

Area: Science and Engineering  
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Astronomy is part of the general education program at American River College. The astronomy sequence includes a laboratory and complies with general education transfer requirements.

### **ASTR 300 Introduction to Astronomy 3 Units**

*Advisory: MATH 100 and 110*

*General Education: AA/AS Area IV; CSU Area B1; IGETC Area 5A*

*Course Transferable to UC/CSU*

*Hours: 54 hours LEC*

This course covers modern astronomical theories, utilizing history, observations, reading, and discussion. It also includes changing conceptions of the cosmos, the planets, the universe of stars and galaxies, and cosmic evolution.

### **ASTR 310 The Solar System 3 Units**

*General Education: AA/AS Area IV; CSU Area B1; IGETC Area 5A*

*Course Transferable to UC/CSU*

*Hours: 54 hours LEC*

This course explores the nature and evolution of the solar system. Topics include the nighttime sky, the history of astronomy, the tools of astronomy, and the origins and characteristics of planets, their satellites, and other components of the solar system. Emphasis is placed on how astronomers gain and refine their knowledge of the universe and interpret the latest results of planetary exploration.

### **ASTR 320 Stars, Galaxies, and Cosmology 3 Units**

*General Education: AA/AS Area IV; CSU Area B1; IGETC Area 5A*

*Course Transferable to UC/CSU*

*Hours: 54 hours LEC*

This course explores the nature and evolution of stars, galaxies, and the universe. Topics include the history of astronomy, the tools of astronomy, star classification, stellar evolution, neutron stars, black holes, and the Big Bang. Emphasis is placed on how astronomers gain and refine their knowledge of the universe and interpret the latest results of space exploration.

### **ASTR 330 Introduction to Astrobiology 3 Units**

*General Education: AA/AS Area IV; CSU Area B1; IGETC Area 5A*

*Course Transferable to UC/CSU*

*Hours: 54 hours LEC*

\*This course explores the possibility of life beyond the Earth. Topics include the origin and evolution of life on Earth, the formation of Earth and other planets in the solar system, the likelihood of life existing on other planets or moons within our solar system, attempts to locate life within our solar system and attempts to communicate with intelligent life in other parts of the galaxy.

### **ASTR 400 Astronomy Laboratory 1 Unit**

*Corequisite: ASTR 300, 310, or 320*

*General Education: AA/AS Area IV; CSU Area B1; CSU Area B3;*

*IGETC Area 5A*

*Course Transferable to UC/CSU*

*Hours: 54 hours LAB*

This course covers the practical use of a telescope for both visual observation and astrotopography. Topics include identifying constellations, collecting and interpreting scientific data, and the use of sky charts and handbooks to plan observation. Night field trips are required.

### **ASTR 480 Honors Introduction to Astronomy 1 Unit**

*Prerequisite: Cumulative GPA of 3.0 or above; ENGWR 300 or 480, and MATH 330 with a grade of "C" or better.*

*Corequisite: ASTR 300, 310, or 320*

*Course Transferable to UC/CSU*

*Hours: 18 hours LEC*

This course is an introduction to current topics in astronomy. It is intended for students with a serious interest in astronomy and requires the ability to apply mathematical and conceptual reasoning to astronomical systems. The course utilizes problem solving, reading, and discussion in a seminar format. Previous knowledge of physics and astronomy is assumed.