Astronomy 170 B1: The Physical Universe

Section 2 (LEC-62127)
Section 3 (Honors, LEC-62128)

Fall 2011

Professor: Dr. Jill Bechtold
TA: Johanna Teske
Honors Section TA: Megan Reiter
Email: astronomy201"at"gmail.com
Lectures: MWF 10:00-10:50am

All lectures meet in Steward Observatory, N210

CLASS WEB PAGE:
http://boojum.as.arizona.edu/~jill/A170/ or see link from d2L class web site

DESCRIPTION:
Beyond the Earth in Space and Time - This course presents an introduction to the science of Astronomy placed in the broader context of the physical sciences. Our survey of the Universe will include our current understanding of our Solar System, stars, the Milky Way Galaxy, other galaxies, and the large-scale structure and evolution of the Universe. We will also cover the basic principles of physics, chemistry, and geology needed to interpret astronomical observations. The application of the scientific method will be emphasized throughout the course.

PREREQUISITES:
This is a Tier 1 General Education course in Natural Sciences. No previous knowledge of astronomy is assumed. Math at the High School algebra level will be used, so the student should be familiar with basic algebra, trigonometry, and fractional powers. For a review of math concepts required for the course, see the class web page.

TEXTS and Other Readings:
Many lectures and labs will be about special topics not covered textbooks. Lecture notes and other materials will be posted on d2l and the class web site. For students who want a text to read, we recommend

The Cosmic Perspective, by Jeffrey O. Bennett, Megan Donahue, Nicholas O. Schneider, and Mark Voit. The 6th Edition is recommended, although the 5th Edition may also be up-to-date enough to be useful. This is a text which is widely used in introductory astronomy courses, and used copies are available.
GRADES AND COURSE REQUIREMENTS:

There will be 3 Midterm Exams. The lowest midterm grade will be dropped. There will therefore be NO MAKEUP exams. If you miss more than one midterm exam, you will receive a zero for the second and subsequent exams missed. Communication with the instructor is encouraged -- let us know if you are missing class or falling behind for a valid reason, and we will do everything we can to help.

Grading will be as follows:

- 40% : Homework, on-line Quizes, Telescope Lab and Citizen Astronomy Projects
- 30% : Midterms
- 30% : Final

Although attendance will not be routinely taken, experience shows that the “A” students are those who attend all classes. Although we will be following the textbook, and we publish the ppt slides on-line, don’t think that reading the textbook and web page alone will be sufficient for learning the material. There is significantly more information in this course than in any high school science course; the lectures will enable you to synthesize and LEARN the material. Technical information can often be terse, and therefore is deceptively simple: we may be able to state in a single sentence the topic of a particular lecture, but most students will need the 50 minute explanation to understand that sentence.

There will be class activities for which you must attend class (e.g. the 10 micron camera lab), and for which we will not be able to schedule make-ups. If you have a valid reason to miss class at any time, please email the professor IN ADVANCE.

HONORS Section. Section 3 is the honors section. Honors students will complete all requirements for the course. In addition, they will attend an overnight observing session at the Mt. Lemmon Sky Center. Additional information can be found on the class web site.

CONTACTING THE PROFESSOR AND TAs:

Prof. Bechtold’s office is in Steward Observatory, Room 328 (second floor), phone 621-6533. The TA is Johanna Teske, and the Honors Section activities are being coordinated by Megan Reiter.

Office hours are immediately after class, or by appointment. When not in the office, we are often in email contact.

Arranging appointments via email is recommended: bechtold"at"email.arizona.edu, jteske"at"email.arizona.edu, mreiter@email.arizona.edu.

Tutors for Astro 170 are available at the “Think Tank” on campus. We will post information on the Think Tank astronomy tutoring session when it becomes available.
ACADEMIC INTEGRITY:

We believe very strongly in upholding the Code of Academic Integrity as established by the Dean of Students of this University. Copies of this code are available from the Dean of Students Office. It states that "The guiding principle of academic integrity is that a student’s submitted work must be the student’s own... Conduct prohibited by the Code consists of all forms of academic dishonesty, including, but not limited to: cheating, fabrication, facilitating academic dishonesty, and plagiarism... modifying any academic work for the purpose of obtaining additional credit after such work has been submitted... and attempting to commit an act prohibited by this Code."

Examples of violation of the Code of Academic Integrity include: having another student take an exam for you; changing an answer on a scantron sheet after it has been graded and returned, and claiming the machine made an error; copying lab data or reports from another student; allowing another student to copy your lab data or report; copying lab data or reports from students in other classes, or previous classes; turning in work that is not your own; using unauthorized notes or other aids during exams; plagiarizing a term paper in total or in part.

You are allowed to discuss assignments with other students, but the written work you hand in must be your own.

Any violation of the code will be dealt with harshly, since all violations diminish the integrity of this class as a whole and the University. If you violate the code in any part of this class or lab, you will receive an E for the course, and your name will be submitted to the Dean of Students so that a notation will be attached to your permanent record that you cheated in this course. Note that this policy is harsher than what is typical in other courses in the College of Science; however, the department chair and Deans have always supported my actions in cases of code violations. More information on the UA academic code of conduct can be found at http://deanofstudents.arizona.edu/academicintegrity/

LECTURE AND EXAM SCHEDULE:

Lecture topics and reading assignments will be posted on the web page as we go along. Key concepts for each lecture will be posted on the web page. EXAMS will be on the day scheduled. We have made an effort to avoid religious holidays, but if you must miss an exam for religious reasons please let Prof. Bechtold know as soon as possible.

MIDTERMS: in class. Sample test questions will be handed out in class. Dates will be announced in class, and posted on the web site.

FINAL EXAM: Wednesday, December 14, 2011. 10:30a-12:30p, in Steward Observatory N210. The final must be given at this time, there are no exceptions.