Astronomy 116
Spring, 2005

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Modern astronomy concerns itself with the Universe, its origin, its structure, its contents, its processes, its evolution and its ultimate fate. While modern astronomy attempts to explain the Universe in terms of physical principles, the ordered study of the heavens for the purpose of making predictions is as old as human civilization. Astronomy can thus claim to be the oldest of the natural sciences. This enterprise continues because humanity continues to believe that the Universe is comprehensible.

Course Objectives. This course is an introductory survey of the science of astronomy. Students completing Astronomy 116 are expected to have an ordered understanding of the development of the human quest for knowledge of the heavens, of the ways in which modern astronomers know the Universe and of the important current questions and issues in astronomy. They are expected to learn basic information about the Sun, the Solar System, stars, galaxies and modern cosmology, as well as to develop a basic understanding of physical principles underlying astronomical research. They should be able to identify objects in the night sky and develop the foundation for a lifetime of appreciation and enjoyment of the heavens.

Textbook and Readings. The textbook for the course is Kaufmann and Comins, *Discovering the Universe*, 6th edition, published by W. H. Freeman and Co., 2003. Additional readings from other sources may be assigned from time to time, and some films will be shown, that supplement the readings and lectures. You are asked to bring your textbook to class every class period since we will often need to refer to tables, graphs and illustrations in the textbook during lectures.

Laboratory. Laboratory activities are designed to give the student opportunities for investigating nature with scientific methodology. The regular laboratory schedule will begin in the second week of classes. All laboratory sessions will begin promptly at 8:00 p.m. in the Multimedia Classroom in Humanities Hall.

Laboratory work will consist of investigatory projects using the f *Voyager III* software. The student will download the lab from the Class conference site and make a copy of the exercise. Ideally each laboratory session would involve both types of activities, but actual observation requires clear skies; therefore, more than one indoor project may be assigned on a particular night. Normally the laboratory will last for three hours. Attendance at laboratory sessions is **mandatory.**

The preparation needed for a particular laboratory session will be announced in class on the Thursday preceding the laboratory session. A tentative schedule of laboratory activities will be issued at the first laboratory session on Wednesday, 26 January.

In general course grades will be determined, as follows:

A	900 or more points
B	800 to 899 points
C	700 to 799 points
D	600 to 699 points
F	fewer than 600 points

Grades of A-, B+, B-, C+, C-, D+ may be assigned for sums of points near the ends of the grade ranges given above.

Class Conference. A conference, named 116 Astronomy, has been set up. Students should stay "tuned" to the conference. It is hoped that this arrangement will promote discussion among students professors. Announcements, special assignments, and other matters of interest will be posted on the conference.

Homework and Other Assignments. Questions, exercises, etc., will be assigned in class. Such assignments will be turned in for a grade.

Additional Materials. Students will need scientific calculators for laboratory work and often in class. A medium-sized loose-leaf binder (3-hole punch) for lab reports, classroom notes and handouts, etc., is recommended.

Absences. Class attendance is required. Excessive class absences will be handled according to College policies. As stated above, attendance at laboratory is mandatory. Excused absences for serious reasons are possible, but the missed laboratory work must be made up. The general make-up requirement for one missed laboratory with an acceptable excuse will be one supplemental observations (in addition to the required one) and independent completion of any computer projects assigned for the laboratory period missed. Unexcused absences must be made up, as well, but in addition to the make-up, a substantial point reduction in laboratory grade will be imposed.

Office Hours. Mr. Honeycutt: Tues & Thur 1-2:00 pm or see me after class for a different time.

THE HONOR CODE OF OXFORD COLLEGE APPLIES TO ALL WORK SUBMITTED FOR CREDIT IN THIS COURSE.