

NATURAL SCIENCES

Natural Sciences (FD-NS) is one of the six Foundational Disciplines that are part of the WCAS bachelor's degree.

The Natural Sciences use a combination of observation, experimentation, and modeling to understand features and mechanisms of the natural world at all levels, from the subatomic scale to the cosmos. Discoveries in the Natural Sciences inform invention and the development of new technologies to solve problems; conversely, new technologies advance discovery and the creation of new knowledge. Courses in the Natural Sciences convey our current understanding of the natural world and the methods by which this understanding is achieved through systematic hypothesis testing. Students learn to appreciate the evidence of our current understanding of nature; the scientific process; as well as the implications, utility, and limitations of scientific inquiry to solve problems and benefit society.

Learning Objectives for FD-NS

Courses in the Natural Sciences are designed to achieve a combination of the following learning outcomes:

- Demonstrate knowledge related to features and mechanisms of the natural world, including the history, major ideas, and research approaches relevant to various scientific disciplines
- Formulate hypotheses and utilize skills to acquire, analyze, and interpret scientific data to test and revise these hypotheses
- Appreciate the implications, utility, and limitations of scientific inquiry, both within the context of a particular field and more broadly for society
- Articulate the scientific process and the significance of scientific advances, in written and/or oral form

FD-NS Courses

Courses approved for the 2024-2025 academic year.

Course	Title
ANTHRO 213-0	Human Origins
ANTHRO 275-0	Introduction to Forensic Anthropology
ANTHRO 309-0	Human Osteology
ANTHRO 375-0	Advanced Methods in Forensic Anthropology
ANTHRO 386-0	Methods in Human Biology Research
ASTRON 101-0	Modern Cosmology
ASTRON 102-0	Milky Way Galaxy
ASTRON 103-0	Solar System
ASTRON 106-0	A Brief Journey Through the Invisible Universe
ASTRON 111-0	Introduction to Astrobiology
ASTRON 120-0	Highlights of Astronomy
BIOL_SCI 103-0	Diversity of Life
BIOL_SCI 109-0	The Nature of Plants
BIOL_SCI 150-0	Human Genetics
BIOL_SCI 164-0	Basic Genetics and Evolution
BIOL_SCI 201-0	Molecular Biology
CHEM 131-0	Fundamentals of Chemistry I
CHEM 132-0	Fundamentals of Chemistry II
CHEM 151-0	General Chemistry I
CHEM 152-0	General Chemistry II
CHEM 171-0	Advanced General Inorganic Chemistry

CHEM 172-0	Advanced General Physical Chemistry
CHEM 201-0	Chemistry of Nature and Culture
CHEM 215-1	Organic Chemistry I
CHEM 215-2	Organic Chemistry II
CHEM 217-1	Accelerated Organic Chemistry I
CHEM 217-2	Accelerated Organic Chemistry II
COG_SCI 210-0	Language and the Brain
EARTH 101-0	Earth Science for the 21st Century
EARTH 106-0	The Ocean, the Atmosphere & Our Climate
EARTH 114-0	Evolution and the Scientific Method
EARTH 180-0	Fantasy Worlds – How to Build Your Own Planet
EARTH 201-0	Earth Systems Revealed
EARTH 202-0	Earth's Interior
EARTH 203-0	Earth System History
EARTH 300-0	Earth and Planetary Materials
LING 250-0	Sound Patterns in Human Language
LING 350-0	Fundamentals of Laboratory Phonology
PHYSICS 103-0	Ideas of Physics
PHYSICS 125-1	General Physics ISP
PHYSICS 125-2	General Physics for ISP
PHYSICS 125-3	General Physics for ISP
PHYSICS 130-1	College Physics
PHYSICS 130-2	College Physics
PHYSICS 130-3	College Physics
PHYSICS 135-1	General Physics
PHYSICS 135-2	General Physics
PHYSICS 135-3	General Physics
PHYSICS 140-1	Fundamentals of Physics
PHYSICS 140-2	Fundamentals of Physics
PHYSICS 140-3	Fundamentals of Physics
PHYSICS 239-0	Foundations of Modern Physics
PSYCH 221-0	Introduction to Neuroscience
PSYCH 324-0	Perception
PSYCH 328-0	Brain Damage and the Mind