

Syllabus

for course at first level

Introduction to Astronomy
Introduktion till astronomi

**7.5 Higher Education
Credits**
7.5 ECTS credits

Course code:	AS5001
Valid from:	Autumn 2015
Date of approval:	2014-10-06
Department	Department of Astronomy
Main field:	Astronomy
Specialisation:	G1F - First cycle, has less than 60 credits in first-cycle course/s as entry requirements

Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University 2014-10-06.

Prerequisites and special admittance requirements

Admission to the course requires knowledge equivalent to Waves and optics, 10.5 credits.

Course structure

Examination code	Name	Higher Education Credits
HELA	Introduction to Astronomy	7.5

Course content

The course consists of an introduction to modern astronomy with a focus on physical understanding. It starts with a broad overview of the properties and content of the Universe, next to discuss how observations give us information about the Universe and its evolution. After this the course treats the basic physics in astrophysics, such as radiation laws, gas laws, atomic and nuclear physics. This is applied first to stellar evolution and the end of stars. Next, galaxies and galaxy clusters are discussed. The course end with the foundations of modern cosmology.

Learning outcomes

Upon completion of the course, students are expected to be able to:

- * describe the different research areas in modern astronomy;
- * show good understanding of how different research instruments work and are used;
- * show extensive ability to use fundamental physics for astrophysical problems;
- * show the ability to acquire independently deeper knowledge within a given area of astronomy.

Education

The education consists of lectures, group work and practical laboratory work.

Participation in the practical laboratory work and group education associated with this is compulsory. An examiner may rule that a student is not obliged to participate in certain compulsory education if there are special grounds for this after consultation with the relevant teacher

Forms of examination

a. Examination for the course is in the following manner: measurement of knowledge takes place through::

Written or oral examination

b. Grading is carried out according to a 7-point scale related to learning objectives:

A = Excellent

B = Very Good

C = Good

D = Satisfactory

E = Sufficient

Fx = Fail, some additional work required

F = Fail, much additional work required

c. Grading criteria for the course will be distributed at the start of the course.

d. A minimum grade of E is required to pass the course, together with: completion of all practical laboratory work and all other compulsory education, followed by its presentation and award of a "Sufficient" grade

e. Students who fail to achieve a pass grade in an ordinary examination have the right to take at least further four examinations, as long as the course is given. The term "examination" here is used to denote also other compulsory elements of the course. Students who have achieved a pass grade on an examination may not retake this examination in order to attempt to achieve a higher grade. Students who have failed to reach a pass grade on two occasions have the right to request that a different teacher be appointed to set the grade of the course. A request for such appointment must be sent to the departmental board.

The course has at least two occasions with exams the year the course is given. Years when not given, there is at least one exam occasion.

f. When graded Fx, the student is given the possibility to make a complementary task to raise the grade to E. The examiner decides which tasks are needed to be done and the criteria to pass the complimentary task. The complimentary task must be completed before next exam occasion.

Interim

Students may request that the examination is carried out in accordance with this syllabus even after it has ceased to apply. This right is limited, however, to a maximum of three occasions during a two-year-period after the end of giving the course. A request for such examination must be sent to the departmental board.

Limitations

The course may not be included in examinations in combination with courses Modern astronomi (AI1220), Modern astronomi (AS1009) eller Modern astronomi (AS2001).

Misc

The course is a component of the Bachelors programme in Astronomy or Physics, and it can also be taken as an individual course.

Required reading

Course literature is decided by the departmental board and is described in an appendix to the syllabus.