PHYSICAL AND LIFE SCIENCES (PHYL)

The courses listed on this page are exclusive to the LPS BAAS degree (https://lpsonline.sas.upenn.edu/features/what-bachelor-applied-arts-and-sciences-degree/) and LPS Online certificates (https://lpsonline.sas.upenn.edu/academics/certificates/).

PHYL 120 Foundations of Life Sciences
Foundations of Life Sciences is a required course for students in the physical and life sciences concentration that also fulfills the Scientific Process foundational course requirement for those in other concentrations who are seeking a BAAS degree. This course will serve as an introduction to the life sciences and is concerned with the relationship of structure to function, the mechanisms underlying energy capture and retrieval, information storage and flow, and the regulation and coordination of these core activities in living systems with an eye to their evolutionary origins. In this course, students will gain exposure to topics such as metabolism, membrane transport, genetics, physiology and ecology. Each of the topics covered will involve an interactive lecture component, a discussion board prompt, a problem set, an activity centered on the scientific method, and a reading comprehension quiz. Note that this course is designed for students with a range of quantitative reasoning skills and those who have had no prior exposure to college-level science. Anyone who is interested in knowing more about the study of living things and in delving into how they do what they do is encouraged to take this course!
Taught by: Megan Elliot Ruth
Activity: Online Course
1.0 Course Unit

PHYL 160 Foundations of Physical & Chemical Sciences
How do the microscopic particles and invisible forces interact to form the world we experience daily? This course serves as an introduction to the physical and chemical sciences and will introduce students to how microscopic particles and their properties, motions and behaviors manifest in macroscopic realities. In this course, students gain exposure to topics in physics such as motion, force, energy, heat and electromagnetism. Students will also be introduced to the topics in chemistry of the periodic table, properties of molecules, chemical reactions and phases of matter. The rules that govern energy and matter transformations will be explored. Students will discover examples of how the physical laws of the universe apply to everyday realities like cooking, energy consumption in homes, materials used in daily life, exercise, and star gazing. PREREQUISITES: This course requires algebraic manipulations, graphical analysis, and unit conversions and either MTHS 200 or MTHS 100 or another equivalent Foundational Requirement in Quantitative Reasoning is required as a pre-requisite to registering for PHYL 160. Foundations of Physical and Chemical Sciences is a required course for students pursuing a BAAS degree with a concentration in Physical and Life Sciences. The course also fulfills the Scientific Process foundational course requirement for students in the BAAS program who are pursuing other concentrations.
Taught by: Ruth Elliot
Prerequisite: MTHS 200 OR MTHS 100
Activity: Online Course
1.0 Course Unit