



PH/HU360: THE LEGACY OF SCIENTIFIC INQUIRY AND THE PRACTICE OF MEDICINE IN ITALY FROM THE MEDIEVAL PERIOD TO THE MODERN ERA
IES Abroad Siena

DESCRIPTION:

In this course, we delve into the rich evolution of the practice of medicine and science in Italy. Taking an interdisciplinary approach, we analyze the philosophical notions of the body, mind, and soul, tracing such practice back to the ancient world, then examine how Arabic, Jewish, and Christian scholars integrated Classical teachings into their own worldview as advances were then made through empirical research. As Europe's population rose from the 11th to 13th centuries, the role of universities and hospitals as providers of health and social services grew in prominence. Using primary and secondary sources, we can explore the impact of historical pandemics like the Black Death and analyze how they informed the development of medicine and public health regulations, paving the way for the Enlightenment. Embarking on a journey from humoral theory to an increasingly scientific understanding of how the human body functions, we investigate how the art of medicine transformed into a rigorous science, one that, however, never ceased to be an art.

This course also extends beyond the classroom, taking full advantage our location with multiple course-related trips to bring the historical significance of past medical practices and institutions into vivid focus. In addition to visits to numerous Siennese sites (its ancient hospital, current voluntary medical services, and university museums), we will travel to Florence and either Bologna or Padua to further our discussion of the scholastic tradition and see intriguing collections of anatomical waxworks, then delve into physiological advancements by visiting a 16th-century university anatomical theater.

This course is required of all students enrolled in the Siena Biomedical Technology program and is held during the first month of the program prior to the start of courses at the University of Siena.

CREDITS: 3

CONTACT HOURS: 45

LANGUAGE OF INSTRUCTION: English

INSTRUCTOR: Dr ---, with guest lectures provided by a professor of x from the University of Siena

PREREQUISITES: Enrollment in the Siena Biomedical Technology program

ADDITIONAL COST: none

METHOD OF PRESENTATION:

In-class lectures, discussions (based on assigned readings), and course-related trips to museums and various sites. Lectures include PowerPoint presentations, which will be available on Moodle.

REQUIRED WORK AND FORM OF ASSESSMENT:

- Active class participation, and class discussion: 10%
- Moodle assignments: 20% (field trip reflections; quizzes; discussion boards)
- Research project and presentation: 20%
- Midterm exam: 25%
- Final exam: 25%

Class participation, and class discussion

Students are expected to complete all readings for each class and actively engage in discussions.

Moodle assignments

These are designed to assess students' understanding of readings, course-related trips, and themes of the previous lessons. Moodle assignments may include student reflections, quizzes, or contributions to discussion posts.



Research project and presentation

A 1250- to 1750-word research paper (with footnotes and bibliography) with accompanying PowerPoint presentation (7-8 minutes) that focuses on an important figure in medical history. The presentation will be delivered from the point of view of the historical character; after all presentations have been given, a round-table “debate” will take place so that each figure may defend their contributions to the history of medicine and science.

Midterm exam

In-class written exam with multiple-choice questions and short essays (2 hours).

Final exam

In-class written exam with multiple-choice questions and short essays (2 hours).

LEARNING OUTCOMES:

By the end of the course, students will be able to:

- recognize major figures in the history of medicine in Italy from the ancient world to the present, and evaluate their contributions to our understanding of the natural world and human health;
- analyze the impact of cultural, religious, and political factors on the progress of scientific and medical knowledge over time, including instances of conflict and cooperation between different belief systems and institutions;
- examine the evolution of scientific and medical methodologies, including changes in experimental techniques, technological advancements, and shifts in theoretical frameworks;
- critically assess the roles of gender, race, and socio-economic status in shaping access to education and participation in the scientific and medical communities;
- synthesize interdisciplinary perspectives by exploring connections between scientific and medical developments and broader historical, cultural, and philosophical trends, illuminating the complex interplay between science, society, and human values.

