

Level: bachelor			
Course title: General Astrophysics			
Status: elective			
ECTS: 6			
Requirements:			
Learning objectives Obtaining basic and general knowledge in astrophysics.			
Learning outcomes After the successful completion of this course student will have general knowledge in astrophysics, will be familiar with fundamental physical laws, astrophysical models, will understand fundamental processes important for celestial object and astrophysical systems. Student will know how to solve problems related to measuring radiation and distance to astronomical objects, will understand their appearance and motions, will understand celestial phenomena. After the completion of this course student will be able to follow more advanced and specific courses in the field of astrophysics.			
Syllabus			
<i>Theoretical instruction</i> Measuring radiation in astrophysics (photometry, spectrometry, polarimetry); Effects of Earth's atmosphere; space observations; Solar system and formation; Stars (birth, radiation, stability, spectral classes, evolution); Sun; Binary systems; Variable stars; Stellar associations; Galaxies (types and origin); Milky Way; Galaxy clusters; Large-scale structures; Velocities of galaxies; Dark matter; Hubble's Law; Measuring distances; Cosmology.			
<i>Practical instruction</i> In order for students to better adopt freshly learned concepts a lot of attention will be given to practical exercises and problem solving by applying physical laws and models on astrophysical systems, which will be of help in completing homework problem sets and help students prepare for written part of the exam.			
<i>Term paper</i> The goal of assigning a term paper is to provide students a deeper introduction into a specific topic chosen by them. Students will have to search the literature on their own, after which they have to write a short description of the topic where they have to present the key points and what they learned about the topic. An important part of the term paper assignment will be making and delivering an in-class presentation of the term paper topic, in order to help improve their presenting skills as well as to share the knowledge about a certain topic with fellow students.			
Weekly teaching load			Other:
Lectures:5	Exercises:3	Other forms of teaching:2	