Faculty of Science

FYST16, Physics: Modern Subatomic Physics, 7.5 credits

Fysik: Modern subatomär fysik, 7,5 högskolepoäng

Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2007-06-14 to be valid from 2007-07-01, autumn semester 2007.

General Information

The course is an elective course for second cycle studies for a scientific candidate or Master's degree (120 credits).

Language of instruction: English and Swedish
If needed, the course is given in English.

Main field of studies	*Depth of study relative to the degree requirements*
Physics	A1N, Second cycle, has only first-cycle course/s as entry requirements

Learning outcomes

The aim of the course is that students should have acquired the following knowledge and skills on completion of the course:

Knowledge and understanding

On completion of the course, the participants should
describe and explain the underlying ideas in subatomic basic research of today, in particular their relation to local research projects.
be able to present a current problem within the subatomic physics

Application and evaluation

This is a translation of the course syllabus approved in Swedish

On completion of the course, the participants should
have acquired proficiency in reading and absorbing scholarly journals
have the ability to analyse and explain current research

Ability to communicate

On completion of the course, the participants should
have improved ability to in a written report account for achieved results

Learning ability and information competence

On completion of the course, the participants should
have acquired the ability to extract relevant information from several scientific articles within a field and present this both orally and in writing

The aim of the course

The aim of the course is to give an introduction to the subatomic basic research and present current research issues.

Course content

Modern subatomic physics is a very broad and active research area that includes everything from photon-induced reactions to issues about the detectability of quark-gluon plasma. To illustrate the models and nuclear reactions that are relevant in the subatomic research of today, during the course we will follow some current projects (linked to Lund) from the planning stage via experiments and data analysis to the final interpretation and comparisons with the theory.

Course design

The teaching is given as lectures, home assignments and projects. Participation in home assignments and projects with seminar are compulsory.

Assessment

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass, Pass with distinction.
To pass the course, passed written assignments, project report and seminar presentation are required. The grade constitutes a weighed assessment from these

three parts.

Entry requirements

For admission to the course, general entry requirements, English B and knowledge equivalent to FYSA31 are required Physics 3, Modern Physics, 30 ECTS or the equivalent.

Subcourses in FYST16, Physics: Modern Subatomic Physics

Applies from V08

0701 Modern Subatomic Physics, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction