

Study programmes: Master academic studies Computer Science			
Course name: Contemporary methods of observational astronomy			
Lecturers: Stevo Šegan			
Status: Optional			
ECTS: 8			
Attendance prerequisite: No prerequisite classes			
Course aims: Training students for the development and application of expert scientific methods in astronomical observations and data reduction.			
Course outcome: After completing a course, student has the essential knowledge and is able to use modern software tools for processing large data bases and is familiar with the most up-to-date observation methods in astronomy.			
Course content: Introduction: general theory; basic equations; Instruments and methods of terrestrial and extraterrestrial Astronomy; Instruments of high and low energy balance; Interferometry in astronomy; Instruments and methods of infrared spectral observations; Instruments and methods of cosmic X and gamma radiation; Adaptive optics; Modern Methods of processing astronomical observations, Numerical Methods; Statistical methods; Methods of data filtering.			
Literature: D. Scott Birney, Guillermo Gonzalez, David Oesper: Observational Astronomy, Cambridge University Press, Jun 29, 2006; D. Đurović: Matematička obrada astronomskih posmatranja, 1974; S. Šegan : Set of 15 lessons for processing observational data, Astronomical Almanac			
Literature for exercises: J. V. Wall, C. R. Jenkins, Practical Statistics for Astronomers, Cambridge, 2003 Astronomical Almanac			
Number of classes of active teaching: 5	Theoretical classes per week: 3 + 2	Practical teaching: 2 (SRI)	
Teaching methods: Going back and front from consultative groups to frontal groups; permanent practical work (special and individual); interactive seminars.			
Assessment (maximal 100 points)			
Course assignments	points	Final exam	points
Lectures	20	Written exam	0
Exercises / Tutorials	30	Oral exam	20
Colloquia		Written-	

		oral exam	
Essay / Project	30		