

ILS 201: Western Culture: Science, Technology, and Philosophy, I
History of Science 201: The Origins of Scientific Thought

SYLLABUS, FALL 2004

Instructor: Lindberg. TAs: Andrews, Bakker, Kundert, Ruis

Course Format:

Two lectures (50-75 minutes) and one discussion section (with a teaching assistant) per week.
Lectures will begin at 1:05, rather than the scheduled 1:00, in 3650 Humanities.

Course Requirements and Grading:

Attend all lectures and discussion sections (don't even consider missing one!); weekly reading. Grading will be based on three take-home essays, weekly (or nearly so) quizzes or other exercises in discussion section, and discussion section participation. TAs will supply further details.

Materials to Purchase:

David C. Lindberg, *THE BEGINNINGS OF WESTERN SCIENCE*. (University Book Store)
A course packet of supplementary materials, available from Bob's Copy Shop (University Square only): Course outlines, primary sources, secondary readings, study questions, review sheets, time lines, and illustrations.

Materials on Reserve (College Library, Helen White Hall):

Thomas Kuhn, *THE COPERNICAN REVOLUTION*.

Schedule of Lecture Topics and Assigned Readings:

(Figures and Documents are in the Reader.)

1. The Beginnings of Greek Philosophy (Sept. 2, 7).

Required: Lindberg, pp. 1-35; Document 1 (Early Greek Thought)
Recommended: Document 2 (Parmenides on Being and Non-Being).

2. Plato's World of Forms (Sept. 9).

Required: Lindberg, pp. 35-45; Document 3 (Plato's Allegory of the Cave).

3. Aristotle's Philosophy of Nature (Sept. 14, 16).

Required: Lindberg, pp. 47-77; Documents 4, 5, and 6.
Recommended: Lindberg, pp. 77-83.

4. Ancient Astronomy (Sept. 21, 23).

Required: Lindberg, pp. 85-105; Figures 1-6 (reader); Document 7.
Recommended: Lindberg, pp. 105-10.

5. The Migration of Greek Science (Sept. 28).

Required: Lindberg, pp. 133-82, 203-6; Document 8 (and accompanying map).

6. **Medieval Universities** (Sept. 30).
Required: Lindberg, pp. 183-213.

7. **The Christian Reception of Pagan Learning** (Oct. 5, 7).
Required: Lindberg, pp. 190-97 (for review), pp. 215-44; Document 9.

Pass out first take-home essay questions about Oct. 7.

8. **The Medieval Science of Motion** (Oct. 12, 14).
Required: Lindberg, pp. 58-62 (for review), pp. 290-307; Document 10.
Recommended: Lindberg, pp. 307-15.

9. **The Copernican Revolution** (Oct. 19, 21).
Required: Document 11; Lindberg, pp. 245-80; Figures 1-7 (reader).
Recommended for those who want or need a fuller exposition: Kuhn, Copernican Revolution, pp. 133-200 (on reserve).

10. **The Reception of Heliocentrism** (Oct. 26).
Required: Document 12; fig. 8 (reader).

11. **Kepler's Invention of a New Heliocentrism** (Oct. 28, Nov 2).
Required: Documents 13, 14; Figures 9-10 (reader).

12. **Galileo's Defense of Heliocentrism** (Nov. 4).
Required: Documents 15, 16, 17.

13. **Galileo and the New Mechanics** (Nov. 9, 11).
Required: Documents 18, 19, 20, 21, and (for review) 10.

Pass out second take-home essay questions about Nov. 11.

14. **The Organic View of Nature and the Epistemology of Skepticism** (Nov. 16).
Required: Document 22.

15. **Rene Descartes and the Mechanical Philosophy** (Nov. 18, 23).
Required: Documents 23, 24, 25, 26, 30.

16. **Pierre Gassendi and Atomism** (Nov. 30)

16. **Mechanics in the 17th Century** (Dec. 2).
Required: Document 27.

17. **Newton's Cosmic Triumph?** (Dec. 7, 9, 14).
Required: Documents 28, 29.