FISICA (LM38)

(Lecce - Università degli Studi)

Insegnamento METODI SPERIMENTALI PER LA FISICA NUCLEARE E SUBNUCLEARE

GenCod A004145

Insegnamento METODI SPERIMENTALI PER LA FISICA NUCLEARE E

Insegnamento in inglese EXPERIMENTAL METHODS FOR

Settore disciplinare FIS/04

Corso di studi di riferimento FISICA

Tipo corso di studi Laurea Magistrale

Crediti 7.0

Ripartizione oraria Ore Attività frontale: 70

Per immatricolati nel 2019/2020

Erogato nel 2019/2020

Anno di corso 1

Lingua ITALIANO

Percorso FISICA SPERIMENTALE DELLE INTERAZIONI FONDAMENTALI

Docente Enrico junior SCHIOPPA

Sede Lecce

Periodo Secondo Semestre

Tipo esame Orale

Valutazione Voto Finale

Orario dell'insegnamento https://easyroom.unisalento.it/Orario

BREVE DESCRIZIONE DEL CORSO

Short introduction to modern nuclear and subnuclear physics. Particle accelerators: linear accelerators, cyclotrons, synchrotrons, synchrotron light. Semiconductors detectors. Detector systems: trackers, calorimeters, particle identification, trigger, data acquisition. Hints of statistical methods and data analysis. Examples of experiments in particle physics and astroparticle physics.

PREREQUISITI

A good knowledge of classical electrodynamics and special relativity is essential. Basic concepts of quantum mechanics are recommended. Some notions of particle physics might facilitate the comprehension, but are not strictly necessary.Short introduction to modern nuclear and subnuclear physics. Particle accelerators: linear accelerators, cyclotrons, synchrotrons, synchrotron light. Radiation-matter interaction. Particle detectors: transport phenomena, signal formation, gas detectors, scintillators, photomultipliers, semiconductor detectors, other types of detectors. Detector systems: trackers, calorimeters, particle identification, trigger, data acquisition. Hints of statistical methods and data analysis. Examples of experiments in particle physics and astroparticle

OBIETTIVI FORMATIVI

The student acquires the basic knowledge to understand the functioning of the instrumentation and the methods which are typically employed in nuclear and subnuclear physics

METODI DIDATTICI

Lecture

MODALITA' D'ESAME

Prova orale

PROGRAMMA ESTESO

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TESTI DI RIFERIMENTO	The material of the class references several textbooks and scientific papers. When treating each topic, the teacher will make sure to point the students to the proper literature.