UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Fisica III

2122-2-E3001Q043

Aims

Illustrations of phenomena that show the inadequacy of classical physics theories for their description and formulation of new models that introduce the students to the first concept leading to quantum physics.

Contents

- [illegible]
- [illegible]
- **Atomic models:**
- [illegible]
- [illegible]

Detailed program

1. [illegible]
2. [illegible]

3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]

Prerequisites

The contents of the maths and physics courses of the first three semesters of the Bachelor degree in Physics and Mathematics.

Teaching form

Lectures.

Textbook and teaching resource

Selected chapters in the following texts and lecturer’s notes.

TIPLER “Modern Physics”

- [illegible]
- [illegible]

BARROW “Chimica fisica”

- [illegible]

ENGE-WEHR-RICHARDS “Introduction to Atomic Physics”

- [illegible]
- [illegible]

DEKKER – “Solid State Physics”

- Chap. 11 – Many-particle Fermi-Dirac and Bose-Einstein systems

SERWAY-MOSES-MOYER “Modern Physics”

- Chap. 6 – Statistical physics

RICHTMYER-KENNARD-COOPER “Modern Physics”

- Chap. 10 – Fermi

EISBERG-RESNICK “Quantum Physics”

- Chap. 10 – Statistical Physics of Free Gases

ALONSO – FINN “III-Quantum and statistical physics”

- Chap. 8 – Elements of Statistical Thermodynamics

Semester

II semester.

Assessment method

The assessment is reached through a written exam that last three hours, with open questions (4/5) in which the student is requested to expose a topic of the program with small derivations, graphs and, if needed some numerical estimates. The use of a scientific calculator is requested. Access to textbooks during the exam is strictly forbidden. The exam score is expressed in 30 points units.

The student succeeded in a positive written exam (>=18/30) can perform an optional oral exam or keep the rating obtained in the written one.

Those students that have been rated 16/30 and 17/30 in the written exam access the oral exam in order to obtain a final score >=18/30.

Office hours

By appointment.