

History 3A: The Scientific Revolution
Prof. Mary Terrall
Winter 2006

Lectures: M-W, 2:00 - 3:15, Public Policy 2214

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Office Hours: Wednesday, 11:00-12:00; Thursday, 10:30-12:00.

Teaching Assistants:

Naamah Akavia

Gustavo Garza

The TAs will announce their office hours in section meetings the first week.

--Required Reading (available in ASUCLA Bookstore):

Peter Dear, Revolutionizing the Sciences

Stillman Drake, Discoveries and Opinions of Galileo

Bruce Moran, Distilling Knowledge: Alchemy, Chemistry, and the Scientific Revolution

René Descartes, Discourse on Method

****Also required****: Additional readings posted online and available for download from the course website. (See below for specific assignments.)

All assignments and review materials will be posted on the website along with study questions for each week's readings. You will also find helpful links to various online information and resources.

GRADING AND COURSE REQUIREMENTS:

Attendance at lectures and sections is a required part of the coursework. T.A.s will take attendance and will be grading you on class participation in section. Participation means engaging in focussed discussion on the reading; attendance alone does not count as participation, and neither does discussion not based on the assigned reading. Discussion sections will address the week's reading, so you must do the reading before going to section. Bring the text with you to section. Grades will be calculated as follows:

Attendance and participation:	20%
Take-Home Midterm:	20%
Paper (due 10 th week):	20%
Final Exam:	40%

WEEKLY SCHEDULE AND ASSIGNMENTS (Primary sources marked with ** : These will be stressed in discussion section. Come to class prepared to discuss them.)

Week 1 (Jan. 9-13): Aristotelian natural philosophy; Ptolemaic astronomy

Dear, Chap. 1

Kuhn, Copernican Revolution, [Chap. 2](#), online

**Aristotle, [handout](#) (also posted online)

[STUDY QUESTIONS](#), WEEK 1

MONDAY LECTURE [PPT](#) [PDF](#)

WEDNESDAY LECTURE [PPT](#) [PDF](#)

Week 2 (Jan. 17-20) (Monday Holiday this week): Copernicus and the Renaissance
Kuhn, Copernican Revolution, [Chap. 5](#), online (with special attention to passages from **Copernicus, pp. 137-139, 141-143, 145-154)
**Osiander [Introduction to Copernicus](#), online
Westman, "[Melanchthon Circle](#)," online (link from course webpage).
Dear, Chap. 2

[STUDY QUESTIONS](#), WEEK 2

WEDNESDAY LECTURE [PPT](#) [PDF](#)

Week 3 (Jan. 23-27): Tycho Brahe and Johannes Kepler

Kuhn, pp. [200-219](#), online

Dear, Chap. 4

**[Tycho Brahe](#), online

**[Kepler](#), online

[STUDY QUESTIONS](#), WEEK 3

MONDAY LECTURE [PPT](#) [PDF](#)

WEDNESDAY LECTURE [PPT](#) [PDF](#)

Week 4 (Jan. 30-Feb. 3): Science in Princely Courts; Galileo's Telescopic Discoveries

**Drake, Discoveries and Opinions of Galileo, pp. 14-19, 21-58

[STUDY QUESTIONS](#), WEEK 4

MONDAY LECTURE [PPT](#) [PDF](#)

WEDNESDAY LECTURE [PPT](#) [PDF](#)

Take-Home Midterm due before Lecture, Monday Feb. 6

Week 5 (Feb. 6-10): Trial of Galileo: Science and Scripture

**Drake, Discoveries and Opinions of Galileo, pp. 145-216

[STUDY QUESTIONS](#), WEEK 5

MONDAY LECTURE [PPT](#) [PDF](#)

WEDNESDAY LECTURE [PPT](#) [PDF](#)

Week 6 (Feb. 13-17): Theory and Practice of Alchemy

Moran, Intro. and Chaps. 1-4

[STUDY QUESTIONS](#), WEEK 6 [PPT](#) [PDF](#)

Week 7 (Feb. 21-25) (Monday Holiday this week): Mechanical Philosophy

**Descartes, Discourse on Method

Dear, Chap. 5-6

[STUDY QUESTIONS](#), WEEK 7 [PPT](#) [PDF](#)

Week 8 (Feb. 27 - Mar. 3.): Experimental Natural Philosophy

**Hooke, Preface to Micrographia, [online](#)

**Boyle, “Experiments Concerning the Air Pump,” [online](#)

Dear, Chap. 7

[STUDY QUESTIONS](#), WEEK 8

MONDAY LECTURE [PPT](#) [PDF](#)

WEDNESDAY LECTURE [PPT](#) [PDF](#)

Week 9 (Mar. 6-10): Experiment Philosophy, continued

Moran, Chaps. 5-6

MONDAY LECTURE [PPT](#) [PDF](#)

WEDNESDAY LECTURE [PPT](#) [PDF](#)

[STUDY QUESTIONS](#), WEEK9

*** [PAPER #2](#): (5-7 PP.) DUE MONDAY, MARCH 13 AT BEGINNING OF LECTURE***

Week 10 (Mar. 13-17): Newton and Leibniz

**Leibniz & Clarke [Correspondence](#)

**Newton, “[General Scholium](#)”

Dear, Chap. 8-9

MONDAY LECTURE [PPT](#) [PDF](#)

WEDNESDAY LECTURE PPT PDF

[STUDY QUESTIONS](#), WEEK 10

[STUDY QUESTIONS FOR FINAL EXAM](#)