ATTENDANCE POLICY: Successful progress of the program depends on the full cooperation of both students and faculty members; regular attendance and active participation in class are essential parts of the learning process. Attendance at and participation in all class meetings and course related trips are required. IES Abroad Siena allows a maximum of TWO excused absences per semester. Each further absence will automatically result in a penalty of two points off (2/100) of the final grade. SEVEN absences per course (including the 2 excused absences) will result in a failing grade for that course. Furthermore, an absence on the date of scheduled tests, presentations, or quizzes does not entitle the student to recover/reschedule such tests. Failure to attend the midterm and/or final exam will result in an F grade on that paper/exam.

CONTENT:

Session	Content	Assignments
		NB: All readings in this column should be completed by each session.
Session 1	Introduction to the Course • Why does the history of medicine matter? • Ideas of the body and health • The pillars of ancient medicine: Hippocrates and Galen	• Mark Jackson, “Introduction” (pp. 1-14), in <i>The Oxford Handbook of the History of Medicine</i>.

Session	Content	Assignments
Session 2	Ancient Traditions to the Scholastic Age - Jewish, Arabic, and Christian scholarship - From monastery to university <i>Schola Medica Salernitana</i>	- Rothman et al, ed., <i>Medicine and Western Civilization: "Hippocrates"</i> (pp. 43-47), "Galen" (pp. 17-22) - Nancy G. Siraisi, Ch 1 (pp. 1-16) in <i>Medieval & Early Renaissance Medicine: An Introduction to Knowledge and Practice</i>. - Ahmed Ragab, "Introduction" (pp. 1-11) in <i>The Medieval Islamic Hospital: Medicine, Religion, and Charity</i>.
Session 3	Course-Related Trip: Urban Planning (walking tour of Siena) - The rise of the city - Order, rationality, beauty, health: how does a city's structure affect its citizens?	Fabrizio Nevola, Ch 1 "Turn Your Eyes to Behold Her" (pp. 5-27) in <i>Siena: Constructing the Renaissance City</i>.
Session 4	"Medicine before Science" - Theoretical vs practical medicine (guest speaker) - Barbers, apothecaries, healers	- Roger French, Ch 2 (pp. 34-56) of <i>Medicine Before Science. The Rational and Learned Doctor from the Middle Ages to the Enlightenment</i>. - Luis García-Ballester, "Introduction" (pp. 1-29) in <i>Practical Medicine from Salerno to the Black Death</i>. - Moodle Discussion Board.
Session 5	Plagues and The Great Mortality - Pandemics in history (with a discussion of Coronavirus and the Covid-19 pandemic) - The Black Death, 1348	- John Aberth, "Introduction" (pp. 1-10) in <i>The Black Death: A New History of the Great Mortality in Europe, 1347-1500</i>. - Sheldon J. Watts, excerpt from Ch 1 (pp. 1-25) in <i>Epidemics and History: Disease, Power, and Imperialism</i>
Session 6	Course-Related Trip: Santa Maria della Scala, Siena The birth of the Hospital	John Henderson, "Introduction" (pp. xxv-xxxiv) in <i>The Renaissance Hospital: Healing the Body and Healing the Soul</i>.
Session 7	Public Health as a Common Good Charity beyond theological virtue: health and social services as civic duty	- Anna M. Peterson, "Public Health and Hospitals in Medieval Siena before the Black Death" (pp. 175-194) - Sally Mayall Brasher, Ch 1 (pp. 11-23) in <i>Hospitals and Charity: Religious Culture and Civic Life in Medieval Northern Italy</i>
Session 8	Course- Related Trip: Misericordia, Siena - Healthcare in medieval Tuscany and today - Patronage of scientific research	- Diana Norman, "When Charity Fails: Andrea Gallerani and the Memory of the Misericordia in Siena" (pp. 91-118). - Moodle Discussion Board.

