

HISTORY OF MODERN MEDICINE

The making of scientific medicine from the anatomy theatre to the human genome project and beyond

Instructor: Cathy Gere

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MWF, 2 – 2.50 pm, Cognitive Science Building, 001

Office hours, Tuesdays, 3-5

Dealing with life and death, suffering and healing, scientific medicine is a repository for humanity's most extravagant hopes and acute anxieties. This class on the History of Modern Medicine is aimed at students who would like to take the 'longer view' of the challenges and conundrums of medical science. We will investigate the origins of aspects of contemporary life familiar to us all, from vitamins, to vaccines, to giving birth in hospital, bringing a historical perspective to topics such as pharmaceutical industry profits, human experimentation, medical racism, and public health mandates.

All the required readings will be available through the Canvas site; all the assignments are take-home; there is no sit-down final exam. The lectures will be podcast. Attendance is encouraged, but not mandated.

Learning Objectives

By the end of this course students should demonstrate:

1. Mastery of the broad outlines of the history of scientific medicine;
2. Historical understanding of contemporary issues;
3. Improvement in their powers of written expression;
4. An understanding of the difference between primary and secondary sources;
5. The capacity to analyze primary sources in their written work;
6. A preliminary grasp of scholarly research methods;
7. An ability to use scholarly citation technique.

What your grade will be based on

There will be a total of five written assignments, which will comprise the entirety of your grade. You will write short papers on four out of a possible seven topics, over the first seven weeks, and also a longer final essay. All assignments are take-home, and all submissions will be online.

As you know, we take plagiarism extremely seriously at UCSD. Your essays will be screened by the Turnitin software for any evidence of improper use of the words of other people. The instructor and the TAs will also be looking out for evidence of buying essays online and other forms of cheating. It is very easy to detect this kind of thing. These assignments are unusual, and no-one outside of the class will be able to do an even halfway plausible job. If you cheat, you will be caught, and you will face consequences, so don't bother!

Course Outline and Readings

FIRST WEEK: Enlightenment

Greatest Benefit, Ch. 10, 'Enlightenment'

Edward Jenner. (1798) *An Inquiry into the causes and effects of the Variolae Vaccinae*.

John Birch, (1806) *Serious Reasons for Uniformly Objecting to the Practice of Vaccination, in answer to the report of the Jennerian Society*. London: Printed by Smeeton for Harris.

SECOND WEEK: Revolution and the Clinic

Greatest Benefit, Ch. 11, 'Scientific Medicine in the 19th Century'

Laennec, Rene. 1829. *A Treatise on Diseases of the Chest and On Mediate Auscultation*. Trans. John Forbes M.D., London: Thomas & George Underwood.

Louis, Pierre Charles. 1836. *Researches on the Effects of Bloodletting in Some Inflammatory Diseases*. Trans. C. G. Putnam. Boston: Hilliard Gray and Co., pp. 55-70.

THIRD WEEK: Laboratory research

Greatest Benefit, Ch. 12. 'Nineteenth-Century Medical Care'

Bernard, Claude. 1865 (1949). *An Introduction to the Study of Experimental Medicine*. Trans. Henry Greene. New York: Henry Schuman Inc., pp. 5-26.

FOURTH WEEK: Epidemiology

David Vachon, 'Father of Epidemiology,' *Old News*, 16(8), pp.8-10, May and June, 2005

Snow, John. 1855. 'On the Mode of Communication of Cholera,' Second Edition, much enlarged.

FIFTH WEEK: Germ theory

Greatest Benefit, Ch. 19, 'Surgery'

Huxley, T. H. 1881. "An Address on the Connection of the Biological Sciences with Medicine." *British Medical Journal*, August 13th, 1881, pp. 273-281

Pasteur, Louis. 1881. 'An Address on Vaccination in Relation to Chicken Cholera and Splenic Fever. *British Medical Journal*, August 13th, 1881, pp. 283-284

SIXTH WEEK: Pharmaceutical industry

Guttman, P., and Ehrlich, P. 1891. "On the Action of Methylene Blue on Malaria" in *The Collected Papers of Paul Ehrlich*, ed. F. Himmelweit. London: Pergamon Press, 1960.

Bosch F., and Rosich L. (2008) 'The Contributions of Paul Ehrlich to Pharmacology: A Tribute on the Occasion of the Centenary of His Nobel Prize.,' *International Journal of Experimental and Clinical Pharmacology*, Vol. 83, #3.

SEVENTH WEEK: Medical eugenics

Bachrach, Susan. 2004. "In the Name of Public Health -- Nazi Racial Hygiene" *New England Journal of Medicine*. 351:5, July 29th, 2004

Karl Kessler (2007) 'Physicians and the Nazi Euthanasia Program' *International Journal of Mental Health* Vol. 36, No. 1

Paul Popenoe, *Applied Eugenics*, Chapter X

EIGHTH WEEK: War on disease

Bush, Vannevar. 1945. 'Science, the Endless Frontier: a report to the President' pp. 10-16.

E. Chain, H. W. Florey, A. D. Gardner, N. G. Heatley, M. A. Jennings, J. Orr-Ewing and A. G. Sanders (1940). "Penicillin as a Chemotherapeutic Agent." *Lancet*, 1940, 2, July-December, pp. 226-28.

Ligon, B. 2004. "Penicillin: Its Discovery and Early Development." *Seminars in Pediatric Infectious Diseases*, 15:1, pp. 52-57

Gere, Cathy. "American Research After Nuremberg," from *Pain, Pleasure and the Greater Good*, University of Chicago Press, 2017, excerpts prepared for HISC 115.

NINTH WEEK: Global health

Declaration of Alma Ata

'The roles of the Government and Market in Health,' in *World Bank Development Report, 1993: Investing in Health*.

Dean T Jamison, et al. (2013) 'Global health 2035: a world converging within a generation.' *The Lancet*, Vol. 382.

TENTH WEEK: Genetic medicine and neoliberal medicine

Ben Goldacre, (2012) *Bad Pharma: How Drug Companies Mislead Doctors and Harm Patients*. New York: Farrar Straus and Giroux.

Eric Lander et al., (2016) "The Heroes of CRISPR," *Cell* 18:164