



AST 114: Stars Galaxies and Universes

This course is a descriptive and conceptual introduction to Astronomy with a focus on events and objects outside our Solar System. The course is divided into two parts. Topics in the first half include: Historical Connections to Astronomy; Gravity and Orbits, and Tools of the Astronomer. In the second part of the course, topics covered are: Star Brightness, Luminosity and Distance; Our Sun and other Stars; the Interstellar Medium; Low vs. High Mass Stars; Galaxies, Universe Expansion; the Structure of the Universe; Black Holes; and how life interconnects with all these topics. Additionally, we will connect these Topics with current news and astronomical events. The laboratory portion of this course consists of computer-based exercises, home-based Astronomical observations, and, when possible, campus-based sky-gazing and Planetarium use. High School Sciences and basic Algebra are highly recommended. Three class hours and two laboratory hours per week. Instructional Support Fee applies. Gen. Ed. Competencies Met: Scientific Reasoning and Discovery.

Course Student Learning Outcomes

1. Describe the physical principles, tools, and techniques by which we understand the nature of the universe.
2. Articulate key events in the history of the universe, and will be able to explain the physical processes that underlie cosmic evolutionary processes.
3. Explain the social and philosophical implications of scientific discoveries towards understanding the universe and our place in it.
4. Articulate the nature of the various phenomena that comprise the universe as a whole as well as its contents.
5. Identify and describe the various types of objects such as nebulae, stars, and galaxies that make up the universe.

Credits: 4

Program: Astronomy