ARTS AND LETTERS

College of Arts and Letters

390H. Perspectives in Literature
Fall. 4(3-0) Juniors, approval of the Honors College.
Attention will be focused on several major literary works. Students will employ various types of literary analysis, considering theme, idea, structure, etc., and examining some major trends in contemporary literary criticism.

391H. Perspectives in Philosophy
Winter. 4(3-0) Juniors, approval of the Honors College.
The two primary areas of concern will be ethics and aesthetics, the emphasis on one or the other to be determined by the professor. The course will include reading of major works, discussion of major figures in the field, and the preparation of a substantial paper.

392H. Perspectives in History
Spring. 4(3-0) Juniors, approval of the Honors College.
The focus will be on the nature of international diplomacy in the 20th century, the development of nationalism, the balance of power system, the influence of new ideologies, and the developments of the power structure since 1945.

450. Arts Management
Fall, Winter, Spring. 3 to 5 credits.
May re-enroll for a maximum of 9 credits. Seniors or Graduate Students or approval of department.
Administration of arts organizations, management of facilities, understanding operational methods and procedures of performing companies, financial structure and funding of arts centers, study of audience development, contemporary trends in arts management field.

ASTRONOMY

College of Natural Science

119. General Astronomy
Fall, Winter, Spring, Summer. 4(4-0)
Not open to engineering or physical science majors or minors.
Physical nature of solar system, star clusters, and galaxies as seen by modern astronomers. Limited opportunity for astronomical observations.

217. General Astronomy
Fall, Winter. 4(4-0) MTH 102.
Descriptive course intended primarily for physical science majors. A semi-quantitative discussion of time, telescopes, the solar system, stars, clusters of stars, galaxies, and cosmology. Limited opportunity for astronomical observations.

228. General Astronomy
Spring. 4(4-0) PHY 287 or 291 or concurrently. Students may not receive credit in more than one of the following: 119, 217, 228.
Fundamental observations in astronomy and their interpretation through physical laws. Intended for physical science majors and recommended for astrophysics major. Quantitative discussion of orbital motion, time, telescopes, solar system, stars, galaxies, and cosmology. Limited opportunity for astronomical observations.

327. Practical Astronomy
Spring. 3(3-0) 217, MTH 113.

378. Contemporary Astronomy
Winter. 3(3-0) 119 or 217, MTH 113.
A continuation of 119 or 217 with particular emphasis on modern developments. Includes interstellar matter, star formation, stellar evolution through final stages, supernovae, pulsars, neutron stars, galaxies and cosmology.

437. Observatory Practice
Fall. 3(1-4) 327.

455. Astrophysics
Winter. 3(3-0) 217 or 229, PHY 289, or approval of department.
Application of physical principles to the atmospheres and interiors of stars to deduce their physical properties. Discussion of radiation spectra and gas properties.

459. Solar System Physics
Fall. 3(3-0) PHY 289 or approval of department.
Physical properties of the sun, interplanetary space, planets, and satellites as deduced from terrestrial observations and from space probes. Recent results of the NASA space program will be emphasized.

490. Special Problems
Fall, Winter, Spring, Summer. 1 to 5 credits. Approval of department.
Individual study or project under the direction of a faculty member. An oral report on the work may be required in department seminar.

801. Seminar
Winter. 1(1-0) May re-enroll for a maximum of 3 credits. Graduate students or approval of department.
Seminars to be presented by both faculty and students to review papers in the current astronomical research literature.

819. Stellar Structure
Spring of even-numbered years. 3(3-0)
455 or PHY 289 or approval of department.

828. Galactic Structure
Winter of even-numbered years. 3(3-0)
PHY 427 or approval of department.
Distribution and dynamics of stars and interstellar material in our galaxy. Spiral structure. Galactic evolution.

839. Celestial Mechanics
Spring of even-numbered years. 3(3-0)
PHY 427 or approval of department.
Two-body, three-body, and n-body problems. Orbital elements of celestial objects such as the sun, the planets, and the satellites of the planets. Stellar mechanics. Stellar motion in the galaxy. Stellar dynamics. Stellar evolution and stellar structure. Stellar evolution modeling. Stellar evolution modeling.

850. Ionized Gases
Spring. 3(3-0) E E 835 or PHY 445.
Interdepartmental with and administered by Electrical Engineering.
Elastic collision processes; Boltzmann equation; moment equations; basic plasma phenomena; motion of a charged particle in an electromagnetic field; collective and individual charged particle behavior.

859. Stellar Atmospheres
Spring of odd-numbered years. 3(3-0)
PHY 289 or approval of department.
The physics of radiation and the equation of state. Tidal forces, dynamical stability, the maintenance of a walking model of the atmosphere.