

Astronomy 1304 Syllabus

Summer - 2023

Class Hours

Online

Instructor

Dr. Kent Montgomery (Office: Science Building 148, phone 903-886-5488, email:kent.montgomery@tamuc.edu, best to contact me by email)
Office Hours: M-Th 11 am - 12 pm

Text

Recommended

21st Century Astronomy, 5th or 6th Edition by Kay, Palen, Smith and Blumenthal

Supplemental Instructors

GAT – Emmanuel Aloyine

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.

Online Course

The course is a totally online course. All homework and tests will be assigned and turned in through D2L Brightspace. Students must have sufficient computer hardware and skills to access the course on a daily basis. Announcements for the course will be put in D2L and should be checked for questions about the class. If you have questions that aren't answered in the announcements then email the instructor. The homework and tests will sometimes require drawing pictures that must be uploaded for credit. Most smart phones can take pictures which can then be uploaded to D2L. The easiest way is to use an app that converts them to a pdf. Some of these apps are free and easy to use.

Students are expected to watch the lecture videos daily as new material will continue to be posted throughout the class.

Homework and Extra Credit

Homework will be given throughout the semester and most of them will be due within a few days of posting. The homework problems will be used as practice for tests, but no credit will be given without showing work. The lowest homework grade will be dropped. The homework grade will account for 20 percent of your final grade.

Tests and Final

Three midterm 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.

Each test will be on the date listed below. The student will be able to take the test any time that day but once they begin they will have a limited time to take the test. If you have extenuating circumstances so you can't take the test on that day notify the instructor immediately by email so other arrangements can be made.

Test Dates (Tentative)

1 st Test	-	June 15 th
2 nd Test	-	June 22 nd
3 rd Test	-	July 29 th
Final	-	July 6 th

Grading

Homework 20%
3 Tests 20% Each
Final 20%

Your grade will be determined using the following scale:

90% < A
80% < B < 90%
70% < C < 80%
60% < D < 70%
F < 60%

Attendance

Watching all the videos and taking good notes is essential to doing well in this class. Many of the topics covered will only be covered in lecture and not in the book.

Student Learning Outcomes

- Students will be able to analyze, evaluate, or solve problems when given a set of circumstances or data.20

- 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 understand and utilize mathematical functions and empirical principles and processes.

University Specific Procedures

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 132 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.

StudentDisabilityServices@tamuc.edu

Lecture	Topic	Book Ref.
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