



Course Syllabus – Astronomy

Instructor

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Location

El Paso High School
Room 402

Office Hours**Tutoring**

Daily, before and after
school

Conferences

By Appointment
Before or after school or
during 8th period (2:30-3:55
on B days)

Course Overview

This is an introductory astronomy course which will begin by investigating the history of astronomy through the ages and how the discoveries of these astronomers led to a better understanding of phenomena on earth, such as the seasons and eclipses.

We will then take a tour of the solar system learning about the terrestrial inner and gaseous outer planets as well as debris within the solar system.

Our solar system tour will end with the Sun which is a springboard into our study of stars – their formation, life cycle, and the ways in which we can gather information from the past. The death of stars can result in black holes which we will delve into (and return from) later in the year.

Having completed study of stars, we will look at massive structures of stars, galaxies, focusing on our home galaxy – the Milky Way. At the end of the year we will move into general cosmology and learn about the formation and evolution of the universe before wrapping things up with investigated exoplanets and possible extraterrestrial life.

A major component of the course will be direct observation of the night (and daytime) sky and recording observations in a formal log. Most of this will be done independently but several class star parties will take place over the course of the year.

The overall goal is for students to gain the ability to locate planets, constellations, galaxies and other astronomical phenomena in the sky and be able to explain what they are with some depth.

Text

OpenStax Astronomy, <https://openstax.org/details/books/astronomy>.

Course Materials

Course materials will be available through the district's LMS Schoology, which includes homework and class assignments, instructional videos, reviews, assessments and other resources.

Class Supplies

1. You will need a notebook of some sort for class notes. The style is up to you.
2. You will need a dedicated observation notebook. In this notebook you will log your observations as we move through the semester including text and sketches of what you observe. I would recommend using a composition style notebook because the pages are not easily torn out, but you are free to use whatever you'd like. Keep in mind that you want something which is easily used outdoors so make sure that it provides you with a solid writing surface.

Class Expectations

All students are expected to be time, be prepared, and be engaged. Our time together in class is limited and the class is fast paced so it is imperative that everyone be ready to go every day when the bell rings.

In addition, I expect every student to put their best effort into everything we do. The material we cover is difficult and ALL students will struggle at one time or another. What's most important, though, is that we keep on trying. If you try, you will learn...it just may take a little while longer than what you are accustomed to.

Classroom Management Plan

If a student is not meeting the classroom expectations, the following actions will be taken:

1. Verbal warning
2. Written warning
3. Loss of privileges
4. Parent conference
5. An administrative referral

Course Schedule (Subject to Change)

Week	Week of	Subject
Week 1.1	8/12/2019	A Brief Tour of the Universe
Week 1.2	8/19/2019	The History of Astronomy
Week 1.3	8/26/2019	Gravity and Orbits
Week 1.4	9/2/2019	Effects of the Earth's Orbital Motion
Exam 1		
Week 1.5	9/9/2019	Introduction to the Solar System

Week	Week of	Subject
Week 1.6	9/16/2019	Earth
Week 1.7	9/23/2019	The Moon and Mercury
Week 1.8	9/30/2019	Venus and Mars
Exam 2		
Week 1.9	10/7/2019	The Outer Gaseous Planets
Week 2.1	10/14/2019	Pluto
Week 2.2	10/21/2019	Comets and Asteroids
Week 2.3	10/28/2019	Origins of the Solar System
Exam 3		
Week 2.4	11/4/2019	Electromagnetic Radiation (Light)
Week 2.5	11/11/2019	Telescopes
Week 2.6	11/18/2019	The Sun
Week 2.7	12/2/2019	
Exam 4		
Week 2.8	12/9/2019	Review
Week 2.9	12/16/2019	Fall Finals
Week 3.1	1/8/2020	Information from the Stars
Week 3.2	1/13/2020	Cataloging the Stars
Week 3.3	1/20/2020	Celestial Distances
Week 3.4	1/27/2020	The Interstellar Medium
Exam 5		
Week 3.5	2/3/2020	A Star is Born
Week 3.6	2/10/2020	The Life of a Star
Week 3.7	2/17/2020	The Sometimes-Spectacular Death of a Star
Week 3.8	2/24/2020	Black Holes
Exam 6		
Week 3.9	3/2/2020	The Milky Way
Week 3.10	3/9/2020	Galaxies
Week 4.1	3/23/2020	Quasars and Supermassive Black Holes

Week	Week of	Subject
Week 4.2	3/30/2020	Evolution and Distribution of Galaxies (Also Dark Matter)
Exam 7		
Week 4.3	4/6/2020	The Big Bang
Week 4.4	4/13/2020	Life in the Universe and Exoplanets
Exam 8		
Week 4.5	4/20/2020	Year End Outreach Project
Week 4.6	4/27/2020	
Week 4.7	5/4/2020	
Week 4.8	5/11/2020	
Week 4.9	5/18/2020	Review
Week 4.10	5/25/2020	Finals

Grading

Students will receive grades which will be dispersed into the following categories per district policy:

Content Engagement (20%) – These grades will come from reading quizzes, in class activities, homework assignments, observation logs and other assignments designed as learning experiences.

Content Understanding (40%) – Grades in this category come from short assessments such as presentations, quizzes, research papers, etc.

Content Mastery (40%) – This category will contain grades from exams and field assessments during class star parties.

Getting Help

All of you are going to struggle at one point or another and it is imperative that you use the support structures that you have to get through those struggles. This includes your table group, additional study groups with friends, and additional instruction from me.

I highly recommend that you form an outside study group to work with on a regular basis and that you see me as soon as you experience any difficulty. Do not let misconceptions or misunderstandings pile up, because at some point it will be too late.

In order to help you out, I am available every day before (8:00 am) and after (until 4:45 or so) school and during lunch on most days.

Academic Integrity

Science department expectations for academic integrity will follow EPISD policy as stated in EIA Local policy manual.

A student who receives a failing grade (CH) due to academic dishonesty shall not be allowed to redo assignments or retake a test. At the discretion of the teacher, a discipline referral may be issued.

Actions constituting academic dishonesty include, but are not limited to, submitting others work as your own, copying work from another student, plagiarism, cheating, fabrication, inappropriate use of technology, falsifying documents, and allowing others to violate the academic integrity policy. Students have the responsibility to submit coursework that is the result of their own thought, research, or self-expression.