



Faculty of Technology and Science  
Physics  
Syllabus

**Course Approval**

The syllabus was approved by the Faculty Board of Technology and Science on 19 May 2008 , and is valid from the Autumn semester of 2007 at Karlstad University.

**Course Code:** FYGA01

**The Universe - a journey through cosmos, 7.5 ECTS Credits**  
**(Universum - en resa genom kosmos, 7.5 Swedish credit points)**

**Degree Level:** Bachelor

**Progressive Specialisation:** G1N (First cycle, has only upper-secondary level entry requirements)

**Language of Instruction**

Swedish

**Prerequisites**

General admission requirements

**Major Field of Study**

FYA (Physics)

Learning Outcomes

The aim of the course is that students acquire knowledge suitable for an interested public audience, and that students are inspired to study further in this fast growing field.

Upon completion of the course students should be able to give an outline of:

- the formation and structure of solar systems, particularly ours
- the formation, evolution, and fate of stars
- black holes
- the structure of galaxies
- the large-scale structure and evolution of the universe

Content and Form of Instruction

Instruction is in the form of lectures, film screening, interactive computer use of astronomy programmes, and telescope observations.

The course deals with:

- the formation and structure of solar systems with a focus on the special conditions of our solar system
- the formation, evolution and fate of stars
- what black holes are and which are believed to exist
- the structure of galaxies
- the large-scale structure and evolution of the universe: established knowledge and speculative knowledge about the creation and fate of the universe.

Throughout the course explanations are based on how a few laws of nature are manifested differently depending on differing circumstances.

#### Reading List

See separate document.

#### Examination

Examination is in the form of a written exam.

#### Grades

One of the grades Fail (U), Pass (G), or Distinction (VG) is awarded in the examination of the course and its modules.

#### Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course assessment is based on student views and experiences as reported in written course evaluations and/or group discussions. Students will be informed of the result of the evaluation and of the measures to be taken.

#### Course Certificate

A course certificate will be provided upon request.

#### Additional Information

Students who enrolled before 1 July 2007 will complete their studies in accordance with the requirements of the earlier admission. Upon completion students may request degree and course certificates to be issued under the current ordinance if they meet its requirements.

The local regulations for studies at the Bachelor's and Master's levels at Karlstad University stipulate the obligations and rights of students and staff.

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