Spring 2017 Trinh Xuan Thuan

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ASTRONOMY 1210 (Section 001)

INTRODUCTION TO THE SKY AND THE SOLAR SYSTEM

Two items are needed:

1) **Text:** The Cosmic Perspective (8th edition) Jeffrey Bennett, et al. (Pearson), available in the bookstore. There is little change between the 7th and 8th editions, so if you have the 7th edition, it can also be used.

2) Access to the **Mastering Astronomy** online learning system is required. Thus you will need to purchase  **Mastering Astronomy** as well. Regardless of the textbook you own (8th or 7th edition), it is important that you purchase the version of **Mastering Astronomy** that goes with the 8th edition. **Mastering Astronomy** associated with the 7th edition will not work.

**Course**: I shall try to follow approximately the text in my lectures, emphasizing what I think is most important. The order in which the material will be covered will not always follow exactly the order in the book, but I shall indicate which corresponding chapter in the book you should read. **You will be tested on the material presented in the lectures**. **Thus taking good notes during the lectures is very important. Reading the book after each class will help improve your understanding of the lectures.**

The topics covered in this course (in approximate order) will be:

- Light and Telescopes (Chapters 5 and 6)

- The Earth (Chapters 9 and 10)

- Timekeeping and Navigation (S1)

- The Sky: Seasons, Phases of the Moon and Eclipses (Chapter 2)

- The Moon (Chapters 9 and 10)

- History of Astronomy (Chapter 3)

- Gravity: Kepler’s and Newton’s Laws (Chapter 4)

- The Other Terrestrial Planets: Mercury, Venus and Mars

(Chapters 9 and 10)

- The Jovian Planets: Jupiter, Saturn, Uranus and Neptune (Chapter 11)

- Asteroids, Comets and Dwarf Planets (Chapter 12)

- Other Planetary Systems (Chapter 13)

- Life in the Universe (Chapter 24)

**Grades**:

Exam Date % of Grade

Constellation Quiz Jan 23 – May 2 5%

Telescope Lab Jan 30 – May 1 5%

Homework every 1-2 weeks 10%

1st quiz Feb 22 20%

2nd quiz April 5 20%

Final Exam May 8, 2:00-4:00 PM 40%

Two quizzes (counting for 20% of the grade each) and a comprehensive final exam (counting for 40% of the grade) will be given. Laboratory work will account for 10% of the grade and homework for the remaining 10% of the grade. The course grades will be curved so that the average is in the B range.

**HOMEWORK**

At intervals of about 1-2 weeks, you will be assigned homework problems using the online **Mastering Astronomy** system. To register go to: [http://www.masteringastronomy.com](http://www.masteringastronomy.com/), and use the course code **THUAN1210SPRING2017**. Homework due dates will be sent to you by email through Collab. Late homework will be penalized 1% per hour up to a maximum of 50%. After 2 days late, there is no additional penalty and the maximum grade is 50%.

You may use the textbook and lecture notes when doing the homework. You can work with other students so long as you understand the answer you submit.

**LAB WORK**

The laboratory work consists of 2 parts: (1) a constellation quiz and (2) telescope observing. They are both graded P/F. A minimum of 7/10 is required to pass. **Each part will need one clear night to complete. Thus you need to sign up for 2 separate clear nights during the semester to complete your lab work**. Each part counts for 5% of the grade. The constellation quiz will be held at the Student Observatory just West of the Astronomy Bldg., in the interior of the U-shaped garage building every clear Monday, Tuesday, Wednesday, and Thursday night, with 2 sessions each night at 9:00 PM and 10:00 PM. The Telescope Observing Lab will be held at the McCormick Observatory, from 9PM to 11PM on clear Mondays and Thursdays. The policies for the observing laboratory are:

1. Students must sign-up in advance for both the constellation quiz lab and the telescope observing lab, using the link in Collab.

2. If a student comes to the telescope observing laboratory without a reservation, they will be denied access. No exceptions will be made.

3. There is a limit of 50 students per session. This limit will not increase at the end of the semester.

4. Students can have only one reservation at a time up to two weeks in advance. If their plans change, they may delete a reservation and sign up for a different time.

5. If a given observing session is cloudy, the students will need to make another reservation.

6. The second time a student misses an observing session after making a reservation, they will be restricted to signing up no earlier than the day of the observing session. If they miss another two sessions

after making reservations, they will not be allowed to complete the lab.

7. All students must meet at the Astronomy Department sign in front of the Astronomy Building before proceeding up to McCormick. The TA will check their name off the list for that evening before giving them a ride to McCormick or letting them drive up.

8. Students should dress warmly, bring a small flashlight, a writing surface (such as a clipboard) and a pencil for drawing. As the lab work will depend on weather conditions, I encourage you to start as soon as possible on it, in order to be able to complete it in time. **Persons who wait until the last week before the deadline to do the lab work and cannot complete it because of bad weather lose 5% of their grade if they complete only 1 lab work, and 10% if they miss both.**

**9. Students who have already done one or both of these labs in other Astronomy classes are still required to do these 2 labs.**

**ATTENDANCE POLICY**

You are expected to be present for both quizzes and the final exam. If there is any difficulty in being present on the days of the quizzes or the final exam, you must see me **before, not after the quiz or exam** to arrange for other possibilities. **The tests will cover what I said in class and not necessarily the material in the book, so attending classes is very important**.

**HONOR POLICY**

All exams, homework and lab work are under the Honor system. Exams need to be pledged, stating that you have not given nor received any help while performing the work.