Level: bachelor

Course title: Physics of stars

Status: obligatory

ECTS: 6

Requirements: Introduction to atomic physics

Learning objectives

To gain basic knowledge related to star formation, structure and evolution.

Learning outcomes

Upon completion of the course, students should possess:

- General abilities: synthesis of basic physics knowledge applied on structure and evolution of stars;
- Subject specific abilities: understanding and use of the basics of star equilibrium equations; understanding of processes of star formation and evolution of stars of different masses; knowledge on basic characteristics of the final stages of star evolution.

Syllabus

Theoretical instruction

Photometric and spectral properties of stars. Classification. Internal structure of the stars (Equation of equilibrium. Energetic of the stars. Physical processes in the interior of the stars. Models of interior structure of the stars). Photosphere of the stars (Transport of the radiation. Radiative equilibrium. Models of photosphere.). Star evolution (Star formation. Evolution of low mass stars. Evolution of massive stars. Evolution of close binaries. The final stages of star evolution.)

Practical instruction

Problem solving exercises based on the theoretical part.

Weekly teaching load				Other: -
Lectures: 3	Exercises: 1	Other forms of teaching: -	Student research: -	