Introduction

What was medieval science? Were there scientists in the middle ages? What was the relationship between the Church and the development of science during the medieval period? This course explores these and related questions about the theory and practice of science in the middle ages. In particular, we will examine these issues through a number of specific topics and problems,
such as medieval views on dissection, medieval cartography, and Islamic technology. In each case, we will combine methods from social, intellectual and cultural history.

**Writing requirements**

The writing exercises are intended to allow you to show what you have learned, with respect to both content and analytic skills. To that end, there are a variety of assignments:

**In-class essays—**

There will be 3 or 4 short in-class essays over the course of the semester. These essays will ask you to analyze the recent material, particularly in light of some of the larger themes we will examine in class. In the class preceding each essay I will distribute three or four possible questions of which you will be asked to write on one.

**Mid-term exam—**

The midterm will be a take-home exam. You will be given three questions of which you can select two to answer. Your answers should be approximately 1000 words (no more than 1250 words). You are encouraged to incorporate notes from class discussions as well as material from the primary and secondary source material. This is not a research essay.

**Short essay—**

Over the course of the semester you will write one short research essay, ca. 1000-1500 words. Together we will find a topic or issue that interests you. You will not be expected to conduct substantial primary research; rather, this essay is a chance to explore in greater depth a particular question of interest to you.

**Final exam—**

The final exam will be similar to the midterm. You will be given two sets of questions—one comprehensive and one from the latter part of the course—and will be asked to write on one question from each set. Your answers again should be between 1000 and 1250 words

**Assessment**

The components of your grade and their approximate weight:

- In-class essays — 20%
- Mid-term exam — 20%
- Short essay — 30%
- Final exam — 20%
- Participation — 10%

**Required Texts**
David C. Lindberg, *The Beginnings of Western Science*.
Nancy Siraisi, *Medieval and Early Renaissance Medicine*.
Edward Grant, *Science and Religion, 400 B.C. to A.D. 1550*

In addition to these texts, various articles will be available through Blackboard.

**Recommended Texts**

David Lindberg (ed.), *Science in the Middle Ages*.

**Syllabus**

**WEEK 1: Medieval Science?**

4 September — Introduction

6 September — What is/was Science?
   Lindberg, *The Beginnings of Western Science*, Introduction

**WEEK 2: Encyclopedias and Book Learning**

11 September — Codification and Stagnation?
   Lindberg, *The Beginnings of Western Science*, chap 7
   Pliny, *Historia naturalis*, selection (BB)
   Martianus Capella, *Marriage of Mercury and Philology*, selection (BB)

13 September — The Seven Liberal Arts & Early Medieval Education
   W. Stahl, “The Quadrivium” (BB)
   Isidore of Seville, *Etymologies*, selections (BB)
   Boethius, *Consolation of Philosophy*, selection (BB)

**WEEK 3: Carolingian Astronomy—the Calendar**

18 September — Astronomy in the Carolingian Renaissance
   B. Eastwood, “Astronomy in Christian Latin Europe” (BB)

20 September — Time
   S. McClusky, “Changing Contexts and Criteria” (BB)
   Bede, *On Reckoning of Time*, selections (BB)

**WEEK 4: Islam**
25 September — Islamic science
   Lindberg, *The Beginnings of Western Science*, chap 8
   al-Biruni, *India*, selection (BB)
   Job of Edessa, “Book of Treasures” (BB)
   Recommended
      A.I. Sabra, “Science, Islamic” (BB)

27 September — Technology and Art
   A. Dallal, “Science, Medicine and Technology” (BB)
   al-Biruni, *Elements in the Instruction of the Art of Astrology* (BB)
   <http://www.mhs.ox.ac.uk/astrolabe>

WEEK 5: Revival of Learning & Translations

2 October — Cathedral Schools and Logic
   Lindberg, *The Beginnings of Western Science*, chap 9

4 October — Peter Abelard: Rationalizing God
   Peter Abelard, *Historia calamitatum* (BB)

WEEK 6: Universities

9 October — Assimilating Greek and Arabic Science
   Lindberg, *The Beginnings of Western Science*, chap 10
   Robert Grosseteste, selections (BB)

