Physics of the Interstellar Medium - astro822

Degree - M.Sc. in Astrophysics (PO von 2014)

Module	**Compulsory Astrophysics II**
Module No.	astro820

Course	**Physics of the Interstellar Medium**
Course No.	astro822

Category	**Type**	**Language**	**Teaching hours**	**CP**	**Semester**
Required	Lecture with exercises	English	3+1	6	ST

Requirements for Participation:

Preparation: Introductory astronomy

Form of Testing and Examination: Requirements for the examination (written or oral): successful work with the exercises

Length of Course: 1 semester

Aims of the Course: The student shall acquire a good understanding of the physics and of the phases of the ISM. The importance for star formation and the effects on the structure and evolution of galaxies is discussed.

Contents of the Course: Constitutens of the interstellar medium, physical processes, radiative transfer, recombination, HI 21cm line, absorption lines, Stroemgren spheres, HII regions, interstellar dust, molecular gas and clouds, shocks, photodissociation regions, energy balances, the multi-phase ISM, gravitational stability and star formation.

Recommended Literature:

B. Draine; The Physics of the Interstellar and Intergalactic Medium (Princeton Univ. Press 2010)

J. Lequeux; The Interstellar Medium (Springer 2005)