

History 3394: Technology and Medicine in Modern America

Professor Roberta Bivins

Course Summary: Medicine as it exists in contemporary America is profoundly technological; we regard it as perfectly normal to be examined with instruments, to expose our bodies to many different machines; and to have the knowledge produced by those machines mechanically/electronically processed, interpreted, and stored. We are billed technologically, prompted to attend appointments technologically, and often buy technologies to protect, diagnose, or improve our health: consider, for example, HEPA-filtering vacuum cleaners, air-purifiers; fat-reducing grills; bathroom scales; blood-pressure cuffs; pregnancy testing kits; blood-sugar monitoring tests; and thermometers. Yet even at the beginning of the twentieth century, medical technologies were scarce and infrequently used by physicians and medical consumers alike. Over the course of this semester, we will examine how technology came to medicine's center-stage, and what impact this change has had on medical practice, medical institutions, and medical consumers -- on all of us!

Course Themes: Below, I've listed some of the relationships that we will examine throughout our readings, lectures and discussions. If you can describe AND ANALYZE examples of one or more of these relationships in each reading, and can compare your chosen examples to others studied across the semester, you will be well-prepared to write your essays and take the final exam.

- Technology and the production of medical knowledge;
- Technology and medical professionalization;
- Technology and medical institutions;
- Technology and the patient/consumer;
- Technology and industry;
- Technology and gender;
- Technology and race.

Required Texts (AVAILABLE FROM CAMPUS BOOKSTORE)

- Howell, Joel, *Technology in the hospital: transforming patient care in the early twentieth century* (Baltimore: Johns Hopkins, 1995).
- Holtzmann-Kevles, Bettyann, *Naked to the bone: medical imaging in the twentieth century* (Cambridge, MA: Perseus Publishing, 1997).
- Sandelowski, Maragarete, *Devices and desires: gender, technology and American nursing* (Chapel Hill: University of North Carolina Press, 2000).
- Wailoo, Keith, *Drawing blood: technology and disease identity in twentieth century America* (Baltimore: John Hopkins Press, 1997).

Recommended and Supplementary Texts (also at Campus Bookstore)

- Cartwright, Lisa, *Screening the body: tracing medicine's visual culture* (Minneapolis: Minnesota University Press, 1995).
- Maines, Rachel. *Technology of Orgasm: hysteria, the vibrator an women's sexual satisfaction* (Baltimore: Johns Hopkins, 1999)
- Rudinow-Saetnan, Ann, Nelly Oudshoorn, and Marta Kirejczyk, *Bodies of technology: women's involvement with reproductive medicine* (Columbus: Ohio State University Press, 2000).
- Starr, Douglas, *Blood: an epic history of medicine and commerce* (New York: Perennial, 1998).

Course Mechanics

Contact information:

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Office Hours: Tuesday, 4:30-5:30; Wednesday 1:30-2:30 or by appointment.

All students should meet with me during office hours (or by appointment) **at least once** during the semester, to discuss paper topics and class performance. Attendance will be taken in lectures and discussions; **attendance and participation will be assessed as part of the final grade.** The final examination will draw upon material covered in lectures as well as in the readings. Therefore, students who must miss a lecture should arrange to get notes from another student, or see me. **Students who miss more than three classes may lose up to 10% of their final mark.**

Readings

This syllabus lists required readings; additional required readings may be added on a week by week basis. In some cases, you will be required to watch a movie. **You should be prepared to discuss these readings and/or movies in class.** All required texts are available from the campus bookstore; most are also on reserve in the M.D.Anderson

Library. I will keep additional copies, and copies of supplementary readings in my office, should problems arise with the Reserve collection (in other words, the readings WILL be available somewhere, as long as you give yourself sufficient time to read them before lecture!). **If you find the material difficult, or simply cannot keep up with the required reading, come and talk to me; failure to do the reading in a timely fashion WILL affect your final grade.**

GRADING

20% Class participation,

20% Pop quizzes and research/group assignments (5)

35% 8-10 page essay due on 10th April

25% Final Examination

Details:

Students will be required to write **one 8-10 page essay worth 35% of the course grade.** Students may choose from a list of topics for which ample material is available in the M.D.Anderson Library. An 'A' paper will have a strong and original argument drawn from a variety of sources -- inclusive of, but not limited to material on the reading list. It will also be spell-checked, and grammatical! **[See Page 8 for details]** Students are encouraged to submit drafts. **This paper will be due on April 10 -- I will not (under normal circumstances) accept any late papers.**

An exam, worth 25% of the final grade, will test students' knowledge and understanding of the material through essay and short answer questions drawing on material from the entire course -- inclusive of lectures, discussions, and readings.

Quizzes and research/group assignments will contribute 20% to your final grade. Quizzes will NOT be announced, but will occur roughly every three weeks. They will test your knowledge of the readings, and your ability to consider them in relation to other readings and lectures. Group assignments will be completed handed in during class, based on class discussions. Research assignments (see

syllabus) will be collected in the class-meeting immediately following the research day.

Class performance will determine the residual 20% of your final grade.

Included in this portion of the mark will be

- attendance;
- one oral presentation on the day's readings;
- participation in class discussion; and
- an essay outline to be submitted in class on **March 11**.

