

Level: bachelor			
Course title: Interstellar Medium			
Status: obligatory			
ECTS: 6			
Requirements: none			
Learning objectives Interstellar medium is the starting point in stellar evolution and the cause of the radiation extinction. Therefore, every astronomer must possess the knowledge about its main properties. The goal of this course is to introduce students to the subject of the interstellar medium and teach them about observational methods used to study this medium, which help them learn about its physical properties.			
Learning outcomes After completion of the course, students should be familiar with the theory of interstellar medium and trained to make conclusions about its physical properties based on different observations.			
Syllabus <i>Theoretical instruction</i> Definition and basic terms about the interstellar medium; Emission processes; Collisional ionization equilibrium; Continuum and recombination lines; Plasma cooling; Interstellar shock waves; Theory and parameters of the photo-ionized regions; Interstellar dust; Introduction to astrochemistry; Thermal phases. <i>Practical instruction</i> With the goal of in-depth understanding of the content covered in classes, a great deal of attention will be given to practical work both during the lectures and in the form of homework. Students will be encouraged to analyze interstellar spectra and draw conclusions about its physical properties, as well as to solve problems in class, which will help prepare them for homework problems and a written exam. <i>Term paper</i> The goal of assigning a term paper is to provide students with a deeper introduction to a specific topic chosen by them. Students will have to independently search the literature and afterwards write a short description of the topic with the task of presenting the key points and their understanding of the topic. An important part of the term paper assignment will be making and delivering an in-class presentation of the topic in order to help improve their presentation skills and share the knowledge about a certain topic with fellow students.			
Weekly teaching load			Other:
Lectures: 3	Exercises: 2	Other forms of teaching: 0	