

S.Y.B.Sc. (PHYSICS)
(SEM-III) (NEP-2024 Pattern)
PHY-241-MN: Applied Physics-I

Course Objectives: -

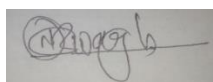
These course aims-

- a) To provide foundational knowledge about nonmaterial's, their unique properties, and fabrication techniques.
- b) To discuss the physical principles governing the behaviour of materials at the nanoscale, including quantum effects.
- c) To introduce the fundamental principles of laser operation, including stimulated emission, population inversion, and optical resonators.
- d) To highlight the practical applications of lasers in industry, medicine, defence, communication, and research.
- e) To understand the physical principles underlying biological processes and systems.
- f) To explore the structure and function of bio molecules such as proteins, DNA, RNA

Course Outcomes (CO):

Upon completion of this course student will able to

- a) Understanding the Nan scale
- b) Nonmaterial Fabrication
- c) Applications of Nanotechnology
- d) Characterization Techniques
- e) Fundamental Principles of Lasers
- f) Types and Characteristics of Lasers
- g) Applications of Lasers
- h) Physical Principles in Biophysics
- i) Functioning of Bioinstrumentations
- j) Basic Understanding of Astrophysics and Space Mission



Subject Teacher




Principal
B.D.Kale Mahavidyalaya
Ghodegaon, Dist. Pune

S.Y.B.Sc. (PHYSICS)
(SEM-IV) (NEP-2024 Pattern)
PHY-291-MN: Applied Physics-II

Course Objectives: -

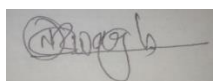
This course aims to introduce Artificial intelligence, Data Analysis and Instrumentation to students.

- 1) To study the basics of Artificial Intelligence.
- 2) To impart knowledge about Data Analysis in Physics.
- 3) To study different instruments used in scientific and industrial laboratory

Course Outcomes (CO):

Upon completion of the course, the student will be able to,

- 1) Utilize AI tools for various aspects in Physics
- 2) Understand errors in different experiments and data analysis
- 3) Learn measurement techniques and data analysis methods.
- 4) Understand the fundamental principles of instrumentation in physics.
- 5) Familiarize with various types of instruments and their applications.
- 6) Develop theoretical understanding of instruments and enhance experimental skills in instrument operation, calibration, and troubleshooting etc.



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