate Truth."

pp. 410-417 Baumrind, Diana. "Some Thoughts on the Ethics of Research."

<http://onlineethics.org/moral/boisjoly/RB-intro.html>

<http://onlineethics.org/essays/shuttle/bois.html>

W 5/4 Due: Major Paper #2 – Thesis

Group #4 Presentation

MacKenzie, N.

pp. 175-185: Goodall, Jane. "The Mind of the Chimpanzee."

pp. 435-8: Karpati, Ron. "A Scientist: 'I Am the Enemy.'"

pp. 142-147: Eiseley, Loran. "Science and the Sense of the Holy."

<http://streaming1.osu.edu:80/ramgen/media/eng367sp04/367-02.rm>

WEEK 7

The Ubiquitous Internet

M 5/9 MacKenzie, N.
 pp. 212-22: Bolter, Jay David. "The Network Culture."

▶ Ebo, Bosah. "Internet or Outernet?" *Cyberghetto or Cybertopia? Race, Class, and Gender on the Internet*. Ed. Bosah Ebo. Westport, Conn: Praeger, 1998. 1-12.

Sidebar: Creating an annotated bibliography.

http://owl.english.purdue.edu/handouts/general/gl_annotatedbib.html

http://owl.english.purdue.edu/handouts/general/gl_annotatedbibEX.html

W 5/11 **Due: Response Paper #3**

Group #5 Presentation

WEEK 8

Invisible, Negative, & Irrelevant Technologies

M 5/16 **Due: Major Paper #2 – Annotated Bibliography**

MacKenzie, N.:

pp. 128-137: Postman, Neil. "Invisible Technologies."

pp. 124-127: Samuelson, Robert. "Technology in Reverse"

Technology & Sports

W 5/18 **Group #6 Presentation**

▶ McGraw, Dan. "A Whole New Ball Game" *Prism*, December 22, 2002, 20-25.

WEEK 9

Science, Technology, & Feelings

M 5/23 **Due: Major Paper #2 – Outline**

MacKenzie, N.:

pp. 471-8: Sacks, Oliver. “On the Level.”

pp. 464-70: Selzer, Richard. “The Exact Location of the Soul.”

Technology & Religiosity

W 5/25 **Due: Response Paper #4**

http://www.religion-online.org/cgi-bin/researchd.dll/showarticle?item_id=1412

http://www.positiveatheism.org/india/gora22.htm#CHAP_VI

<http://islamonline.net/english/index.shtml>

http://teaching_buddhism.tripod.com/infotech.html

<http://www.energysdream.com/tarot/tarotBranch.html>

<http://www.united.edu/marc.shtml>

WEEK 10

M 5/30 **Memorial Day – No classes**

W 6/1 **Due: Major Paper #2 – Rough Draft**

FINALS WEEK

M 6/6 **Due: Major Paper #2 in 203 HI by noon. No exceptions.**

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Sample Cover Page (do not number this page)

Title

centered, bold, Times New Roman, 12 point

Your Name

Assignment: *direct from syllabus, e.g., Major Paper #2 – Outline*

Engineering 367

Winter Quarter 2005

Dr. John D. Chovan

Due: *due date*

Submitted: *date submitted, but only if submitted late*

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Response Paper Topics

A minimum of 2 pages per paper. These are not collaborative assignments.

Response Paper #1 – RP1

(Assignment was adapted from *Science and Technology Today*, page 110.)

Observe people around you and talk to your friends and acquaintances to identify examples of resistance to technology and examples of embracing technology. Draw examples from your own life and what you have observed firsthand in the past. Analyze a specific example of people resisting new technology that cannot be explained only by age differences. Summarize your observations in detail and write your conclusions about why people embrace certain types of technology while rejecting or resisting others. Include a list at the end of your paper of the people with whom you talked during the course of developing this paper.

Response Paper #2 – RP2

(Assignment was adapted from *Science and Technology Today*, page 232)

Review advertisements in several general interest magazines: one targeted toward male audiences (for example, *GQ*, *Esquire*, *Maxim*, *Men's Health*, and *Sports Illustrated*), one targeted toward female audiences (for example, *Cosmopolitan*, *Glamour*, *Marie Claire*, *Vogue*, *Women's Day*), and one targeted to both male and female audiences (for example, *Time*, *Newsweek*, *Business Week*, *Saturday Evening Post*, and *U.S. News & World Report*). Determine what images are frequently used to present technological products. Analyze and draw conclusions from your findings about language, images, clothing, the inclusion of people, colors, and techniques that seem to dominate the advertisements. How do these advertisements influence American society?

Response Paper #3 – RP3

With the advent of chat rooms, desktop video cameras, and high bandwidth connections in homes, the Internet has changed how people communicate with one another. One arena that has experienced substantial activity with these tools is that of expression of sexuality. Some scholars believe that the Internet has given people more freedom to express minority sexual orientations and has influenced the acceptance of them by the general American populace. Do you agree? If so, why? What are the advantages and disadvantages brought to bear by technology on sexual freedom and expression of sexual orientation? How has the acceptance in American culture of different sexual orientations been influenced by the availability of technology for sexual expression? What has been the impact of technology on acceptance of others whose sexual orientation is different than one's own?

Response Paper #4 – RP4

Discuss the role of technology in sports in the United States. What is sport and how has technology changed it over the past fifty years? How does technology help or hinder human athletic performance? Will athletic performance continue to improve or are human beings limited in spite of technological assistance? Where do you predict technology will be most useful in sports in the future? What technology would you like to see invented for sports that has not yet been invented?

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