Study programmes: Astronomy and Astrophysics – Bachelor studies	
Course name: Basic software tools in astronomy	
Lecturers: Bojan Arbutina	
Status: Compulsory	
ECTS: 5	
Attendance prerequisites: None	
Course aims: Introducing with basic software tools in astronomy.	
Course outcome: At the end of the course, student acquires basic knowledge in working with software tools used in astronomy. Student is prepared for further scientific work.	
Course content: Introduction to programs for data processing used in astronomy: IDL, MatLab, ORIGIN. Basic programming in Fortran. Introduction to the Linux environment. Working in Gnuplot. Introduction to programs used for image processing in astronomy: IRAF, IRIS, fv, Karma, ds9. Introduction to FITS format. Introduction to programs for text editing: LaTeX, HTML. Working in text editors: WinEdt, UltraEdit, Kile. Introduction to network protocol: SSH Secure shell.	

Literature:

1. Fanning, W. D.: 2003, IDL Programming Techniques, Fanning Software Consulting Starck, J.L., Murtagh, F.: 2006
2. Astronomical Image and Data Analysis, Springer-Verlag London
3. Samardžić, A., Nenadić, G., Janičić, P.: 2003, LaTeX 2e za autore, Kompjuter biblioteka, Čačak
4. Gustafsson, F., Bregman N.: 2003, MatLab for engineers explained, Springer-Verlag, London
5. Đurović, D., 1979, Matematička analiza astronomskih podataka, Privredno-Finansijski vodič, Beograd

Number of hours: **4**	Lecures: **2**	Tutorials: **2**	Laboratory: **-**	Research: **-**

Teaching and learning methods: Frontal / Individual / Interactive / Tutorials / Lectures / Exercises

Assessment (maximal 100 points)			
Course assignments	**points**	**Final exam**	**points**
Lectures	-	Written exam	50
Exercises / Tutorials	20	Oral exam	-
Colloquia	-	Written-oral exam	-
Essay / Project	30		