



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 Spring semester of 2008 at Karlstad University.

Course Code: FYGA02

Astrobiology - the cosmic prerequisites for life, 7.5 ECTS Credits

(Astrobiologi - de kosmiska förutsättningarna för liv, 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 objective of the course is for students to acquire knowledge suited for communicating to non-specialists who are interested in the subject in general. Students can also use this knowledge as a basis for further studies of a field in rapid expansion.

Upon completion of the course, student should be able to give an account of:

- the cosmic prerequisites of complex structures, primarily life
- the geological development and climate changes of the earth
- the nature of life on earth
- the origin and evolution of life on earth
- the conditions of life elsewhere in the solar system
- the conditions of life beyond the solar system.

Content and Form of Instruction

Instruction is in the form of lectures.

The course covers:

- the properties of natural laws and the influence of special conditions on complex structures such as life
- geology and climate
- the nature of life on earth: its molecular basis and the function of cells
- the origin and development of life on earth: the nature of evolution
- the changing conditions of life on earth: habitable zones
- conditions of life on other locations in the solar system: Mars and the moons of Jupiter and Saturn

- the conditions of life beyond the solar system: extrasolar planets.

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.

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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