Session	Content	Assignments
Session 9	Course-Related Trip: Florence - Hospital of the Innocents - City walking tour - Anatomical waxworks at La Specola	(Sessions 9 and 10 will be held on the same day, with class meeting before and after lunch) - John Henderson, Ch. 1 (pp. 3-33) <i>The Renaissance Hospital: Healing the Body and Healing the Soul</i>.
Session 10	Course-Related Trip: Florence - Hospital of the Innocents - City walking tour - Anatomical waxworks at La Specola	(Sessions 9 and 10 will be held on the same day, with class meeting before and after lunch)
Session 11	Women in Medicine - Women as healers, nurses, doctors, teachers - The perils of androcentric history and practice	Monica Helen Green, Introduction (pp. 1-28) in <i>Making Women's Medicine Masculine: The Rise of Male Authority in Pre-modern Gynaecology</i>.
Session 12	Cults of Healing - Religious devotion and traditional medicine - Christian saints in art	Louise Marshall, "Manipulating the Sacred: Image and Plague in Renaissance Italy" (pp. 485-532)
Session 13	MIDTERM EXAM	2-hour in-class exam.
Session 14	The Art of the Body - Artistic and scientific representations of the male and female forms, from Classical art to Renaissance masters to anatomical drawings and waxworks - Dissection: illicit to legitimate practice - Effects of religious suppression on scientific enquiry	Laurenza, Domenico. "Art and Anatomy in Renaissance Italy" (pp. 4-48).
Session 15	Course-Related Trip: Museum of Medical Instruments, Siena Evolution of surgical techniques (guest speaker)	Roy Porter, "Hospitals and Surgery" (pp. 176-210) in <i>The Cambridge History of Medicine</i>.
Session 16	The Science of Anatomy - Advancements "Mysteries" of the female form (Guest speaker?)	- Excerpts from Monica Helen Green, <i>Making Women's Medicine Masculine: The Rise of Male Authority in Pre-modern Gynaecology</i>. - Excerpts from Laurence I Conrad, Michael Neve, Vivian Nutton, Roy Porter, Andrew Wear, eds., <i>The Western Medical Tradition: 800 BC to AD 1800</i>.

Session	Content	Assignments
Session 17	Course- Related Trip: Padua OR Bologna - Padua: Anatomical Theatre, Palazzo Bo - Bologna: Anatomical Theatre; anatomical waxworks collection at Palazzo Poggi	(sessions 17 and 18 will be held on the same day, with class meeting before and after lunch) - Cynthia Klestinec, Ch 2 (pp. 55-89) in <i>Theaters of Anatomy: Students, Teachers, and Traditions of Dissection in Renaissance Venice</i>. - Katherine Park, excerpt from Ch 5 (pp. 207-21) in <i>Secrets of Women: Gender, Generation, and the Origin of Human Dissection</i> - Baldasar Heseler, "Andreas Vesalius' First Public Anatomy at Bologna, 1540" (pp. 61-65) in Rothman et al, <i>Medicine and Western Civilization</i>
Session 18	Course- Related Trip: Padua OR Bologna - Padua: Anatomical Theatre, Palazzo Bo - Bologna: Anatomical Theatre; anatomical waxworks collection at Palazzo Poggi	(sessions 17 and 18 will be held on the same day, with class meeting before and after lunch) <i>Moodle Assignment.</i>
Session 19	The Enlightenment - Separating the art from the science - Contributions from Italian doctors in the modern age	E. C. Spary, "Health and Medicine in the Enlightenment" (pp. 82-93) in <i>The Oxford Handbook of the History of Medicine</i>. - Ruth Richardson, excerpt from Ch 5 (pp. 117-24) in <i>The Making of Mr. Gray's Anatomy</i>.
Session 20	Presentations Slideshow presentations based on research project	- Research Paper due (upload Word or PDF file to Moodle). - Slideshows due (upload PowerPoint or PDF file to Moodle).
Session 21	Conclusions: Healthcare and Education Today - General Practitioners and Specialized Doctors (guest speaker) - Healthcare: comparing NHS (UK) to the American system, to the Italian system - Why the history of medicine matters. - Where do we go from here?	- Frank Honigsbaum, "The Evolution of the NHS" (pp. 694-99). - Geoff Watts, "Looking to the Future Revisited" (pp. 331-40) in <i>The Cambridge History of Medicine</i>.
Session 22	FINAL EXAM	2-hour in-class exam

COURSE-RELATED TRIPS:

These are intended to enrich students' experience by discussing core concepts *in situ*. Please note that the session number of the course-related trips is subject to change depending on the institution's opening hours and the overall IES semester calendar.

