SCIENCE (SCNC1-UC)

SCNC1-UC 1000 Where the City Meets the Sea (4 Credits)
Over half of the human population lives within 100 km of a coast and coastlines contain more than two-thirds of the world's largest cities. As a result, the world's natural coastal environments have been substantially modified to suit human needs. This course uses the built and natural environments of coastal cities as laboratories to examine the environmental and ecological implications of urban development in coastal areas. Using data from multiple coastal cities, student teams use field-based studies and Geographic Information System (GIS) data to examine patterns and processes operating in coastal cities. This course uses the local terrestrial, marine, and built environments as a laboratory to address these issues, and team projects requiring field work form a core component of the learning experience. As part of the NYU Global Network University this course is being offered simultaneously in several NYU sites globally and students are collaborating extensively with students from their sister campuses through the duration of this course.
Grading: UC SPS Graded
Repeatable for additional credit: No

SCNC1-UC 2001 Human Biology (4 Credits)
Typically offered occasionally
This course focuses on the biological events that take place in the human body. It discusses such fundamental processes as cellular respiration and the role of DNA as the source of genetic inheritance. Other lecture topics include the internal organization of the human body; cell structure and functions; stem cells and their medical potential; tissues; and skin. Students also study the physiology of the digestive system and nutrition, the cardiovascular and respiratory systems, blood, the reproductive system and additional related topics.
Grading: UC SPS Graded
Repeatable for additional credit: No

SCNC1-UC 2104 The Physics of Everyday Life (4 Credits)
Typically offered occasionally
The course is an introduction to physics for students who are not majoring in math or science. Using case studies focused on everyday objects and phenomena, students learn the basic principles that govern these phenomena and how they are interrelated. Topics include Newton's Laws of motion, friction, energy, equilibrium, pressure, density, temperature, Archimedes' Principle, buoyant force, ideal gas law, harmonic oscillators, simple harmonic motion, frequency, transverse and longitudinal waves, frequency and wavelength in mechanical waves, superimposition, Doppler effect, dispersion, refraction, and interference in mechanical waves. Students gain first-hand experience of natural phenomena through classroom demonstrations.
Grading: UC SPS Graded
Repeatable for additional credit: No

SCNC1-UC 3203 Environmental Sustainability (4 Credits)
Typically offered occasionally
In this course students review the current unsustainable path of the global environment and explore ways of shifting to a sustainable one that stabilizes population, reverses problems with climate change and pollution, and establishes a global society dependent on renewable energy sources such as hydrogen, solar, and other energy options. Ways to reverse the negative human ecological footprint on the earth's precious resources (such as water, air and soil) are examined. Major future challenges such as poverty, hunger, emerging and reemerging diseases, threats to biodiversity, species extinction, domestication of food crops as well as biotechnology and genetically modified foods are discussed.
Grading: UC SPS Graded
Repeatable for additional credit: No

SCNC1-UC 3207 Stars, Planets, & Life (4 Credits)
Typically offered occasionally
This course deals with the history of events in the cosmos leading up to the formation of the solar system and the appearance of life on the earth. Topics include the origin of the universe; the birth and death of stars; properties of the earth, moon, Mars, and Venus as observed by earth-bound and spacecraft observations; the origin and history of life on the earth; the impact of astronomical and geological changes on biological evolution; life and intelligence in the cosmos; and philosophical implications in the synthesis of astronomy, earth sciences, and the history of life.
Grading: UC SPS Graded
Repeatable for additional credit: No

SCNC1-UC 3208 Human Genetics (4 Credits)
Typically offered occasionally
This course will review basic human genetics from Darwin and Mendel to DNA and Genomics. It will provide an introduction to the biology of chromosomes, genes and DNA. We will discuss the social implications of genetic intervention in the human population, such as: reproductive technologies, cloning, gene therapy and recombinant DNA and Personal Genomics. The course will consider the social and biological implications of advances in genetics like the human genome project. We will also explore the potential for rapid progress in genetic interventions in human health and disease control.
Grading: UC SPS Graded
Repeatable for additional credit: No

SCNC1-UC 3209 NYC's Natural and Urban Environment (4 Credits)
This course explores the interrelationship between NYC's natural and urban environment with a focus on NYC's natural history: wetlands, forests, hills, meadows, bodies of water (streams, rivers, and bays) and beaches. Students will examine the environmental consequences of NYC's growth and transformation of the natural environment, initiatives to protect and restore natural areas, and the main features of a sustainable NYC in which our urban environment is in balance with nature.
Grading: UC SPS Graded
Repeatable for additional credit: No

SCNC1-UC 3218 Darwin to DNA: An Overview of Evolution (4 Credits)
Typically offered occasionally
This course leads students on a broad exploration of evolutionary science. Students review the history of evolutionary thought and science; genetics; the man mechanisms and forces that drive evolution; and the tools and findings of evolutionary research, including the evolution of humans and human behavior.
Grading: UC SPS Graded
Repeatable for additional credit: No