

Astronomy 116

Fall 2008

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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*, 8th edition, published by W. H. Freeman and Co., 2008. Additional readings from other sources may be assigned from time to time, and some videos will be shown, that supplement the readings and lectures. You are asked to bring your textbook to class every class period since we will sometimes 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 classroom 206 in Pierce Hall. Students are expected to arrive on time for lab..

Laboratory work will consist of investigatory projects using the *Voyager III* software, CLEA labs, and observations. Ideally laboratory sessions 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. An absence from lab will result in a 10% reduction in the student's final lab grade.**

The preparation needed for a particular laboratory session will be announced in class on the Tuesday preceding the laboratory session. A tentative schedule of laboratory activities will be issued at the first class meeting.

Each student's work must be his own. Collaboration is permitted only in using laboratory apparatus, and observing the sky. During the in-class labs, you may discuss your calculations or procedure, but each student must do his own measurements and obtain his own results. Home work is not to be discussed

Oral Presentation. Students will prepare and give short, illustrated, oral presentations concerning objects in the night sky. Details will be issued after midterm. The oral presentations will take place during the last laboratory sessions (November 19 & December 3).

Homework and Other Assignments. Questions, exercises, etc., will be assigned in class. Such assignments will be turned in for a grade and students are expected to follow the Honor Code

Additional Materials. Students will need scientific calculators for laboratory and class work. A lab book is required.

Absences. Class attendance is important, there are **no excused class absences**. Each student may be absent **five times** without penalty, but any additional cuts will result in a grade reduction of 5% for each additional absence. **USE YOUR CUTS WITH CAUTION**; e.g. for sick leave only. As stated above, attendance at laboratory is mandatory. Excused absences for serious reasons are possible, but the instructor must be notified prior to the day of the lab, except in extreme cases. **If you are allowed to make up a laboratory session, the work must be made up and a supplemental report will be assigned. If you miss a lab, you will need to present proof of the situation. Acceptance of an absence, will be determined by the instructor. Starting with the first absence from lab, the student will be subject to a reduction of 10% of the final lab grade .There will be an additional 10% reduction for each additional absence.**

Office Hours. Mr. Honeycutt: Tues & Thu 9:00-10:00 am, and 12:00 – 1:30 pm,- or see me after class for a time that is convenient for both of us. Simple questions can be answered on the 116 Astronomy Class Conference.

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

