

# Astronomy

Liberal Arts and Science Academy, Austin Texas

Instructor: Ms. Alison Earnhart

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<http://www.stempirecentral.com/astronomy.html>

Room 20 (Dungeon)

## Course Description:

Astronomy is a one-year course in which students will develop an appreciation, thorough understanding, and ongoing curiosity about the mysterious, intense, and magnificent Universe and humankind's place in it. Students will learn about astronomy in a historical context, understanding its relevance in ancient and modern times alike, and hypothesize about what impact astronomy will have on the future of the human race.

Topics covered include but are not limited to: the history of astronomy, gravity & orbits, the electromagnetic spectrum, quantum mechanics and relativity, the Earth/Moon system, the solar system, stars, galaxies, constellations, black holes, cosmology, human endeavors in space, exobiology, and astronomy's impact on culture and society. Current events in the space program and the most recent data received by telescopes and probes will be covered, as well as upcoming celestial events to observe. Students will become familiar with the night sky and objects in it. Students are *highly encouraged* to attend at least one evening of nighttime star observing during the academic year. Field trips to star parties, observatories, and planetariums will be planned according to availability and convenience.

## Course Materials

No textbook will be issued for this course. Information will be presented in class via lecture, demonstration, and research projects. All students are highly encouraged to take notes and keep them in one convenient notebook, bringing it to class every day. Students may use various online and print media as a class supplement, but are cautioned against "Wikipedia Syndrome", i.e. believing anything you read online is a credible source of information.

A majority of assignments and projects will be communicated to the student through e-mail and the teacher website. Each student must have access to an e-mail account, establish contact with Ms. Earnhart ([astronomy.earnhart@gmail.com](mailto:astronomy.earnhart@gmail.com)), and check it regularly for class communication. Each student should also regularly check the teacher website for class materials and notes (<http://www.stempirecentral.com/astronomy.html>). Failure to check e-mail, the teacher website, or technical malfunctions with your digital communication are no excuse for late work.

## Course Evaluation

### Homework & Quizzes 25%

When homework is assigned, it is expected to be completed and turned in on time. Unless otherwise stated, assignments are due at the *beginning of class*. Assignments turned in later, even on the same day or class period, are considered **late**.

In-class, unannounced, open-notes quizzes will be given on a regular basis on topics being covered in lecture. You may use *ONLY your own notes*. If you were absent the day the material was covered, the quiz becomes homework, and is due immediately the following class period. If you are absent the day of a quiz, it is assigned to you as homework immediately upon your return to class.

### **Projects & Labs: 35%**

There are projects, labs, and bigger class assignments at least once per unit. You *will* have to do things like write papers, research, give class presentations, work with groups, build things, and manage time well. Group projects are not subject to the normal makeup work policies – due dates are not affected by individual members' absences.

### **Exams: 40%**

Each unit of study will be followed by a comprehensive exam covering all topics discussed in class as well as covered in assignments. In-class review sessions will be held one class period before the day of the exam. Students absent on the day of review may elect to not sit for the exam the next class, but **MUST** make up the exam within one calendar week (or by the end of the grading period, if that comes first).

## **Extensions, Absences, Late Work & Makeup Work Policy:**

*The student is responsible for all missed work! If you are absent, you are responsible for checking the website to find out what you missed.*

- Extensions are only granted for extreme circumstances. Students cannot ask for extensions on the day an assignment is due.
- If a student is absent on the day an assignment is due, it is due IMMEDIATELY upon the student's return. Anticipated absences (sports, field trips, etc.) do not qualify. If you know you are going to be gone, turn in your work ahead of time or arrange for it to be submitted by the deadline.
- Students may arrange with the teacher to come in before or after school, or during lunch to make up work.
- Absent students are responsible for getting missed notes from a classmate or the website IMMEDIATELY. Once you are back in class, you are expected to catch up.
- All late work (including late make up work) loses **20%** from the grade.
- All work from a six weeks grading period **MUST** be made up and turned in before the end of the six weeks, or it is a zero.
- Students may elect to re-test for a failed major assignment (Project, Lab, or Exam). Failure is defined by a grade of 50% or lower. The nature of the re-test is determined solely by the teacher, and a grade no higher than 70% may be attained.
- *Unexcused* absences on assignment due dates result in a grade of zero with no makeup or re-test offered.

## **Honor Code, Class Conduct & Electronic Devices**

You are attending a school of choice, participating in an elective class. You are expected to be engaged and ready to learn every day you walk into class. Lying, cheating, stealing, rudeness, or disrespect for the teacher or fellow classmates will not be tolerated under any circumstances. You are expected to comply with the LASA Honor Code when engaged in any assignment or assessment.

During lectures and class project time, personal electronic devices are not to be used. Electronic devices in use during these times will be confiscated and turned in to the Main Office. During project work time, classroom computers should be used only for the assignment at hand. Any evidence of misuse of computers (off-task e-mail checking, chatting, gaming, etc.) will result in a loss of computer access and possible referral to the office. Only during teacher-designated "down time" may students use their devices or classroom computers for personal use.