



SH2101 Subatomic Physics 6.0 credits

Subatomär fysik

Course syllabus for SH2101 valid from Autumn 07, edition 1.

Intended learning outcomes

To extend the knowledge of nuclear and particle physics, to enhance the understanding of the phenomena governing the composition and structure of the universe and to show how knowledge in this field can be used by the society.

Course main content

Big Bang and the development of the Universe from particles under extreme conditions via nucleosynthesis in stars to atomic nuclei and matter. Dark matter. The force between protons and neutrons. The structure and mass of the nucleus and the various decay modes of unstable nuclei. Nuclear reactions and nuclear energy. The three families of quarks and leptons. The different forces and their exchange particles. The standard model. CERN.

Eligibility

Literature

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

Examination

- TEN1 - Examination, 6.0 credits, grade scale: A, B, C, D, E, FX, F

Requirements for final grade

One written examination (TEN1; 6 university credits).