Class performance is the one part of your final mark over which you have complete control -- as long as you attend, hand in your outline on time, and are prepared for your presentation and discussions, your class performance can only raise your final mark. Take advantage of this opportunity to insure against that unexpected exam question, or rushed essay!

University Policy

In accordance with the guidelines of the Americans with Disabilities Act, I will make every effort to reasonably accommodate students who request and require assistance. Please inform me of your needs as soon as possible.

Students are required to produce and submit their own original work. Allegations of academic dishonesty (e.g. copying during exams, submitting or using the work of others without proper attribution) will be reported to the appropriate authorities.

Students should consult the Student Handbook to review their responsibilities and rights regarding academic honesty.

All essays will be submitted to anti-plagiarism databases; students will be required to submit their essays directly to www.turnitin.com, as well as handing in a hard copy on April 10th.

SYLLABUS AND LECTURE SCHEDULE

Week 1

Lecture 1: Introduction

Lecture 2: Medical technology: artifacts and practices

Reading: Howell, Chapter 1, Sandelowski, Chapter 2

Week 2

Lecture 3: Technology and modernity: the hospital and ‘scientific management’

Reading: Howell, Chapter 2

Lecture 4: Technology and clinical traditions

Reading: Howell, Chapter 3

Section 1. X-Rays and Medical Modernity

Week 3

Lecture 5: Novelty, modernity, and ‘vision’: the exciting X-ray

Reading Holtzmann-Kevles, Chapter 1;

Lecture 6: Selling Sight: X-Rays and the marketplace

Reading: Holtzmann-Kevles, Chapter 3

Week 4

Lecture 7: X-rays, exposure, and cinema

Reading: Cartwright, Chapter 5

Lecture 8: Integrating technological innovation: making room for technological diagnostics

Reading: Howell, Chapter 4

Week 5

Lecture 9: Technology and professionalization (part 1): Regulating radiology

Reading Holtzmann-Kevles, Chapter 4

Lecture 10: Gender and the technological gaze (part 1)

Reading: Howell, Chapter 5

Week 6

Lecture 11: Technology and professionalization (part 2): Nursing

Reading: Sandelowski, Chapter 1

Lecture 12: Women, technology and the public health

Reading: Cartwright, Chapter 6

Section 2. Medical Technology and medical identities

Background reading: Wailoo, Introduction

Week 7

Lecture 13: Defining disease: technology, blood and the disappearing domestic sphere

Reading: Wailoo, Chapter 1

Lecture 14: Technology, disease, and specialization

Reading: Wailoo, Chapter 2

MARCH 1-9 SPRING BREAK

Week 8

Lecture 15: Industrial disease, technological management

Reading Wailoo, Chapter 3

OUTLINES DUE IN CLASS

Lecture 16: ‘Miracles’ and the public response to technological medicine

Reading: Wailoo, Chapter 4

Week 9

Lecture 17: Diagnosing ‘Race’

Reading: Wailoo, Chapter 5

Lecture 18: Disease, technology and ethnicity

Reading: Valier and Bivins, ON RESERVE

Section 3. Technologies of gender, technologies of sex

Week 10

Lecture 19: Caring machines: nurses and medical technology, post 1950

Reading: Sandelowski Chapter 5

Lecture 20: Maverick Medicine: the Pill

Rudinow-Saetnan, Chapter 2

Week 11

Lecture 21: Technological innovation, medical experimentation

Reading: Rudinow-Saetnan, Chapter 5

Lecture 22: Reproducing masculinity: ‘male’ contraceptive technologies

Reading: Rudinow-Saetnan, Chapter 3

Week 12

Lecture 23 Visualization and professionalization: nursing and fetal monitoring

Reading: Sandelowski, Chapter 6

Lecture 24 MOVIE

(No reading)

PAPERS DUE IN CLASS AND TO WWW.TURNITIN.COM

Week 13

Lecture 25 Power, ethnicity, and medical technology

Reading: Rudinow-Saetnan, Chapter 14

Lecture 26: ‘Hysteria’ sex and technology

Reading Maines, TBA

Week 14

Lecture 27 'Failed' innovations: the decline of the medical vibrator

Reading Maines, TBA

Lecture 28 Conclusion

No Readings

Please note that this schedule may be changed; students will be notified of all changes in advance if possible.

Assessment criteria for essays/exam answers (see also 'Writing a strong essay')

Format: Essays must be typed/word-processed . They must be either 1.5 or double-spaced, and the font should be 12 point. Margins, headers and footers should not be more than 1.3 inches.

I will assess your written work according to the following criteria:

1. **empirical coverage of the relevant literature:** Have you drawn upon a wide range of readings, going beyond the lectures and required reading?
2. **understanding:** Did you grasp the main concepts and arguments presented in readings and lectures?
3. **structure of the argument:** Is your argument clear, persuasive and insightful? Is it comprehensive? Is it original?
4. **critical capacity:** Have you spotted the limitations of your sources, and the weaknesses of authors' arguments, etc.?
5. **prose:** Is your writing clear, grammatical, properly punctuated and without spelling errors?
6. **organisation of the material:** Have you presented your material (argument and evidence) clearly, and does it make sense as a sequence?
7. **format:** Does your essay abide by the appropriate guidelines (attached!) for such work? In particular, have you cited your sources and connected your evidence to your arguments appropriately?