Space and Planetary Sciences (SPAC)

Courses

SPAC 50303. Astrophysics I: Stars and Planetary Systems. 3 Hours.
Stellar structure and evolution, the properties of the solar system, and extrasolar planetary systems. (Typically offered: Fall Odd Years)

SPAC 51203. Internship. 3 Hours.
Internship for graduate students in the space and planetary sciences graduate degree programs and concentrations in the graduate programs in physics, biology, geosciences and mechanical engineering. Students conduct a phase of their research, normally for one month, at a national or industrial laboratory in North America or overseas. (Typically offered: Fall and Spring)

SPAC 51601. Seminar. 1 Hour.
Seminars organized by the Center for Space and Planetary Sciences covering topics on the cutting edge of research in the field for graduate students conducting research with a faculty member in the space and planetary sciences as part of their graduate degree programs or concentrations in the graduate programs in physics, biology, geology, geography and mechanical engineering. (Typically offered: Fall and Spring) May be repeated for up to 8 hours of degree credit.

SPAC 52101. SPAC Proseminar. 1 Hour.
Introductory course consisting of discourses and case studies in ethics, communications and public policy in the administration of space and planetary sciences. Prerequisite: Admission to program or instructor consent. (Typically offered: Spring)

SPAC 53103. Planetary Atmospheres. 3 Hours.
Origins of planetary atmospheres, structures of atmospheres, climate evolution, dynamics of atmospheres, levels in the atmosphere, the upper atmosphere, escape of atmospheres, and comparative planetology of atmospheres. (Typically offered: Irregular)

SPAC 54103. Planetary Geology. 3 Hours.
Exploration of the solar system, geology and stratigraphy, meteorite impacts, planetary surfaces, planetary crusts, basaltic volcanism, planetary interiors, chemical composition of the planets, origin and evolution of the Moon and planets. (Typically offered: Spring Even Years)

SPAC 55503. Astrobiology. 3 Hours.
Discusses the scientific basis for the possible existence of extraterrestrial life. Includes origin and evolution of life on Earth, possibility of life elsewhere in the solar system (including Mars), and the possibility of life on planets around other stars. Prerequisite: Instructor consent. (Typically offered: Spring Even Years)

SPAC 56103. Astronautics. 3 Hours.
Study of spacecraft design and operations. Prerequisite: Admission to program or instructor consent. (Typically offered: Irregular)

SPAC 6000V. Master's Thesis. 1-10 Hour.
Master's thesis. (Typically offered: Fall, Spring and Summer) May be repeated for degree credit.

SPAC 7000V. Doctoral Dissertation. 1-18 Hour.
Doctoral dissertation. (Typically offered: Fall, Spring and Summer) May be repeated for degree credit.