

Level: bachelor			
Course title: Interstellar Medium			
Status: elective			
ECTS: 6			
Requirements: /			
Learning objectives Interstellar medium is the starting point in stellar evolution as well as the cause of the radiation extinction, and thus every astronomer must possess knowledge about its main properties. The goal of this course is to introduce the students with the subject of the interstellar medium and to teach them about observational methods used to study this medium and which help us learn about its physical properties.			
Learning outcomes After the successful completion of the course titled «Interstellar Medium» the students will be familiarized 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 solidifying the material covered in class, large attention will be given to practical work both during the lectures themselves, 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 written exam. <i>Term paper</i> The goal of assigning a term paper is to provide students a deeper introduction into a specific topic chosen by them. Students will have to search the literature on their own, after which they have to write a short description of the topic where they have to present the key points and what they learned about the topic. An important part of the term paper assignment will be making and delivering an in-class presentation of the term paper topic, in order to help improve their presenting skills as well as to share the knowledge about a certain topic with fellow students.			
Weekly teaching load			Other:
Lectures: 3	Exercises: 1	Other forms of teaching: 1	