

Basic Outline of Reading Covered on Exams (subject to possible slight modification, e.g. if we don't quite finish covering a particular chapter, we may postpone that material to a later exam—I will notify you in class and by email if there are changes, and well in advance of the exams.)

Because of the large number of topics included in “astronomy” and the finite length of the semester, I have decided to omit several chapters that consist of detailed discussions of objects in our solar system (chapters 7-14), and to not discuss the history of astronomy, except in ways that I will make clear in class. We will also omit Ch.28 (extraterrestrial intelligence); take AST 309L (which will be taught in Spring 2007, for example) for a full-semester treatment of this subject.

We need to first develop the background physical principles that will be used to understand observations and theories. This might be the most crucial part of the course, because it may seem dry and difficult, but much of your later success in understanding the material will depend on how comfortable you are with these basic physical concepts. So probably the most important advice for this course is to NOT get behind in the reading and self-testing for the first part of the course, especially chapters 3 and 4 on the topic of light.

Here is a list of the reading assignments for each of the seven exams. I suggest you copy this to a separate sheet and keep it handy. However because we only have about four to five lectures per exam, and there may be unforeseen circumstances, you should consider this list tentative; if the reading schedule is changed slightly, it will be announced prominently in class and by class email. Note that the first five exams are scheduled for Wednesdays.

Exam 1. Chapters **1** (basics), **2** (gravity, orbits,...), **3** (radiation). Also see Appendices 1 and 2 at the end of the textbook. Chapter 3 is especially important for later chapters.

Sept. 4 Monday is a holiday.

In Ch. 1 you will only be tested on sections 1.1, 1.2, 1.7. In Ch. 2 you should read sec. 2.2, 2.3, but really we will be concentrating only on sections 2.5, 2.6, 2.7. We will cover all of Ch. 3 (radiation, really important).

Date: **Mon., Sept. 18** (7 lectures including first class day)

Exam 2. Chapters **4** (spectroscopy) and **5** (telescopes). Chapter 4 is especially important for later chapters, and usually difficult for students.

Date: **Mon., Oct. 2** (4 lectures)

Exam 3. Chapters **6** (survey of the solar system), **15** (formation of the solar system), and **16** (the sun).

[Note that we are skipping chaps.7-14 covering details of the solar system.].

Date: **Fri. Oct. 13** (4 lectures)

Exam 4. Chapters **17** (properties of stars), **18** (the interstellar gas and dust), and **19** (the birth of stars).

Date: **Wed., Oct. 25** (4 lectures)

Syllabus has been edited 11/17/06 past this point:

Exam 5. Chapters **19-21** (star formation, stellar evolution and death).

Date: **Fri., Nov. 10** *Already taken.*

Revised syllabus for last two exams.

Dates of exams stay the same, division of materials/topics slightly changed.

Continued...

Exam 6 will cover:

Chapter 22 (neutron stars, gamma-ray bursts, black holes),

Chapter 23 (Milky Way galaxy; skip 23.5, Galactic Spiral Arms, 617-622; skip 23.7 Galactic Center, 625-628),

Chapter 24 (other galaxies; skip last two sections 24.4 Active Galactic Nuclei, 24.5 The Central Engine of an Active Galaxy, pp. 648-662)

Date of exam 6: **Monday, Nov. 20** -- Monday before Thanksgiving break. NO CHANGE. [I am assuming an exam on the day before Thanksgiving break Nov. 23-25 would result in more problems than it is worth.]

Exam 7 will cover:

25 (galaxies and dark matter), **26** (cosmology) and **27** (the early universe).

Date of exam 7: **Friday, Dec. 8** (last class day; 5 lectures)