

ASTRONOMY 1303

Syllabus

Fall 2014

Class Hours

MWF 2-2:50 PM in the Planetarium

Labs

ASTR 1103 is an independent lab course. It meets once a week and is one credit course.

Instructors

Dr. Kent Montgomery (Office: Science Building 148, phone 903-468-8650, email: kent.montgomery@tamuc3.edu)
Office Hours M - R 9-10

Dr. Cheri Davis - Lab Instructor (Office: Science Building 148, ph 903-468-8650, email: cheri.davis@tamuc.edu)

Text

Recommended

21st Century Astronomy, 4th Edition by Kay, Palen, Smith and Blumenthal

Course Description

Astronomy is the oldest science. For centuries humans have looked up at the sky and wondered about their place in the universe. Today we are in the midst of an explosion of knowledge regarding our place in the universe. New technology has revolutionized the way astronomers "see" the universe.

The aim of the course is to acquaint you with the objects found in the universe and how astronomers try to understand these objects and our place in the universe. We will explore the universe from the nearest star, our Sun, to nearby stellar nurseries, stellar mortuaries, distant galaxies and out to the edge of the known universe.

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 have access to past tests to be utilized for test preparation. To

access the web enhanced portion students will need to log on to myLeo and then go to eCollege.

Homework and Extra Credit

Once during the semester the class will go out to the observatory located 5 miles off campus. During this time students will be using telescopes to explore see heavenly objects like clusters, double stars and nebulas. The date of this lab is dependent upon the weather and phase of the Moon.

This fall we will also have an opportunity to view a total lunar eclipse. It is happening early in the morning on the 8th of October. Weather permitting the observatory will be open for viewing and extra credit will be given to those that come out to the observatory.

Homework will be given throughout the semester and most will be due the next lecture at the beginning of class. The problems will be used as practice for tests, but no credit will be given without showing work. 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. The lowest homework grade will be dropped.

The homework grade will account for 15 percent of your final grade.

Tests

There will be three midterm tests given during the semester. Each of these tests will account for 15 percent of your grade. The midterm tests will cover only the material leading to each test. The final will account for 25 percent of your grade and it will be cumulative, however, the highest percentage of questions will come from the untested material given during the last couple of days of class. Part of the final will also include stars and constellations learned during the class. This portion of the final will be administered during the last scheduled lab.

Test Dates (Tentative)

1 st Test	-	September 25 th
2 nd Test	-	October 23 rd
3 rd Test	-	November 20 th
Final	-	Dec. 9 th at 1:15 pm

Grading

Grading:	
Homework	15%
3 Tests	20% 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. If you want to do well in this class the most valuable thing you can do is never miss a lecture. If a student has excessive absences they 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)

Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

Lecture Topic

Lecture #	Topic	Reading
1	Our Place in the Universe	
1	Sun: Our Closest Star	Ch 16
2	Distances to Stars, Parallax Method	Ch 17.1
3	Motions of Stars, Doppler Shift, Space Vel.	Ch 17.1
4	Magnitudes, Temperatures	Ch 17.2-17.3
5	Light Spectrums, Spectral Types	Ch3, 4, 17.3
6	Masses and Radii of Stars	Ch 17.4
7	Binary Stars, HR Diagram	Ch 17.5-17.8
8	Gas and Dust in Space	Ch 18
9	Star Formation	Ch 19
10	Stellar Evolution	Ch 20
11	Clusters of Stars	Ch 20
12	Planetary Nebula, Supernovas	Ch 21
13	White Dwarfs	Ch 21.1
14	Neutron Stars, Relativity, Black Holes	Ch 22
15	Binary Star Evolution	Ch 20.6
16	Understanding the Milky Way	Ch 23
17	Galaxies: Characteristics	Ch 24
18	Hubble Law	Ch 24
19	Active Galaxies and Quasars	Ch 24.4-24.5
20	Large Scale Structure	Ch 25
21	The Big Bang, Shape of the Universe	Ch 26
22	Cosmology, Inflationary Universe	Ch 27
23	White Holes, Time Travel, etc.	---
24	Review	---