

Astronomy 1411

Syllabus - Spring - 2013

Class Hours

MWF at 2 PM, Planetarium, Science Building Room 125

Labs

M 3-5, W 12-2 or W 3-5, Planetarium, Science Building room 107, or the Observatory

Instructors

Dr. Kent Montgomery (Office: Science Building 148, phone 903-468-8650,
email:kent.montgomery@tamuc.edu)
Office Hours M-Th 9-10 am

Cheri Davis - Lab Instructor, Teaching Assistant (Office: Science Building 148,
phone 903-468-8650, email: cheri_davis@tamu-commerce.edu)

Text

Recommended: *Astronomy Today, Volume 1: The Solar System*, Chaisson
McMillan, 7th Edition

Course Description

The goal of this course is to give the students a broad understanding of the solar system and the methods astronomers use to study the solar system. This course will also focus on simple observations from earth and how these observations have changed our view of our place in the universe. The first part of this course will describe what we can observe with the unaided eye and how these simple observations have been used to create models of the solar system. It will also include a brief historical overview of the significant astronomical events and people in the past. The second part of this course will focus on the properties of light and matter and the use of these principles to deduce the size, speed, composition, and origin of solar system bodies. The third part of the course will be a detailed look at the sun, planets and other minor solar system bodies such as comets and asteroids.

Web Enhanced Course

Astronomy is a very visual science and the course will contain many pictures. To allow students access to these pictures and the PowerPoint presentations used during lectures the course has been web enhanced. Students will also have access to past tests to be utilized for test preparation. To access the web enhanced portion students will need to login to MyLeo and then go to eCollege.

Labs

Labs are held either Monday or Wednesday. These labs will be held either in the Planetarium, Science building room 107 or at the Observatory. Labs will start shortly after class ends on Monday and Wednesday, if you are late you may be locked out. Please come to lab prepared with a pencil and calculator every day. The labs are designed to compliment the lecture material. If you do not attend the labs it will affect your grade. Your lowest lab grade will be dropped or if you miss a lab that will be the one dropped. **There will be no makeup labs.**

Homework

Homework will be assigned regularly throughout the semester. The assignments will cover the material contained in the lecture and are important for understanding test material. The homework will have specific due dates, any assignment received after this date will lose 2 points a day from the total of 10 points per assignment. Your lowest homework grade will be dropped.

Tests and Final

Three exams will be given during the semester and a final will be given at the end of the semester. The three tests during the semester will cover only the material leading up to each test. The final will be comprehensive covering both the material at the end of the semester as well as material on the first three tests. Part of the final will also include constellations and stars learned during the class and will be given during the last scheduled laboratory class.

Grading

Homework and Labs 30%

3 Tests 15% Each

Final 25%

Your grade will be determined using the following scale:

90% < A

80% < B < 90%

70% < C < 80%

60% < D < 70%

F < 60%

Attendance

Regular attendance is essential to doing well in this class. Many of the topics covered will only be covered in lecture and not in the book. For a student to do well in this class the most valuable thing they can do is never miss a lecture. If a student has excessive absences they will be referred to the Dean's office and may be involuntarily dropped from the class.

Syllabus Requirement

Faculty are required to include the following statement in their syllabi: "All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (See Student's Guide Handbook, Policies and Procedures, Conduct)

<u>Lecture</u>	<u>Topic</u>	<u>Book Ref.</u>
1	Overview of Class - Intro to Solar System	1.1
2	Constellations - Seasons	1.3-1.4
3	Timekeeping	----
4	Phases of Moon	1.5
5	Eclipses	1.5
6	Ancient Greek Astronomy	2.1-2.2
7	Copernicus	2.3
8	Copernicus - Kepler	2.5
9	Galileo-Newton	2.4, 2.7
10	Basic Physics of motion	2.7-2.8
10	Electromagnetic Spectrum	3.1-3.3
11	Blackbodies – Doppler Effect	3.4-3.5
12	Spectroscopy	4
12	Telescopes and Detectors	5
13	Radio Telescopes – Interferometry	5.5-5.6
13	Sun as a Star	16
14	Terrestrial & Jovian Planets, Solar System Formation	6
15	Mercury	8
16	Venus	9
17	Moon	8
18	Earth	7
19	Mars	10
20	Jupiter	11
21	Saturn	12
22	Uranus - Neptune	13
23	Moons in the Solar System and Dwarf Planets	11.5, 12.5, 13.5, 14.3
24	Asteroids	14.1
25	Comets - Meteors	14.2, 14.4
27	Other Worlds and Other Life?	28