

DEPAUL

University Honors Program
2017-2018 (listings subject to change)

HON 225
Honors Lab
Science Topics

AUTUMN QUARTER

Biological Anthropology, M. Aiello – LPC – MW 9:40-11:10 (lecture) and W 11:20-12:50 (lab)

This course will examine the evolution of the human species and explore the nature of human biological variation in the modern world. Students will consider the fossil evidence for human evolution using comparative data from nonhuman primate ecology to help reconstruct prehistoric lifeways. Particular attention will be given to how human populations utilized biological and behavioral mechanisms to adapt to their environments throughout evolutionary history.

Cosmochemistry: Big Bang to Extinction, W. Wolbach – LPC – TU 6:00-9:15 – (lecture and lab) – Hybrid course with online component

This course introduces students to basic chemical, geological and astronomical concepts through a discussion of the chemical principles and scientific laws governing the composition of the components making up the Earth and solar system. Major topics include an introduction to the basic principles of matter, chemical reactivity, radioactive decay, mineral geology, and stellar/planetary formation. Applications of geochemistry will include the isotopic dating of geologic processes (e.g., mineral or rock formation, meteorite impacts) and a study of the environmental effects and extinctions triggered by giant meteorite impacts.

Environmental Science, M. Potosnak – LPC MW 1:00-2:30 (lecture) and M 2:40-5:40 (lab) – Balloon Launch: Sept 29 (rain date Oct 6)

This course provides an overview of the interrelationships between humans and their environment from a scientific perspective, focusing on the application of scientific methodology to understanding, evaluating and solving environmental issues. There will be a particular focus on climate change and the influence of cultural and societal institutions in solving environmental problems. In addition to weekly laboratory experiments, students will participate in a high-altitude balloon launch to measure greenhouse gases.

WINTER QUARTER

Bioanthropology, R. Scott – LPC TTH 2:40-4:10 (lecture) and TU 4:20-5:50 (lab)

This course will examine the evolution of the human species and explore the nature of human biological variation in the modern world. Students will consider the fossil evidence for human evolution using comparative data from nonhuman primate ecology to help reconstruct prehistoric lifeways. Particular attention will be given to how human populations utilized biological and behavioral mechanisms to adapt to their environments throughout evolutionary history.

Molecules of Life: DNA and Disease, J. Maresh – LPC – MW 9:40-11:10 (lecture) and W 11:20-2:20 (lab)

The class explores the science behind key technologies that are making an impact on our lives, in particular in medical biosciences, biotechnology, and transgenic food. What causes inherited diseases? How is DNA sequencing impacting the way that doctors practice medicine? How are pharmaceutical drugs developed? Are GMO food products safe for our health and the environment? How do you interpret science news in the popular press to decide if it will impact your life? Other topics may be covered depending on student interest, which will be assessed continually throughout the course.

SPRING QUARTER

Archaeology, C. Milan – LPC – TTH 11:20-12:50 (lecture) and TH 1:00-2:30 (lab)

Archaeology is equal parts curiosity, tedium, and excitement for the archaeologist seeking answers about people's past social and economic conditions. Through lectures and lab sessions, students will be introduced to a broad range of methodologies, theories, and practices currently employed by archaeologists who are working around the world to identify and interpret past human behavior.

Solar Energy, E. Landahl – LPC – M 1:00-5:30 (lecture and lab)

Solar energy is both the most abundant and least utilized source of renewable energy available to mankind. This course will explore the scientific reasons for this discrepancy. Students will learn to recognize the transformation of energy between different forms and distinguish between physical and technical constraints on real world problems.

