COURSE DETAIL

INTRODUCTION TO NUCLEAR AND PARTICLE PHYSICS
Country Norway
Host Institution University of Oslo
Program(s) University of Oslo
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Physics
UCEAP Course Number 119
UCEAP Course Suffix
UCEAP Official Title INTRODUCTION TO NUCLEAR AND PARTICLE PHYSICS
UCEAP Transcript Title NUCLEAR&PARTICL PHY
UCEAP Quarter Units 8.00
UCEAP Semester Units 5.30

Course Description
This course is an introduction to nuclear and particle physics, from the universe's elementary particles and the forces that act between them, to the quantum structure of systems composed of elementary particles. Weight is given to current challenges and new results from cutting-edge research. The course discusses topics including fundamental conservation laws and symmetries; production and decay processes for nuclei and elementary particles; interplay between theory, models, and data from modern experiments; nuclear properties and models that describe the quantum structure, decay, and reactions of nuclei; the Standard Model of elementary particles and interactions including the role of the Higgs boson; the quark-gluon plasma; and the roles of nuclear and particle physics in energy production, medicine, and astrophysics. The course requires students to have met specific prerequisites in order to enroll in the course.

Language(s) of Instruction
English

Host Institution Course Number
FYS3500

Host Institution Course Title
INTRODUCTION TO NUCLEAR AND PARTICLE PHYSICS

Host Institution Campus
Mathematics and Natural Sciences

Host Institution Faculty

Host Institution Degree

Host Institution Department
Physics

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