Study programmes: Bachelor studies – Astronomy

Course name: Planetary astronomy Lecturers: Dr Bojan Novaković

Status: Optional

ECTS: 5

Attendance prerequisites: None

Course aims: Acquiring advanced knowledge about planetary astronomy.

Course outcome: At the end of the course, student is familiar with basic processes wich determine the evolution of planets, as well as all other objects in one planetary system. First of all, he acquires knowledge about Solar system. He meets the objects in our planetary system, acquires knowledge about their physical characteristics, the way of creation, and processes that lead to evolution as individual objects and the system as a whole.

Course content:

- 1. **The origin of Solar system:** theories about creation, migration of planets, late heavy bombardment, the origin of water on Earth, the origin of the Moon.
- 2. Objects inside Solar system: planets, satelites, rings, asteroids, comets, meteors, debris...
- 3. **Impact craters:** types, forming mechanisms, distribution of ejected material, sizes, craters on the objects inside Solar systems.
- 4. **Vulcanicity:** elements, vulcanic activity classification, products, post-vulcanic events, vulcanoes on Earth and other Solar system objects examples.
- 5. Extra-solar and Planetary systems: detection methods, number, basic characteristics, habitability

Literature:

- 1. Bojan Novakovic: Planetarna astronomija, skripta, Beograd, 2014
- 2. H.Jay Melosh: Planetary Surface Processes, Cambridge University Press, 2011
- 3. Imke de Pater, Jack J. Lissauer: Planetary Sciences, Cambridge University Press, 2001
- 4. George H. A. Cole, Michael M. Woolfson: 2013, Planetary Science: The Science of Planets around Stars, Second Edition, CRC Press

Number of hours: 5	Lecures: 3	3 Tutorials: 2		Laboratory: -	Research: -
Teaching and learning methods: Frontal / Group / Practical					
Assessment (maximal 100 points)					
Course assignm	ents po	oints	Fi	Final exam	
Lectures		-	Written exam		20
Exercises / Tutorials		20	Oral exam		40
Colloquia		20	Written-oral exam		-
Essay / Project		-			