

# Astronomy

## **ASTR S-35. Fundamentals of Contemporary Astronomy: Stars, Galaxies, and the Universe (CRN: 31194)**

*Rosanne Di Stefano PhD, Visiting Scholar in Astronomy, Harvard University*

The fundamentals of astronomy will be covered in the context of contemporary research. We will study several areas that are being actively investigated by astronomers today. Topics will include: stars, galaxies, and the large-scale structure of the universe; the history of the universe; the nature of dark matter; and new observational instruments and techniques.

## **ASTR S-8. Planets, Moons, and the Search for Alien Life: An Introduction to the Solar System and to the Search for Planets Around Other Stars (CRN: 31489)**

*Alessandro Massarotti PhD, , Assistant Professor of Physics and Astronomy, Stonehill College*

The course covers the astrophysics of the solar system, the search for planets around other stars, and the probability of finding life on other planets or their moons. Weekly sections allow the discussion of extra material, such as scientific articles, and hands-on learning, with the use of various demonstrations and of material from the Harvard Museum of Natural History. Topics will include: the Sun, the planets, and the moons in our solar system; comets and asteroids; the origin of the solar system and models for its formation; a broad discussion of what is known about the origin of life on Earth and its evolution; mass life extinctions, and the role that giant asteroid impacts play in the evolution of life; the formation of stars and planetary systems; the recent successful search for planets around other stars; the future searches for extrasolar planets currently being planned; and the possibility of discovering Earth-like planets around other stars in the near future.