Humanities 250/Physics 296/Philosophy 296 -- Copernicus: The Problem of Planets
Spring, 2004

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1. Course Description

The publication of Nicholas Copernicus's *On the Revolutions of the Heavenly Spheres* in 1543 is often thought to mark the beginning of a revolution not only in astronomy, but in Western thought more broadly construed. Co-taught by a physicist and a philosopher, this course will explore the scientific, historical, and philosophical implications of Copernicus's proposal, with special emphasis on his solution to the age-old problem of planetary motion. In the process, it will offer students the opportunity to work with some of the unique materials in the Library's Department of Special Collections.

2. Readings

Three books have been ordered at the University Bookstore:

Thomas S. Kuhn, *The Copernican Revolution*, Harvard, 1992, 0674171039
Dava Sobel, *Galileo's Daughter*, Penguin, 2000, 0140280553
Kitty Ferguson, *Tycho and Kepler*, Walker, 2002, 0802713904

Additional readings will be placed on online reserve in the Course Documents section of the course blackboard site, accessible at ci.lehigh.edu, or have been made available through the digital library site developed in association with this course. You are also expected to purchase a planisphere at the University bookstore.

3. Course requirements

This is a low-enrollment, seminar-style course, so attendance is not only mandatory but very important, as are adequate preparation and in-class participation. You will be asked to write a final term paper, approximately 10 pages in length, due at our last class meeting, April 28. It will be worth 30 points toward your final grade. Final papers will be written on a topic developed by you in consultation with your instructors. A preliminary proposal for your final paper is due on Monday, March 22. One take-home mid-term examination will be due on Monday, March 1. It will be worth 25 points. A discussion forum corresponding to each assigned reading will be created on blackboard. You are expected to make at least one posting (either in your own thread, or someone else's) to each forum. Up to 15 points will be awarded for these contributions. Each student will also be expected to participate as a member of two groups, each of which will produce a group project with accompanying oral presentation. These presentations, and the written materials that accompany them (handouts, outlines, etc.) will account for an additional 25 points. Finally, up to ten points toward your final grade will be awarded

based on your in-class contributions. The highest possible score is 105 points, and grades will be assigned on a standard 100-point scale.

It is painful to have to say this on any syllabus, let alone one for such an advanced course, but sad experience has proved it necessary. The minimum sanction for anyone found to have committed plagiarism or any other form of academic dishonesty in this course will be a *failing grade for the entire course*. In other words, a student found plagiarizing on an assignment ordinarily worth 20% of his or her grade, will have the weight of that assignment reassessed at 100%, and receive a grade of 0. A report will be made to the Dean of Students office for possible further action. If you have any doubts or questions about plagiarism or other forms of academic dishonesty, please see the relevant section in your *Student Handbook*, or consult with your instructors.

If you have a disability for which you are or may be requesting accommodations, please contact both your instructors and the Office of Academic Support Services, University Center Room 212 (610-758-4152), as early as possible in the semester.

4. Preliminary schedule of readings and assignments, subject to completion and revision:

Readings are given on a weekly basis, with each week designated by the date of its first class meeting. Please try to have the readings for each week completed by the Monday of that week. Unless otherwise specified, readings may be found in the Course Documents section of our blackboard site.

Week of:	Readings and assignments:
Jan. 19	Introduction. Primer on celestial observation, evening TBA.
Jan. 26	Kuhn, Ch. 1-2
Feb. 2	Kuhn, Ch. 3-4. Excerpt from Kuhn, *The Structure of Scientific Revolutions*.
Feb. 9	Kuhn, Ch. 5. Copernicus, *De Revolutionibus*, Book I (online).
Feb. 16	Kuhn, Ch. 5, continued.
Feb. 23	Ferguson. **Monday, Feb. 23: Mid-term examination assigned.**
March 1	Ferguson, continued. **Monday, March 1: Mid-term examination due.**
March 8	**Spring Break**

March 15	Sobel
March 22	Sobel, continued. **Monday, March 22: Preliminary proposals for final papers due.**
March 29	Kuhn, Ch. 6-7
April 5	Excerpt from Westfall, *Never at Rest*
April 12	Presentations
April 19	Presentations
April 26	Presentations. **Wednesday, April 28: Final papers due**.