Study programmes: Astronomy and Astrophysics - PhD studies			
Course name: Multifrequency astronomy			
Lecturers: Milica Vučetić			
Status: Optional			
ECTS: 9			
Attendance prerequisites: None			
Course aims: Acquiring knowledge and skills for the application of observational and professional achievements in all domains of electromagnetic radiation in astronomy and training for creative work.			
Course outcome: Upon completion of the course, the student is able to have a comprehensive approach to the problem in scientific research - to review current professional literature and use available (observational) data in all relevant parts of the electromagnetic spectrum.			
Course content: Observational astrophysics in time of multimessinger astronomy; Emission mechanisms of electromagnetic radiation; Overview of observing techniques from X to radio frequencies; Particle astrophysics: gamma ray, cosmic ray, and neutrino astronomy; Gravitational waves and their detection; Obtaining and interpreting astronomical data; Multifrequency astronomy in practice: examples from celestial sources; Astronomy software and tools.			
Literature: G. H. Rieke, Measuring the Universe: A Multiwavelength Perspective, 2012. M. D. Filipović, N. F. H. Tothill, Principles of Multimessinger Astronomy, 2021. M. D. Filipović, Astronomija na svim talasima, 2007.			
Number of hours: 10	**Lectures: 4**	**Tutorials: 6**	
Teaching and learning methods: Frontal, group, practical work			

Assessment (maximal 100 points)			
Course assignments	**points**	**Final exam**	**points**
Lectures	-	Written exam	-
Exercises / Tutorials	30	Oral exam	40
Colloquia	-	Written-oral exam	-
Essay / Project	30		