



# SH2102 Subatomic Physics, Extended Course 3.0 credits

Subatomär fysik, tilläggskurs

This is a translation of the Swedish, legally binding, course syllabus.

## Establishment

Course syllabus for SH2102 valid from Autumn 2007

## Grading scale

P, F

## Education cycle

Second cycle

## Main field of study

Physics

## Specific prerequisites

## Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

The course will give the students an increased knowledge about experimental methods within nuclear-and particle physics and how these methods can be used in basic science as well as in the society.

## Course contents

In nuclear physics, the interaction between ionized radiation and matter is studied, gamma-decay, how different detectors work, identification of radioactive isotopes, the use of international databases. In particle physics the capture and decay of cosmic radiation is studied, where the lifetime of muons is determined. The decay of  $Z^0$  is investigated in a computerized tutorial.

## Course literature

W.S.C. Williams: Nuclear and Particle Physics (Clarendon, Oxford 1991. ISBN 0-19-852046-8, Paperback)

## Examination

- INL1 - Project, 1.5 credits, grading scale: P, F
- LAB1 - Laboratory Work, 1.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

## Other requirements for final grade

Laboratory work (LAB1;3 university credits).

## Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.