UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Laboratorio di Fisica I

2122-1-E2701Q059

Aims

Aim of the course is to give the basis of Experimental Physics through experiments of Mechanics and Thermodynamics and to learn statistics and error analysis.

Contents

The first part of the course is based on lectures on statistics: Analysis of experimental data, random and systematic errors, Distributions, Probability and confidence. The second part of the course is carried out in laboratory, by making basic Physics experiments

Detailed program

The first part of the course is based on lectures on statistics: Analysis of experimental data, random and systematic errors, Distributions, Probability and confidence.

The second part of the course is carried out in laboratory, by making the following basic physics experiments

1 DENSITY
2 BINOMIAL AND GAUSSIAN DISTRIBUTIONS

3 MOMENT OFDI INERTIA
4 STANDING WAVES
5 ELASTICITY
6 RADIOACTIVE DECAY
7 PENDULUM
8 NEWTON'S LAW OF COOLING
9 INERTIAL BALANCE
10 POISSON DISTRIBUTION

Prerequisites

None

Teaching form

Lessons and activity in laboratory, in groups of two-three students each, managing experimental activities varying every day of presence.

Textbook and teaching resource

J.R. Taylor, *Introduzione all'analisi degli errori,* ed. Zanichelli

Tutorial video (e-learning page of the course)
Laboratory notes (e-learning page of the course)

Semester

Lessons: Novembre - December 2021

Laboratory activities: March-April 2022

Assessment method

Final Oral exam: discussion on the experimental activity based on a detailed laboratory report

Office hours

On request contacting the teacher: m.martini@unimib.it