REQUIRED READINGS:

All the required excerpts and articles (in English) are available on the course's Moodle site in PDF format. The instructor is happy to suggest additional readings (both in English and Italian).

- Aberth, John. *The Black Death: A New History of the Great Mortality in Europe, 1347-1500*. Oxford: Oxford University Press, 2020.
- Conrad, Laurence I, Michael Neve, Vivian Nutton, Roy Porter, Andrew Wear. *The Western Medical Tradition: 800 BC to AD 1800*. Cambridge: Cambridge University Press, 1995.
- Brasher, Sally Mayall. *Hospitals and Charity: Religious Culture and Civic Life in Medieval Northern Italy*. Manchester: Manchester University Press, 2017.
- French, Roger. *Medicine Before Science. The Rational and Learned Doctor from the Middle Ages to the Enlightenment*. Cambridge: Cambridge University Press, 2003.
- García-Ballester, Luis, Roger French, Jon Arrizabalaga, and Andrew Cunningham, eds., *Practical Medicine from Salerno to the Black Death*. Cambridge: Cambridge University Press, 1994.
- Green, Monica Helen. *Making Women's Medicine Masculine: The Rise of Male Authority in Pre-modern Gynaecology*. Oxford: Oxford University Press, 2008.
- Henderson, John. *The Renaissance Hospital: Healing the Body and Healing the Soul*. New Haven: Yale University Press, 2006.
- Honigsbaum, Frank. "The Evolution of the NHS". *British Medical Journal* 301 (1990): 694-99.
- Jackson, Mark, ed. *The Oxford Handbook of the History of Medicine*. Oxford: Oxford University Press, 2011.
- Klestinec, Cynthia. *Theaters of Anatomy: Students, Teachers, and Traditions of Dissection in Renaissance Venice*. Baltimore: Johns Hopkins University Press, 2011.
- Laurenza, Domenico. "Art and Anatomy in Renaissance Italy: Images from a Scientific Revolution." *The Metropolitan Museum of Art Bulletin* 69 (2012): 4-48.
- Marshall, Louise. "Manipulating the Sacred: Image and Plague in Renaissance Italy." *Renaissance Quarterly* 47 (1994): 485-532.
- Nevola, Fabrizio. *Siena: Constructing the Renaissance City*. (New Haven: Yale University Press, 2007.
- Norman, Diana. "When Charity Fails: Andrea Gallerani and the Memory of the Misericordia in Siena." In *The Kindness of Strangers. Charity in the Pre-Modern Mediterranean*, ed. by D. Stathakopoulos, 91-118. London: Centre for Hellenic Studies Occasional Publications, 2007.
- Park, Katherine. *Secrets of Women: Gender, Generation, and the Origin of Human Dissection*. New York: Zone Books; Cambridge, MA: MIT Press, 2006.
- Pesta, Duke. "Resurrecting Vivisection: Michelangelo among the Anatomists". *The Sixteenth Century Journal* 45 (2014): 921-50.
- Peterson, Anna M. "Public Health and Hospitals in Medieval Siena before the Black Death." In *A Companion to Late Medieval and Early Modern Siena*, ed. by Santa Casciani and Heather Richardson Heyton, 175-194. Leiden: Brill, 2021.
- Porter, Roy, ed. *The Cambridge History of Medicine*. Cambridge: Cambridge University Press, 2011.
- Ragab, Ahmed. *The Medieval Islamic Hospital: Medicine, Religion, and Charity*. Cambridge: Cambridge University Press, 2018.
- Richardson, Ruth. *The Making of Mr. Gray's Anatomy*. Oxford: Oxford University Press, 2008.
- Rothman, David J., Steven Marcus, Stephanie A. Kiceluk, eds. *Medicine and Western Civilization*. New Brunswick: Rutgers University Press, 1995.
- Siraisi, Nancy G. *Medieval & Early Renaissance Medicine: An Introduction to Knowledge and Practice*. Chicago: University of Chicago Press, 1990.
- Watts, Sheldon J. *Epidemics and History: Disease, Power, and Imperialism*. New Haven: Yale University Press, 1999.

INSTRUCTOR BIOGRAPHY: