

ASTRONOMY 1303

Syllabus

Fall 2018

Class Hours

TR 2-3:15 PM in the Planetarium, Science Building Room 125

Instructor

Dr. Kent Montgomery (Office: Science Building 106, phone 903-886-5488,
email: kent.montgomery@tamuc.edu)
Office Hours M-R 9-10 am

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.

Student Learning Outcomes

- Students will be able to analyze, evaluate, or solve problems when given a set of circumstances, data, texts, or art.\ In written, oral, and/or visual communication, A&M-Commerce students will communicate in a manner appropriate to audience and occasion, with an evident message and organizational structure.
- Students will be able to work together toward a shared purpose relevant to the course or discipline with a sense of shared responsibility for meeting that purpose.
- Students will be able to interpret, test and demonstrate principles revealed in empirical data and/or observable facts.

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. It works best under Internet Explorer but does work under some other browsers.

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 heavenly objects like clusters, double stars and nebulas. The date of this lab is dependent upon the weather and phase of the Moon.

Homework will be given throughout the semester and most assignments will be due at the beginning of the next lecture. The homework 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, some questions will come from the untested material given during the last few days of class.

Test Dates (Tentative)

1 st Test	-	September 27 th
2 nd Test	-	October 25 th
3 rd Test	-	November 29 th
Final	-	December 11 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.

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	Ch 3, 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.	---

ADA Statement**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 162 Phone (903) 886-5150 or (903) 886-5835 Fax (903) 468-8148 StudentDisabilityServices@tamuc.edu

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See *Code of Student Conduct from Student Guide Handbook*).

Nondiscrimination Notice

A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Plagiarism

Plagiarism is a criminal activity. You must cite all sources of information. Unreferenced copying of material, whether parts of sentences, whole sentences, paragraphs, or entire articles can result in a score of zero for your assignment and may result in further disciplinary action.

Campus Concealed Carry

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to (<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.