

Overview

Explore the exciting world of modern solar systems astronomy.

About this course

In this introductory lecture and laboratory course, we 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, we will learn about the Discovery Channel Telescope, the Lowell Observatory, the Challenger Space Center, and Meteor Crater, the world's best-preserved meteorite impact site on Earth. We will also get a chance to virtually walk through the Lunar Exploration Museum and Arizona State University's Moer Building, home of the Mars Space Flight Facility where ASU scientists and researchers are using spacecraft instruments on Mars to explore the geology and mineralogy of the red planet.

Required prior knowledge and skills

To be successful in this course, we recommend English language fluency, computer literacy, and secondary school-level Algebra.

To be adequately prepared for the mathematics required in this course, a recommended prerequisite course is MAT 117 College Algebra and Problem Solving. The prerequisite course should be taken first to ensure that the course credits will transfer to your institution, including ASU.

Learning Outcomes

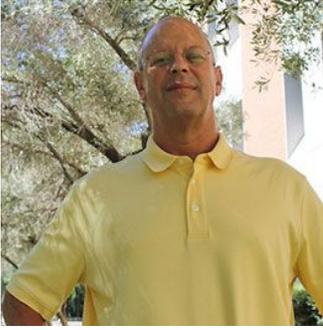
By the end of this course you will be able to:

- 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.

Additional Info

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 to their degree requirements prior to transferring the credit.

Creator



Dr. Frank Timmes

Frank Timmes is a theoretical astrophysicist who is interested in the universe's evolving composition and its implications for life in the universe. His current research focuses on stars, supernovae and explosions of all sorts, cosmic chemical evolution, and gamma-ray emission from radioactive isotopes. This research involves analytical models, desktop calculations, large-scale parallel computations, comparison with existing observations or experiments, and creating testable predictions. He holds a B.S. in Physics from UC Santa Barbara, and a M.S. & Ph.D. in Astronomy & Astrophysics from UC Santa Cruz.