

Study programmes: Astronomy and Astrophysics - PhD studies			
Course name: Physics of Interstellar Medium			
Lecturers: Dejan Urošević			
Status: Optional			
ECTS: 9			
Attendance prerequisites: None			
Course aims: Attaining of advanced knowledge connected to theoretical studying of the physics of interstellar medium.			
Course outcome: At the end of the course, student has skills to work on some research topics: phases of interstellar medium, heating and cooling, shock waves, turbulences, collapsing of the medium, and formation of stars.			
Course content: Fundamentals of interstellar medium in our Galaxy. Radiation and magnetic field. Transfer of radiation and extinction. Neutral interstellar gas. Ionized interstellar gas. Interstellar medium at high energies. Interstellar dust. Heating and cooling of interstellar gas. Interstellar chemistry. PDR regions. Shock waves: supernova remnants, bubbles, dynamics of HII regions, particle acceleration. Turbulence in interstellar medium. Equilibrium, collapse and formation of stars. Changing of states and transformations of interstellar medium.			
Literatures: 1. Lequeux, J., Falgarone, E. & Ryter, C.: 2004, <i>The Interstellar Medium</i> , Springer Exercises: B. Arbutina: Supernovae and their remnants, Creative Commons, Belgrade, 2012			
Number of hours: 10	Lectures: 4	Tutorials: 6	
Teaching and learning methods: Ex cathedra, group work, student research			
Assessment (maximal 100 points)			
Course assignments	points	Final exam	points
Lectures	20	Written exam	40
Exercises / Tutorials	20	Oral exam	20
Colloquia			
Essay / Project			