Astronomy 151 Syllabus
Professor Lee Riedinger
Fall 2009

Required Materials
Two items will be required of all students.

1. Textbook: *Astronomy Today* by Chaisson and McMillan, 6th edition. An alternative is to purchase only volume 1 of this book: *Astronomy Today* by Chaisson and McMillan, 6th edition, *Volume I – The Solar System*. The ‘full’ book has the material for the two-semester course, Astronomy 151 and 152. The first semester deals with our Solar System, the second semester covers stars, galaxies, and the universe. There is a volume 1 and volume 2 of this book, to cover the material for Astronomy 151 and 152, respectively. Buying the ‘full’ book is definitely cheaper (by roughly $22) than buying the two halves.

2. A Turning Technologies "clicker," which looks like a bit like a TV remote control. We will use this probably every class.

The subject matter for this course is Chapters 1 to 15 in the textbook by Chaisson and McMillan. This material includes the properties of our Solar System.

Class Meeting Times
12:40 pm - 1:55 pm Tuesday and Thursday in Nielsen Physics 415

Lecture Schedule
October 13, 15: no class - fall break on 10/15; I must go to a conference on 10/13
November 26: no class - Thanksgiving
December 1: last class

Grades
Three tests will be given, two during the semester in class period and one in the exam period at the end. Each test will count as one third of the grade. A tentative schedule for the tests is:

- Test #1 - September 15 – chapters 1 through 5 – astronomy and the universe
- Test #2 – October 27 – chapters 6 through 10 – Earth through Mars
- Test #3 – December 8 – chapters 11 through 15 – Jupiter and beyond: 12:30 to 2:30 pm – the time of this test is certain.

These tests are closed book and closed notes and are a combination of multiple choice, completion, and essay questions.

Makeup tests:
There will be a makeup test given a few days after test #1 and after test #2, on the same material as for the normal test. In contrast to the normal tests #1 and 2, the makeup for each of these will be purely essay questions. There is not a makeup for the third test.
Lecture notes
The lectures will be available on Blackboard as pdf files on the evening before each lecture is given.

Extra Credit
Extra credit is designed to boost your grade over a boundary to the next grade, assuming you are close to the higher grade based on the grades from the three tests. Extra credit is meant to help remove the harmful effect of unexpectedly doing badly on one test, for example. There are two forms of extra credit:

- **Quizzes in class.** I plan to give in most or all class periods one or more quiz questions, which you will answer with your clicker. Your clicker must be registered with this class. This is accomplished in Blackboard by pressing the "Clicker Setup" button on the course menu at the left and following the instructions.

  The clicker quiz will be given generally at the beginning of each class period and will cover the material to be discussed in the lecture. The student should prepare for this by reading the pdf file for the lecture before class, and/or reading the textbook in preparation for the class. Correct answers for the clicker quiz will earn twice the credit each time compared to an incorrect answer. At the end of the semester, the scores for all of the clicker questions will be totaled, compared to the maximum possible, to calculate the percentage of the total extra credit that is earned by each student. Correct answers on all clicker questions throughout the semester will add five points to the final numerical average of the three test scores, and will therefore lead to potentially a higher letter grade for the course.

- **Telescopic observations of the sky.** Day and evening telescope observation sessions are available from the roof of the Physics building, conducted by Mr. Paul Lewis. One day and one evening observation for extra credit is allowed, and each can generate as much as two points to be added to the final average of the three test scores.

  - These sessions last about 45 minutes. You must sign up in advance on lists posted on the small corkboard outside room P415 (Nielsen Physics Building). Read Mr. Lewis' instructions carefully when you sign up. Failure to follow his guidelines can result in loss of the extra credit privilege. If you sign up, please show up or else email Mr. Lewis (gplewis@utk.edu) and give a valid excuse to him for your needing to miss the session (e.g., illness). If you know early enough during the day that you cannot attend a session, you may try to contact Mr. Lewis by phone at 974-9601.

  - You must be on time for these sessions, as Mr. Lewis has to run a tight ship and will shut the door to the roof before he starts each session. So, arrive a little early to be sure that you are not left out of the session.
o Even if you cannot see the sky clearly, you still need to come to the session that you signed up for. It is also important that you try to do your observing as early as possible in the semester, since bad weather usually causes many cancellations of extra credit sessions. This causes many students to miss their chance at extra credit.

o At sessions where weather prevents observation, Mr. Lewis will talk to you and show an astronomy videotape from our astronomy library. These sessions will be held in a classroom to be designated on that night by Mr. Lewis. He will post that information on the chalkboard at the roof entrance. These sessions also earn extra credit.

o One solar and one evening observing session will be considered for extra credit. A stamped form from Mr. Lewis PLUS a one-page essay description (typed) of your observing trip must be handed in to me for you to get the full credit. An average report for each of these two sessions would give one point added to your final average, an exceptional one two points.

o Mr. Lewis occasionally provides additional extra credit opportunities when appropriate. These might include a lunar or solar eclipse observation and meteor shower or comet viewing. Mr. Lewis will post these additional opportunities on the bulletin board outside of P415. These extra events might be held off campus, in which case Mr. Lewis will provide directions to the selected site.