

Level: bachelor				
Course title: Solar System				
Status: obligatory				
ECTS: 7				
Requirements:				
Learning objectives Learning the basics of structure, composition and theories about the Solar system creation.				
Learning outcomes After completing the course, students should possess: <ul style="list-style-type: none"> - Analytical and scientific understanding of this field of science; - Knowledge on how to follow professional literature; - Knowledge of the composition, structure and theoretical models of the Solar system; - Ability to teach this matter to other individuals and groups. 				
Syllabus <i>Theoretical instruction</i> The regularity of the spatial distribution and motion of celestial bodies within our Solar system (Kepler's laws, the law of gravity, escape velocities). The position of the Solar system in the space. General features of the Solar system. Hypotheses and theoretical understanding of the origin and evolution of the Solar system. Spatial distribution, movement and physical properties of the Sun. Sources of the stellar energies. The evolution and structure of the planets. The natural processes that take place on the planets in the Solar system. The characteristics of inner and outer planets. Comparison to the adequate natural processes on the Earth. Satellites: the shape and size, physical characteristics. Natural processes on the Moon. Theory of the origin and characteristics of the Moons' relief. The satellites of other planets in the Solar system. Characteristics and dynamics of the outer planetary rings. Small bodies of the Solar system (asteroids, comets, meteoroids): spatial distribution, size, methods for their detection. Movements, physical and chemical composition of the comets and meteors. Eclipses, transits and occultations of the celestial bodies. Current studies of the Solar system. The results of studies about cosmic spacecrafts and research probes. The existence of planetary associations outside of the Solar system. <i>Practical instruction</i> Exercises, other forms of teaching, student research work. Writing and public defense of the seminar papers that follow the content of lectures.				
Weekly teaching load				Other:
Lectures: 3	Exercises: 2	Other forms of teaching: 0	Student research:	