

Astronomy Department

DEGREES:

Astronomy (AS)

COURSES:

ASTR (Astronomy)

CONTACT INFORMATION:

School of Mathematics and Sciences

Building: 2700 Room 2719B

Phone Number: (707) 864-7110

Fax Number: (707) 646-2054

Dean: Joseph Ryan

Administrative Assistants:

Mathematics: Kayla Kaywood

Sciences: Kelsi Mundell

Faculty Contact:

Zach Hannan

Melanie Lutz



P.A.C.E. - SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS - A PATHWAY FOR ACADEMIC AND CAREER EXCELLENCE AT SOLANO COMMUNITY COLLEGE

ARE YOU THE KIND OF PERSON WHO...

- ...desires to observe, learn, analyze, evaluate, or solve problems?
- ...enjoys to question and explore physical or biological happenings?
- ...likes to work hands-on with objects, machines, tools, plants, or animals?
- ...is interested in math and/or thinking analytically to solve complex problems?

Astronomy

Astronomy

Associate in Science

Program Description

The Astronomy program introduces students to the physical properties and processes that govern celestial bodies in the Universe. Students may take astronomy courses to satisfy their natural sciences requirements or to transfer with a major in astronomy/astrophysics or double major in astronomy and physics to the university. Transfer level astronomy curricula stress very strong preparation in physics and mathematics. While most astronomy courses will be taken at the upper division or graduate level, exposure to lower division astronomy courses will assist in exploring the major. Students planning to transfer may need to complete additional coursework and/or select specific electives required by the transfer institution and should consult with a counselor to identify required courses at their target university. Students who pursue a B.S. degree in astronomy will be qualified to enter a teaching credential program, operate a planetarium, and assist at an observatory. With an M.S. degree, students can teach astronomy or physics at a community college, be a telescope operator at a major observatory, or work in industry. A Ph.D. qualifies students for a career in research at a university, space agency, or observatory.

The Associate in Science in Astronomy can be obtained by completing the 39-unit major, General Education, and electives as needed to complete a minimum of 60 units. All courses for the major must be completed with a minimum grade of C, or a grade of P if the course is taken on a Pass/No Pass basis.

Program Outcomes

Students who complete the Astronomy Associate in Science will be able to:

1. Explain and discuss basic astronomical phenomena including, but not limited to: gravitation, the seasons, the phases of the Moon, eclipses.
2. Apply the laws of physics to explain the properties of planets, stars, galaxies, and the Universe.
3. Explain and discuss the impact and history of scientific theories and their importance in the advancement of astronomy.
4. Demonstrate proficiency in applying scientific procedures for making observations and measurements typical of modern astronomical research.

REQUIRED COURSES Units

ASTR 010 General Astronomy	3
ASTR 020 Astronomy Laboratory.....	1
MATH 020 Analytic Geometry and Calculus I	5
MATH 021 Analytic Geometry and Calculus II	5
MATH 022 Analytic Geometry and Calculus III	4
PHYS 006 Physics for Science and Engineering.....	5
PHYS 007 Physics for Science and Engineering.....	5
PHYS 008 Physics for Science and Engineering.....	5
6 units from List A:	6
Required Major Total Units.....	39

List A: (select 6 units) Units

ASTR 030 The Solar System	3
ASTR 040 Stars, Galaxies, and Cosmology	3
ASTR 045 Introduction to Astrobiology and the Search for Life in the Universe	3
ASTR 050 Astronomical Optics	1
CHEM 001 General Chemistry	5
CIS 022 Introduction to Programming.....	3