

Level: master				
Course title: Formation of stars and planetary systems				
Status: obligatory				
ECTS: 8				
Requirements:				
Learning objectives Star formation, as well as the formation of planetary systems in the Milky Way, is a keystone of our picture of stellar evolution. The aim of this course is to provide students with an overview of the leading theories of stellar and planetary formation, as well as insight into methods applied in this important field.				
Learning outcomes Upon successful completion of this course, students will be acquainted with the theoretical basis of our ideas about stellar and planetary formation, as well as trained to derive important physical information from the relevant astronomical observations.				
Syllabus <i>Theoretical instruction</i> Molecular clouds; dynamical structure and evolution of giant molecular clouds; astrochemistry; young stellar objects; high-mass star formation and the Orion region; low-mass star formation; pre-Main Sequence evolution of stars; T-Tauri stars; circumstellar disks; accretion disks and bipolar outflows; planetary formation; extrasolar planets; typicality of our Solar System. <i>Practical instruction</i> In order to make the contents of the course as specific as possible, the emphasis will be put on practical exercise encouraging students to use observations of young stars and planetary systems to derive important data on the physical properties of those systems, as well as on solving numerical problems of relevance. Students will be required to write an essay on a particular topic within the set of problems introduced in the course, with emphasis on in-depth search of the literature published and on-line databases.				
Weekly teaching load				Other:
Lectures: 3	Exercises: 3	Other forms of teaching:	Student research:	