

AST 111 Introduction to Solar Systems Astronomy Fall 2009

Coordinates: MWF 9:40 am to 10:30 am between 24Aug and 07Dec in PSF-173

Instructor: Professor Frank Timmes ftimmes@asu.edu (480) 965-4274 PSF-242

TA: Mark Richardson Mark.L.Richardson@asu.edu (480) 318-4449 PSF-274

Text: The Cosmic Perspective 5th edition by Bennet et al. Chose one the following two options:

All Electronic: Cosmic Perspective ebook 5/e with MasteringAstronomy Access ISBN-10:0321636589

or

Hardcopy + Web: Cosmic Perspective textbook 5/e with MasteringAstronomy Access ISBN-10:0321551389

Web: Three websites are relevant, with the first being the most important:

- 1) <http://www.masteringastronomy.com> hosts all the homeworks and exams (and reading for the all electronic option). See the section **Getting Online** below for the mechanics, access codes and other tips.
- 2) http://cococubed.asu.edu/class_pages/class_planet.shtml will host the course lectures.
- 3) <https://myasucourses.asu.edu> for the blackboard discussion area.

Office Hours:

Prof. Timmes is available during normal class times, Wednesdays and Fridays between 9:40am and 10:30am, by email (ftimmes@asu.edu), skype (chatterbox4444), icht (fxt44@mac.com), telephone (480 965-4274), or the blackboard discussion area. Appointments to meet in person must be arranged beforehand.

TA Mark Richardson is available Mondays 11:00am - 12:00pm and Thursdays 12:15pm - 1:15pm via skype, (username m.la.richardson), blackboard discussion area, or face-to-face in room PSF-274.

Hybrid Course: This is an introductory course about solar systems. Live, traditional lectures will, in general, be given on Mondays. It is your responsibility to complete the reading (hardcopy or ebook), online homework, and online exams on the days when we do not meet in person. It is assumed you have suitable computer hardware, software, internet connectivity, and know how to administer your machine. I will not be the administrator of your computer.

My goals for this course are to communicate the excitement of modern solar systems astronomy. Some simple algebra will be used in this course because obtaining quantitative results is an essential part of science. However, it is more important for you to be able to give clear verbal descriptions of physical phenomena. If you learn the material, this class could be one of your most rewarding courses. We will cover Chapters 1-5 and 7-13 of the textbook, the Cosmic Perspective.

We will move quickly and each new topic will build upon concepts covered previously. If you fall behind, you will find it difficult to catch up. Attend lectures, complete the reading, do the online homeworks, and stay ahead of the game.

Online Homework: You will complete 12 homework assignments online; roughly one per week. Each homework has 100 points and will take about 40 minutes. You may collaborate on homework assignments in groups up to 4 people, but no larger. Except for verified medical reasons, online homework access will not be reopened after it closes. In other words, late homework will not be accepted. Homework assignments count 50% towards your final grade, that is, each homework is 4.17% of your grade.

Online Exams: You will complete 3 exams online. Each exam is open book, but must be completed by yourself (see section **Cheating** below). Each exam will be open for a period of 24 hours, so you may start the exam when it is convenient for you. However, once you start, you'll have 90 minutes to finish the exam. The exams are the same style and same content level as the homeworks. Exam #1 is on September 21, Exam #2 is on October 23, and Exam #3 is on December 04. These 3 exams count 50% toward your final grade, that is, each exam is 16.67% of your grade. Make-up exams will be allowed only for verified medical reasons or school-sponsored activities. In exchange for this draconian policy, there will be no final exam.

Cheating: Just don't. Evidence of cheating on the online exams (e.g., sacrificial lambs, drones, dummy accounts, statistical/internet evidence of collaboration) will result in you failing not just the exam but the entire course, as well as being referred to the appropriate Dean. Don't cheat.

Extra Credit: There are no extra credit or honors projects for this course.

Getting Online at <http://www.masteringastronomy.com> :

- 1) Purchase the MasteringAstronomy access kit from the bookstore. ASU's bookstore decided to sell the textbook and access kit as separate items instead of as a single item as I requested. The dvd attached to the book is *not* the access kit.
- 2) Goto <http://www.masteringastronomy.com> and click on the "new student" button. Enter the registration number you find in the access kit you purchased.
- 3) Once your new account is created you should be able to log out and login again without problem.
- 4) Once you login, the course access code is MATIMMES04536.

Seeing your ebook:

- 1) Make sure you have actually purchased the ebook. This is not the same as the access kit.
- 2) You cannot use Windows Vista and Internet Explorer. Use Mozilla's Firefox or Google's Chrome instead. Download and install as needed.
- 3) Make sure the "don't allow pop-up windows" is unchecked. In other words, make sure pop-up windows are allowed.
- 4) Still not seeing your ebook? Use another computer, such as the machines in the library. If it now works, there is an issue with the configuration of your machine.

