

# Physical Science

## Physical Science Classes

### ASTR 120: Earth's Cosmic Context

This course will explore how astronomers have been able to discover Earth's place in the universe, and the structure of the local galaxy and universe. Within this exploration, astronomers have also discovered thousands of other planets, and have begun to map the deepest extents of time and space. From the discovery of distant galaxies and signatures of the origins of the universe, we also have begun to unravel the mysteries of the Big Bang, the formation of the first stars and galaxies, and how the earth arose from billions of years of cosmic evolution. The course will explore the search for exoplanets and the early universe with a mix of in-class exercises, analysis of space-based datasets and observations with telescopes and instruments.

**Units:** 3

**Program:** [Physical Science](#)

### PHYS 150: Heaven and Earth: A First Synthesis

The physics of motion on earth and in the heavens is traced from ancient Greek times through the Dark and Middle Ages, to the Renaissance and Galileo, and to Newton and the Enlightenment. Humanistic, cultural, and historical perspectives are emphasized as is the scientific method/process. Science is shown to be inextricably linked to other human endeavors such as religion, art, politics, music, literature, philosophy, and commerce. High school knowledge of algebra, geometry, trigonometry, and scientific notation would be helpful. Concurrently, we will explore physics after Newton and up to the contemporary frontier of string/brane theory, covering topics such as relativity and quantum mechanics and utilizing modern physics labs.

**Units:** 3

**Program:** [Physical Science](#)

### PHYS 370: Space, Time, & the Texture of Reality

This heavily mathematical course with no lab requirement examines the changing conceptions of space and time from classical to modern to contemporary physics. Moving from Newtonian reality to Einstein's relativity to quantum mechanics to current unification theories, we will explore mathematics as a tool to transcend our faulty perceptions and to reveal new phenomenal, though perhaps not narrative, truth.

**Units:** 3

**Prerequisites:**

Previous and solid experience in physics and calculus plus instructor consent.

**Program:** [Physical Science](#)