

Syllabus

for course at advanced level

Observational Astrophysics II
Astronomisk observationsteknik II

**7.5 Higher Education
Credits**
7.5 ECTS credits

Course code:	AS7004
Valid from:	Autumn 2019
Date of approval:	2006-09-27
Changed:	2006-09-27
Department	Department of Astronomy
Main field:	Astronomy
Specialisation:	A1F - Second cycle, has second-cycle course/s as entry requirements

Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University 2006-09-27

Prerequisites and special admittance requirements

To enter this course knowledge corresponding to a Bachelor's degree in physics, or similar, is required. In addition, knowledge corresponding to the courses Astronomisk observationsteknik I, AN, 7,5hp (AS7003), Astrofysikaliska spektra, AN, 7,5hp (AS7006), Stjärnornas struktur och utveckling, AN, 7,5hp (AS7010) is needed. Also required is knowledge equivalent to Swedish upper secondary school course English B, or equivalent to one of the following tests; Cambridge CPE and CAE: Pass, IELTS: 6.0 (with no part of the test below 5.0), TOEFL (paper based): 550 (with minimum grade 4 on the written test part), TOEFL (computer based): 213, TOEFL (internet based): 79.

Course structure

Examination code	Name	Higher Education Credits
TEN1	Exam	7.5

Course content

The course prepares for practical work with the theoretical knowledge acquired in the course Astronomisk observationsteknik I, AN, 7,5hp (AS7003). The practical work is done with an advanced telescope during one week. The course gives knowledge and ability to write a complete observing time proposal, within which a detailed estimate and report for the requested time is included, as well as a plan for observing the selected targets. The course gives knowledge about the large software packages that control the telescope, the selected instruments and the detectors, as well as those packages that are used for the final reduction of the received signals.

Learning outcomes

It is expected that the student after taking the course will be able to: know and apply the extensive information needed to write an acceptable and competitive observing time proposal - know and understand telescope and instrument parameters that are specific for a given observation of celestial objects - know and present the signal-to-noise requirements given for the astronomical/astrophysical context on the one hand, and how this can be realized at the telescope on the other - know and apply the available astronomical analysis software and reduce the gathered data - in an independent way present this knowledge to other students and the teacher.

Education

The education consists of lectures, hand-in exercises with associated oral and written reports, and practical work at a telescope in association with a written final report. Participation in lectures, the practical laboratory work and all other student reports 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 report for hand-in exercises and a final report associated with the observations.

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 F = Fail 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: participation at other students reports. 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.

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 a degree together with the courses "Astronomisk observationsteknik II gk, 5p" (AI1390), or the equivalents.

Misc

The course is a component of the Master's programme in Astronomy, but 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.