Schedule

This schedule is a guide, not a legal document, and subject to changes that depend on the class' progress.

- 24Aug Monday Lecture
Chapter 1 - Our place in the Universe
- 26Aug Wednesday Online
Chapter 1 - Our place in the Universe
- 28Aug Friday Online
Homework 01 on Chapter 01 Due
Chapter 2 - Discovering the Universe for Yourself
- 31Aug Monday Lecture
Chapter 2 - Discovering the Universe for Yourself
- 02Sep Wednesday Online
Chapter 2 - Discovering the Universe for Yourself
- 04Sep Friday Lecture
Homework 02 on Chapter 02 Due
Chapter 3 - The Science of Astronomy
- 07Sep Labor Day, Monday, No Class
- 09Sep Wednesday Online
Chapter 3 - The Science of Astronomy
- 11Sep Friday Online
Homework 03 on Chapter 03 Due
Chapter 3 - The Science of Astronomy
- 14Sep Monday Lecture
Chapter 4 - Understanding Motion, Energy and Gravity
- 16Sep Wednesday Online
Chapter 4 - Understanding Motion, Energy and Gravity
- 18Sep Friday Online
Homework 04 on Chapter 04 Due
Chapter 4 - Understanding Motion, Energy and Gravity
- 21Sep Monday Lecture
Exam 01 Due
Chapter 5 - Light and Matter
- 23Sep Wednesday Online
Chapter 5 - Light and Matter
- 25Sep Friday Online
Homework 05 on Chapter 05 Due
Chapter 5 - Light and Matter
- 28Sep Monday Lecture
Chapter 7 - Our Planetary System

30Sep Wednesday Online
Chapter 7 - Our Planetary System

02Oct Friday Online
Chapter 7 - Our Planetary System

05Oct Monday Lecture
Homework 06 on Chapter 07 Due
Chapter 7 - Our Planetary System

07Oct Wednesday Online
Chapter 8 - Formation of Our Solar System

09Oct Friday Lecture
Chapter 8 - Formation of Our Solar System

12Oct Monday Online
Chapter 8 - Formation of Our Solar System

14Oct Wednesday Online
Homework 07 on Chapter 08 Due
Chapter 8 - Formation of Our Solar System

16Oct Friday Online
Chapter 9 - Planetary Geology: Terrestrial Worlds

19Oct Monday Lecture
Chapter 9 - Planetary Geology: Terrestrial Worlds

21Oct Wednesday Online
Chapter 9 - Planetary Geology: Terrestrial Worlds

23Oct Friday Online
Homework 08 on Chapter 09 Due
Exam 02 Due
Chapter 9 - Planetary Geology: Terrestrial Worlds

26Oct Monday Online
Chapter 10 - Planetary Atmospheres: Terrestrial Worlds

28Oct Wednesday Online
Chapter 10 - Planetary Atmospheres: Terrestrial Worlds

30Oct Friday Online
Chapter 10 - Planetary Atmospheres: Terrestrial Worlds

02Nov Monday Lecture
Homework 09 on Chapter 10 Due
Chapter 10 - Planetary Atmospheres: Terrestrial Worlds

04Nov Wednesday Online
Chapter 11 - Jovian Planetary Systems

06Nov Friday Online
Chapter 11 - Jovian Planetary Systems

09Nov Monday Lecture
Chapter 11 - Jovian Planetary Systems

11Nov Veterans Day, Wednesday, No Class

13Nov Friday Online
Homework 10 on Chapter 11 Due
Chapter 11 - Jovian planetary systems

16Nov Monday Lecture
Chapter 12 - Asteroids, Comets & Dwarf Planets

18Nov Wednesday Online
Chapter 12 - Asteroids, Comets & Dwarf Planets

20Nov Friday Online
Chapter 12 - Asteroids, Comets & Dwarf Planets

23Nov Monday Lecture
Homework 11 on Chapter 12 Due
Chapter 12 - Asteroids, Comets & Dwarf Planets

25Nov Wednesday Online
Chapter 13 - Exosolar Planetary Systems

27Nov Thanksgiving, Friday No Class

30Nov Monday Lecture
Chapter 13 - Exosolar Planetary Systems

02Dec Wednesday Online
Chapter 13 - Exosolar Planetary Systems

04Dec Friday Online
Homework 12 on Chapter 13 Due
Exam 03 Due
Chapter 13 - Exosolar Planetary Systems

07Dec Monday Lecture
Class evaluation and contingency day.