ASTRONOMY

Associate in Science
Transfer Preparation * (Major Code: 01500)

Some areas of study in astronomy include the solar system, stars and stellar evolution, interstellar medium, compact objects and black holes, the Milky Way and galaxies, and cosmology. Astronomers work for educational institutions as professors and researchers, for government agencies (e.g. NASA, national observatories, national laboratories), or in space industries.

Astronomy curricula stress very strong initial study in mathematics and physics. Students are encouraged to follow the course sequence listed below. Most of the courses are prerequisites for the next courses. Students must add General Education courses each semester that satisfy either local associate degree or Cal-GETC requirements.

Program Student Learning Outcome

- Develop mathematical skills, acquire physics knowledge, and practice applying these skills and knowledge to understand astronomical techniques and astrophysical phenomena.

Code	Title	Units
First Semester		
ASTR 201	ASTRONOMY FOR SCIENCE MAJORS	3
MATH C2210	CALCULUS I: EARLY TRANSCENDENTALS	5
Second Semester		
MATH C2220	CALCULUS II: EARLY TRANSCENDENTALS	4
PHYS 270	PRINCIPLES OF PHYSICS I	4
Summer		
PHYS 271	PRINCIPLES OF PHYSICS LABORATORY I	1
Third Semester		
MATH 252	ANALYTIC GEOMETRY AND CALCULUS III	4
PHYS 272	PRINCIPLES OF PHYSICS II	4
PHYS 273	PRINCIPLES OF PHYSICS LABORATORY II	1
Fourth Semester		
PHYS 274	PRINCIPLES OF PHYSICS III	4
PHYS 275	PRINCIPLES OF PHYSICS LABORATORY III	1
Total Units		**31**

Code	Title	Units
Recommended Electives		
ASTR 205	ELEMENTARY ASTROPHYSICS	3
ENGR 221	COMPUTER PROGRAMMING AND APPLICATIONS - MATLAB	3

* 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 Career and Transfer Connections. See catalog Transfer Courses Information (https://catalog.swccd.edu/student-success-support-program/student-services-and-college-services/other-services/transfer-courses/) section for further information.

To earn an associate degree, additional general education and graduation requirements (https://catalog.swccd.edu/certificates-certifications-degrees-csuuc-requirements/) must be completed.