ASTRONOMY—ASSOCIATE OF SCIENCE DEGREE

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 Hartnell College 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.

PROGRAM OUTCOMES

Upon successful completion of the Astronomy program, a student should be able to:

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