Level: specialist

Course title: SELECTED CHAPTERS OF HISTORY OF NATURAL SCIENCES

SPH604

Status: elective

ECTS: 5

Requirements: none

Learning objectives

Acquiring knowledge on the development of natural sciences with special emphasis on the latest developments and the Nobel Prize winners in chemistry, physics, physiology or genetics. Modern achievements in geography and astronomy.

Learning outcomes

Science teaching as the greatest achievement in the education and pedagogical system.

Syllabus

Theoretical instruction:

Natural sciences as the philosophy of ancient civilization. Thales and Pythagoras' school of mathematics and the philosophies of nature. Pliny the Younger and older, as a pioneer of natural sciences. Natural and Mathematical Sciences in the Middle Ages, especially in Arabs. Age of the great discoveries in the natural sciences, which enabled the industrial revolution in the eighteenth and nineteenth century. Work and creativity of Karl Line and systematics in biology. Development of the theory of evolution. The emergence of scientific chemistry. Geography as a natural science, work and creativity of Alexander von Humboldt. Russian School of Natural Sciences and Mathematics. Great discoveries in physics, theory of relativity, Einstein's theory. The emergence of quantum physics. Connection of chemistry and biology, molecular biology as a modern achievement of natural sciences. Theories of origin of the universe and the development of celestial mechanics.

Practical instruction:

Serbian scientists of natural and mathematical sciences. The most important findings of Serbian scientists and mathematicians. The scientists of neighbouring countries and their achievements. These topics are treated as seminar papers.

Weekly teaching load				Other:
Lectures:	Exercises:	Other forms of	Student research:	
2		teaching: 2		