



# AST 111: Introduction to Solar Systems Astronomy

## Overview

In this introductory lecture and laboratory course, you will explore the origins, structure, contents, and evolution of our solar system and other solar systems. We will also cover aspects of the history of astronomy, gravity, light, and telescopes. Throughout the course, you will also take a look at nearby stars and learn about the Lowell Observatory, the Challenger Space Center, the Discovery Channel Telescope, and Meteor Crater, the largest meteor impact site in the world. Additionally, you will take a virtual tour of the Lunar Exploration Museum and the home of the Mars Space Flight Facility where scientists are using spacecraft to explore the geology of Mars. This course is packed with information and will greatly expand your understanding of our vast universe.

## What You'll Learn

- Describe the origins, structure, contents, and evolution of our solar system
- Use algebra and order-of-magnitude estimates to obtain quantitative, scientific results
- Give clear explanations of physical phenomena

## How to Succeed

To be successful in this course, we recommend English language fluency and computer literacy. We also encourage you to make sure your laptop or desktop computer meets the [technical requirements](#).

**MAT 117 College Algebra is strongly recommended as a prerequisite for success in this course.**

## Earn College Credit

This course appears on your transcript identically to how it appears on the transcript of an enrolled ASU student.

This course includes a lab and satisfies 4 credit hours toward the Natural Science - Quantitative (SQ) General Studies requirement at Arizona State University. It is strongly encouraged that you consult with your institution of choice to determine how these credits will be applied.

In order to receive academic credit for this course, you must earn a grade of "C" or better. You have one year to add the course to your transcript.

## Exams and Grading

**5%**

**Content Mastery**

**15%**

**Outdoor Activities**

**15%**

**Labs**

**30%**

**Homework**

**5%**

**Design Project**

**20%**

**Quizzes**

**10%**

**Final Exam**

# AST 111: Continued

## Time Commitment

This is an asynchronous, online course. This means, while you will have deadlines, you do not need to be at your computer at specific times or attend live content in the course.

To be successful in this class, you must view all course pages and complete all graded work by the deadlines indicated. Also, keep in mind that "attendance" in an online course means logging into the platform on a regular basis, checking for course announcements, and visiting and participating in the discussion forums.

This 4 credit, 8 week course requires about 180 hours of work. Therefore, expect to spend approximately 20-25 hours per week preparing for and engaging in this course.

## Materials

This course makes use of open educational resources (OERs) provided within the course, **no purchase necessary**.

## Graded Assignments

Graded assignments are required and count towards your final grade. Students must submit all assignments via the course site unless otherwise instructed.

**Cerego Content Mastery (5%):** There are 14 interactive content review exercises for the course.

**Outdoor Activities (15%):** There are three outdoor activities for the course. These will be self-assessed and you should provide a description and photo of your experiences.

**Labs (15%):** There are seven labs for the course. Each week's lab has two parts. In part one of the lab, each question is worth one point. Part two of the lab is called Discovery Lab, which is worth one point. The Discovery Lab quizzes offer the opportunity to develop practical, critical thinking, and job skills.

**Homework (30%):** There are 14 homework assignments for the course. You may collaborate on homework assignments in groups.

**Design Project (5%):** There is a design project and weekly readings will help you determine a topic for your design. You will pick a topic as your focus, related to one of the course learning objectives listed below:

- Describe the origins, structure, contents, and evolution of our solar system
- Use algebra and order-of-magnitude estimates to obtain quantitative, scientific results
- Give clear explanations of physical phenomena.

**Quizzes (20%):** There are three quizzes. Quizzes one and three are open book, and must be completed by you. Quiz two is timed, and closed book; this means you must not access any of the course materials or your notes in order to answer questions. The quizzes have the same style and content level as the homework. You may take a quiz at any time during the window when they are available; however, once you start a quiz, you will have three hours to complete it.

**Final Exam (10%):** The final exam is a timed, closed book exam. The final exam will have the same style and content level as the homework and quizzes. You may take the final exam at any time during the open window; however, once you start, you will have three hours to complete it.

## Assignment Deadlines

Your instructional team will provide all content and learning activities on or through your course site. It is your responsibility to review all content, fulfill all assignments on time, and ask any questions you have in the designated discussion area. It is also your responsibility to determine the due dates and times for all course assignments according to your time zone. Due to the large-scale format of Universal Learner Courses, late assignments will not be accepted at any point during the course, and we cannot make exceptions.

# AST 111: Continued

## Course Communication

All communication will take place via the discussion forums and course announcement page. There will be a discussion forum where you can post general questions, comments, and direct inquiries for the instructor and course team. Please use these forums to ensure a timely response. Your instructor will not be able to respond to email.

## Additional Information

If you have questions about Universal Learner Courses and how they work, please visit [ea.asu.edu](https://ea.asu.edu) or contact our support team at [ulcourses@asu.edu](mailto:ulcourses@asu.edu).