

Discipline: The concept of modern natural science

Annotation

Labor intensity: 1 ECTS, 26 academic hours.

Final control form: test.

Natural sciences and humanities; history of natural science; panorama of modern natural science; development trends; corpuscular starting and continual concept of describing nature; order and disorder in nature, chaos; structural levels of organization of matter; micro-, macro-, mega worlds; space and time; principles of relativity; symmetry principles, conservation laws; interaction, short-range, long-range; state; superposition principles, uncertainty, complementarity; dynamic and statistical patterns in nature; energy conservation laws in macroscopic processes; principle increasing entropy; chemical systems, energetics of chemical processes; reactivity of substances; features of the biological level of organization matter; principles of evolution, reproduction and development of living systems, diversity living organisms - the basis for the organization and stability of the biosphere; anthroposociogenesis and human genetics; physiology, health, emotions, performance; self-organization in living and inanimate nature; the principle of universal evolutionism.

Interconnection from others disciplines specialties:

As ideological discipline, which adequately explains the generality of the laws of nature, species Homo sapiens as one of the natural objects, at the same time due to its specifics - the bearer of a new form of matter - society and therefore responsible for its activities in the natural environment, the discipline "Concepts of modern natural science" helps to understand the place of each person in nature, in the changing globalized society.

Requirements for the initial levels of knowledge and skills of students:

Knowledge of natural sciences within the school course are necessary and sufficient for passing disciplines.