Astronomy

School of Mathematics, Science, and Engineering

Interim Dean Richard Fielding, M.S., Office 345A, 619-482-6344
Faculty Grant J. Miller, M.S.; Jeffrey Veal, Ph.D.
Department Chair Tinh-Alfredo V. Khuong, Ph.D.

General Description

Astronomy, the oldest science, is a physical science that has played an important function in the development of modern science. This discipline explores the universe at large and the physical processes that govern it. Astronomers have historically investigated the laws, physical properties and behavior, chemistry, and composition of astronomical phenomena. Modern astronomers use advanced technology to explain and understand planets, comets, stars, nebulae, galaxies, quasars, pulsars, black holes, and the evolution of the universe.

Career Options

Below is a sample of the career options available for the astronomy major. A few require an associate degree, some require a bachelor's degree, and most require a graduate-level degree: high school or college instructor, space science technician, astronaut, astrophysicist, astronomer, observatory technician, telescope operator, scientific computer programmer, space engineer, mathematician, and positions in planetaria or allied professions of business and industry.

Degree/Certificate Options

	Major Code
Associate in Science Degree: Transfer Preparation	
Astronomy	01500

Consult with a counselor to develop a Student Education Plan (SEP), which lists the courses necessary to achieve your academic goal.

ASSOCIATE IN SCIENCE DEGREE

🔒 Astronomy
Transfer Preparation * (Major Code: 01500)

Some areas of study in astronomy include the sun, the solar system, stars and stellar evolution, the Milky Way, galaxies, and cosmology. Astronomers work in space industries, for government agencies, and for educational institutions as professors and researchers.

Astronomy curricula stress very strong initial study in mathematics, physics, and computer science. Students are encouraged to start with mathematics and physics in the order listed below since these courses are prerequisites for the subsequent courses.

First Semester

MATH 250	Analytic Geometry and Calculus I	5

Second Semester

MATH 251	Analytic Geometry and Calculus II	4
PHYS 270	Principles of Physics I	3
PHYS 271	Principles of Physics Laboratory I	1

Third Semester

ASTR 205	Elementary Astrophysics	3
MATH 252	Analytic Geometry and Calculus III	4
PHYS 272	Principles of Physics II	3
PHYS 273	Principles of Physics Laboratory II	1

Fourth Semester

PHYS 274	Principles of Physics III	3
PHYS 275	Principles of Physics Laboratory III	1
	Total units	**28**

Recommended Elective: CHEM 200.

To earn an associate degree, additional general education and graduation requirements must be completed.
See page 51.

* Students planning to transfer to a four-year college or university should complete courses specific to the transfer institution of choice. University requirements vary from institution to institution and are subject to change. Therefore, it is important to verify transfer major preparation and general education requirements through consultation with a counselor in either the Counseling Center or Transfer Center. **See catalog TRANSFER COURSES INFORMATION section on page 33 for further information.**

Some courses within this program may require additional coursework that must be completed prior to enrollment in those courses. Please consult the individual course listings for prerequisites and any other limitations on enrollment.

2012-2013 SOUTHWESTERN COLLEGE CATALOG 105