Star Formation (MA) - Star Formation

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

Module	**Elective Advanced Lectures: Modern Astrophysics**
Module No.	astro850

Course	**Star Formation (MA)**
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Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	2	3	WT

Requirements for Participation:

Preparation: Astrophysics I (Astrophysics II recommended)

Form of Testing and Examination: Oral examination

Length of Course: 1 semester

Aims of the Course: Understanding of fundamental concepts of star formation in a variety of environments.

Contents of the Course:

The lecture introduces the basic aspects of Star Formation:

Physical Processes in the ISM, Interstellar Chemistry, ISM and Molecular Clouds, Equilibrium Configurations and Collapse, Protostars, Formation of High Mass Stars, Jets, Outflows, Disks, Pre-main sequence stars, Initial Mass Function, Structure of the Galaxy, Starburst Galaxies, Star Formation in the early Universe

Recommended Literature:

Palla and Stahler, Formation of Stars (Wiley)

Carroll and Ostlie, An Introduction to Modern Astrophysics (Addison-Wesley)

Shu, The Physics of Astrophysics I & II (University Science Books, Mill Valley)

Tielens, The Physics and Chemistry of the Interstellar Medium (Cambridge University Press)

Spitzer, Physical Processes in the Interstellar Medium (Wiley)

Unsöld and Baschek, Der neue Kosmos (Springer, Berlin)