Astronomy
Credit, Degree Applicable Courses

ASTR 19. Galaxies and the Universe (3 units)
Lecture – 3 hours weekly

Catalog Description
Introduction to cosmology and extragalactic astronomy, with a focus on basic questions of existence: where do we come from and what is our fate? Universe origin, evolution and fate, Big Bang cosmology, expansion and acceleration of the universe, large scale structure, dark matter, properties and phenomena of galaxies and active galactic nuclei.

Transferability
UC/CSU - This course satisfies the general education Area C requirement for the Associate degree, the general education Area B1 requirement for all campuses of the California State University, and is acceptable for elective credit under the Intersegmental General Education Transfer Curriculum Area 5A at all campuses of the University of California.

Method of Grading
Letter Grade (cannot be taken for Pass/No Pass option)

Upon completion of this course the student will be able to:
A. Describe the universe and the major components of its large-scale structure.
B. Use scientific notation and the scientific method.
C. Discuss the history of cosmology from the ancient to modern world.
D. Analyze the roles of fundamental particles and forces in the universe.
E. Interpret the structure, origin, evolution of the universe and its large-scale structure from the perspective of physical cosmology.
F. Evaluate differing astrophysical theories regarding the possible final states of the universe.
G. Compare and contrast the types of galaxies, and their structure, formation, evolution, and interactions.
H. Appraise methods by which structural knowledge of our galaxy has been accumulated.
I. Identify major phenomena that remain unresolved.