# 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)