Lecture Topics and Associated Readings

Part I: The Copernican Revolution.

1) Introduction.

2) The University Curriculum I: Aristotelian Natural Philosophy
   (a) Dear, RS, pp. 1–18; b) Kuhn, CR, ch. 3.

3) The University Curriculum II: The Science of the Stars
   (a) Kuhn, CR, chaps. 1, 2; (b) Westman, The Copernican Question: Prognostication, Skepticism and Celestial Order, chap. 2, pp. 62–75 [Geisel online]; (c) Dear, RS, pp. 18–29; (d) Animations of planetary motions by Prof. Dennis Duke [Google: “Dennis Duke”> "Almagest Planetary Model Animations"; Scroll down to “II. Stand Alone Versions”]; (d) “Ptolemy”: Wikipedia online.

4) Copernicus's Reform: What did he do? Why did he do it?
   Read: (a) Dear, RS, pp. 30–45; (b) Kuhn, CR, pp. 123–184; (c) Westman, The Copernican Question, chap. 3; (d) Copernicus, Commentariolus [Ted]; (e) Dennis Duke Animations
5) **The Copernicans and the Churches: Convincing Catholic Rome and Lutheran Wittenberg**


6) **The First Copernicans, Tycho Brahe and Unexpected, Singular Heavenly Novelties.**

Read: (a) Kuhn, CR, 200–209; (b) Dear, RS, pp. 76–77.

7) **Kepler: From the Cosmographic Mystery to the New Astronomy**


8) **Kepler and Galileo: Unexpected, Recurrent Novelties in the Heavens**

Read: (a) Dear, RS, pp. 65–79, 101–111; (b) Kuhn, CR, 219–225; (c) Galileo, *Sidereal Messenger* (all)

**MIDTERM EXAMINATION: February 18**

**PART II: THE TRANSFORMATION OF 17C NATURAL PHILOSOPHIES**

9) **New Visions and Places of Scientific Authority in the Seventeenth Century**

Read: Dear, RS, pp. 111–130; Popkin, History of Scepticism, Introd., chap. 1 [TED]

10) **Divine Activity and the Mechanical Philosophy**

Read: (a) Dear, RS, pp. 80–100; (b) Kuhn, CR, pp. 238–242; 252–4; (c) Descartes, DM (entire); “Rene Descartes” (Wikipedia online)

**SHORT PAPER DUE: March 4**


Read: (a) Dear, RS, pp. 131–148; (b) W.T. Jones, A History of Western Philosophy, vol. 3, pp. 104–114 [TED]; c) Shapin, “Pump and Circumstance” [TED]; (e) The Principle of the Barometer. Excerpts from Evangelista Torricelli (1644) and Robert Boyle (1660)[TED]

12) **Atheism Resolved: How Sir Isaac Newton Restored Law n’Order to the West’**


**Grading Requirements**

+Mid-Term Examination (25%): Short answer; multiple choice. February 18
+Short Paper (25%): March 4
+Final Examination (50%): Essay: Take-home exam
+Final Examination: Tuesday, March 18, 11:30 a.m.– 2:29 p.m.