

# Module: Elective Advanced Lectures: Modern Astrophysics

Module No.: astro850

## Course: Star Formation

Course No.: astro857

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	2+1	4	WT

### Requirements for Participation:

### Preparation:

### Form of Testing and Examination:

Written or oral examination

### Length of Course:

1 semester

### Aims of the Course:

An introduction to basic concepts, modern theories, and the current observational basis of star formation.

### Contents of the Course:

The structure and evolution of the interstellar medium in relation to Star Formation: molecular excitation, interstellar chemistry; the star formation process: conditions, cloud collapse, protostellar evolution; low mass vs. massive star formation; related phenomena: jets and outflows, protostellar disks, shocks, photodissociation regions; the initial mass function, global star formation, starbursts, the star formation history of the Universe, the very first stars.

### Recommended Literature:

Stahler, Palla: The Formation of Stars (Wiley-VCH, 2004)

Additional literature will be given during the course