Early Modern Science & Medicine

1500-1800

History 494N

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Spring Semester, 2006
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OH: T-Th: 9:45-12:00

THE COURSE

Scientific, medical, and technological progress has become so fundamental to our lives that we find it hard imagine a world without it. This course asks you to do just that: to imagine a world without modern science and medicine and then to understand the very different views that pertained in early modern Europe. When our period begins, virtually all Europeans believed that the earth was the center of the planetary system. Ancient authorities such as Aristotle, Galen, Hippocrates, 'Hermes,' and Ptolemy held enormous sway. Mathematics was rarely used to measure and explain the universe, and the idea of an experiment was not clearly understood. Both science (natural philosophy) and medicine were inextricably bound up with various metaphysical, religious, and societal beliefs. Much of this had changed by 1800, and to understand fully these changes, we will examine both the changes in medical and scientific ideas and the broad historical contexts—political, economic, religious, social, and intellectual- in which these changes took place.

REQUIRED READING

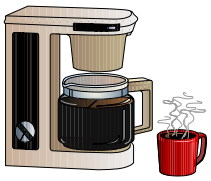
Lisa T. Sarasohn, *The Scientific Revolution* (Houghton Mifflin, 2006) ISBN 0-618-05243-7.

John Henry, *The Scientific Revolution and the Origins of Modern Science*, 2nd edition (Palgrave, 2002) ISBN 0-333-96090-4.

Peter Elmer, editor, *The Healing Arts: Health, Disease and Society in Europe, 1500-1800* (Manchester University Press, 2004) ISBN 0-7190-6734-0.

Peter Elmer and Ole Peter Grell, *Health, Disease and Society in Europe, 1500-1800: A Source Book* (Manchester University Press, 2004) ISBN 0-7190-6737-5.

REQUIREMENTS



ATTENDANCE. For a one-day-a-week course, attendance is absolutely crucial, so arrange you work, family, and social commitments accordingly.

PREPARATION. Weekly readings to prepare your for classroom discussions and quizzes.

PARTICIPATION. Build a climate of thoughtful curiosity by asking questions, participating in class discussions, and engaging the material. The success of the course depends partially on your participation.

EXAMS. A mid-term and a final, each with an ingenious array of essay and short answer questions.

QUIZZES. Announced quizzes on the readings for the week, designed to test for a basic knowledge of the reading and make for an informed discussion.

ORAL PRESENTATION: TEACH A DOCUMENT. Each student will choose a natural philosopher or a physician and teach a mini-class (10-15 minutes) on that subject. Your presentation should involve a discussion of a short primary source document (provided by me if necessary).

PAPER. A research paper of seven to eight pages that meets the following criteria:

1) a significant part of the paper must involve the interpretation of a primary source;

2) the paper must have a solid bibliography with at least two scholarly articles and two books, due on **March 23**;

3) the paper must be properly documented, using the Chicago Style for footnotes and bibliography;

4) the paper is due **April 20.**

Your paper may be deeper examination of the topic for your oral presentation.

GRADING

Exams (2)	20%
Quiz Average	20%
Oral Report	20%
Research Paper	20%

The standard ten-point grading scale applies: A = 90-100, etc. I reward improvement over the semester.

INTEGRITY

The minimum penalty for cheating or plagiarism is to fail the course. As required by the Faculty Manual, I will report any such cases to the Chair of the Department and the Dean, who may take further action. Students are responsible for knowing what constitutes plagiarism.

Class Schedule
History 494N Early Modern Science and Medicine

H = Handouts. Unless otherwise stated, quizzes will cover the primary sources.

Date	Topic	Readings
2/19	Approaches to the History of Science and Medicine (H)	Approaches to the History of Science and Medicine Sarasohn, "Introduction, p. 1-5 Henry, p. 1-14 Elmer, *The Healing Arts*, xi-xxiii.
	"Science" in 1500 Medicine in 1500	Plato and Aristotle on Math and Physics (H) Elmer, *The Healing Arts*, Chapter 1 Elmer and Grell, Sections 1.1 through 1.4
2/26	1543: A Heliocentric Cosmos	Henry, 14-30. Copernicus, From "On the Revolutions...."
	Medical Practice & the Humors	Brian Nance, "Determining the Patient's Temperament," (H)
2/2	Copernicus' Early Disciples: Kepler *of the World* (H)	Kepler, *The New Astronomy & The Harmonies*
	Varieties of Healers	Elmer, Ch. 2 "The Sick and Their Healers" Elmer and Grell, 2.2, 2.3, & 2.4
2/9	Copernicus' Early Disciples: Galileo *Messenger* (H)	Galileo, From the *Dialogue*, & *Starry*
	1543: Vesalius' Anatomy Vesalius"	Elmer, Ch. 3 "Medical Renaissance & Elmer and Grell, 3.3, 3.4, & 3.5
2/16	**Celebration of Inquiry**	
2/23	Galileo & the Church Medicine & Religion	Galileo & Cardinal Bellarmine, Letters," (H) Elmer, Ch. 4 "Medicine & Religion" Elmer and Grell, 4.5, 4.6, & 4.7
3/2	Bacon and Experimental Science	Henry, 30-53 Bacon, Selections from *The New Organon*. (H) Findlin, *Possessing Nature* (H)
	The Chemical Assault on Galenism	Elmer, Ch. 5 Elmer and Grell, 5.2 & 5.3
3/9	**No Class; I'm in Washington, DC**	Complete bibliography for paper.
3/16	**Spring Break**	

3/23	**Bibliography and Outline Due.**	
	Descartes and Deductive Science	Descartes, *Optics* & *The Discourse on Method* (H)
	Public Health in the Renaissance	Elmer, Ch 6 Elmer and Grell, 6.1 & 6.2
3/30	Isaac Newton	Selections from the *Principia* (H)
	Harvey & the Circulation of the Blood	Elmer, Ch. 7 From *De motu cordis* (H)
4/6	Enlightenment (Mechanical) Science	Henry, Chapter 5
	Mental Illness	Elmer, Ch. 9.1 & 9.2
4/13	**Papers Due.**	
	Big Issues: Science and Women	L. Sarason on Margaret Cavendish (H)
	Women & Medicine	Elmer, Ch. 8 Elmer & Grell, 8.3, 8.4, & 8.5
4/20	Big Issues: Science and Religion	Henry, Ch. 6 S. F. Mason on Science and Calvinism (H)
4/27	Big Issues: Science and Society	Henry, Ch.7 Shapin & Shaeffer, *Leviathan and the Air Pump* (H)