**AST: Astronomy Courses**

**Courses**

AST 1002  Descriptive Astronomy  
3 sh (may not be repeated for credit)  
Prerequisite: MAC 1105 OR MAC 1114  
Introductory astronomy. Basic astronomical concepts; gravitation and other cosmic forces; planets, moons, and other components of the solar system; nature and evolution of the sun and of other stars; structure of galaxies and of the universe as a whole. Credit may not be received in both AST1002 and AST3033. Meets General Education requirement in Natural Sciences.

AST 1002L  Descriptive Astronomy Laboratory  
1 sh (may not be repeated for credit)  
Co-requisite: AST 1002  
Elective laboratory to accompany AST 1002. One period per week for 3 hours. Experiments, measurements, and observations of planetary, stellar, galactic, and extragalactic astronomy.

AST 3222  Introduction to Astrophysics  
3 sh (may not be repeated for credit)  
Prerequisite: MAC 2311 AND PHY 2048  
Co-requisite: PHY 2049  
Comprehensive survey of the universe and its appearance from earth. Seasons, tides, eclipses. The solar system, stellar evolution and galaxies. Quasars, pulsars, black holes.

AST 3905  Directed Study  
1-12 sh (may be repeated indefinitely for credit)