11 October — Condemning Greek Science
   T. Aquinas, *Physics commentary*, selection (BB)
   Condemnations of 1210, 1255, 1272 and 1277 (BB)

12 OCTOBER — MID-TERM EXAM DUE

FALL BREAK

16/18 October — BREAK

WEEK 7: Medieval Cosmos & Physics

23 October — Heaven and Earth
   Lindberg, *The Beginnings of Western Science*, chap 11
   Sacrobosco, *De sphera* (BB)
   Albertus Magnus, “On comets” (BB)

25 October — Physics
   Lindberg, *The Beginnings of Western Science*, chap 12
   Ockham, “On Motion” (BB)
   J Buridan, selections (BB)
WEEK 8: Medieval Cartography

30 October — Mapping the ‘Real’ World
Kline, “The World of Strange and Monstrous Races” (BB)
Pliny, Historia naturalis, selection (BB)
Medieval maps (handout)

1 November — Mapping the Symbolic World
A. Scafì, “Mapping Eden” (BB)
E. Casey, “Discursive and Presentational Symbolism in Maps” (BB)
Medieval maps (handout)
Portolan charts (handout)

WEEK 9: Medicine from Islam to the Latin West

6 November — Medicine in the Islamic world
N. Siraisi, Medieval and Early Renaissance Medicine, chap 1
E. Savage-Smith, “Medicine” (BB)
Avicenna, Canon, selections (BB)
Rhazes, “Thirty-three clinical observations” (BB)
Recommended:
E. Savage-Smith, “Islamic Culture and the Medical Arts” at <http:/
/www.nlm.nih.gov/exhibition/islamic_medical/islamic_00.html>

8 November — Medicine returns to the Latin West
N. Siraisi, Medieval and Early Renaissance Medicine, chaps 3-4
E. Savage-Smith “Attitudes towards Dissection in Medieval Islam” (BB)
K. Park, “The Life of the Corpse” (BB)
Isidore of Seville, Etymologies, selections (BB)
“Anatomy of the Pig” (BB)
Master Nicholas, “Anatomy” (BB)
Mondino de Liuzzi, “Anatomy” (BB)

WEEK 10: Medical Practice and Practitioners

13 November — Medical Education
N. Siraisi, Medieval and Early Renaissance Medicine, chaps 2, 5
Archimathaeus, “On the Instruction of a Doctor” (BB)
Arnald of Villanova, “De cautelis medicorum” (BB)

15 November — Women as Practitioners and Patients
Trotula, selections (BB)
J-C Schmitt, The Holy Greyhound, selection (BB)
“The Sorceress” (Movie)
WEEK 11: The Black Death

20 November — University Responses
   J. Arrizabalaga, “Facing the Black Death” (BB)
   University sources (BB)
   Physicians sources (BB)
   Recommended
   M. Dols, “The Comparative Communal Responses to the Black Death” (BB)

22 November — Plague Tractates
   A. Campell, “Contents of the Tractates” (BB)
   Tractates selections (BB)

23 NOVEMBER — LAST DAY TO TURN IN ESSAY

WEEK 12: Herbals and Pharmacopeia

27 November — Anglo-Saxon Medical Remedies
   L. Voigts, “Anglo-Saxon Plant Remedies” (BB)
   Anglo-Saxon herbals, selections (BB)

29 November — Materia medica
   Rufinus “Simple Medicines” (BB)
   Antidotarium Nicolai (BB)
   Anglo-Norman medical prescriptions, selections (BB)

WEEK 13: The Church

4 December — Christianity and Science
   E. Grant, Science and Religion, chaps 1 & 4

6 December — Science in a ‘new’ Europe
   E. Grant, Science and Religion, chap 5

WEEK 14: Science as Handmaiden? Theology as Science?

11 December — Universities
   E. Grant, Science and Religion, chap 6

13 December — Is Natural Philosophy Science?
   E. Grant, Science and Religion, chap 7
   Recommended
   A. Cunningham vs. E. Grant on “Natural Philosophy” (BB)
   E. Grant, Science and Religion, chap 8

WEEK 15: FINALS WEEK