Level: master

Course title: Planetology

Status: elective

ECTS: 9

Requirements:

Learning objectives

Using scientific approach and scientific principles to create the attitude of students regarding the questioning of existing definitions, attitudes and prejudices about the natural processes that take place on the Earth and other planets.

Learning outcomes

Upon completion of the course student is expected to: demonstrate understanding of the natural processes on the Earth and other celestial bodies; show willingness to solve tasks and problems related to the analysis of current research of planets in the Solar system, as well as to acquire basic knowledge about research on the planets outside the Solar system.

Syllabus

Theoretical instruction

Planetology- tasks, aim and historical development. Significance of Planetology. Basic geological characteristics and regularities of natural processes on Earth. Comparison of the natural processes on the Earth and other planets. NASA and ESA programmes of planetary investigations. Milankovic's theory of the astronomical factors that cause the ice ages on the Earth. Influence of the orbital parameters change on climatic characteristics of other planets. Planets beyond the Solar system.

Practical instruction

Introduction to rocks and minerals on the Earth, tectonic and volcanic investigations, methods of geo and paleomagnetic investigations, absolute dating methods and methods for detection of planets beyond the Solar system.

Weekly teaching load				Other:
Lectures: 3	Exercises: 1	Other forms of teaching: 1	Student research:	