Course name : B. Sc.

Mode of study : Full time

Duration : 3 years

Programme Outcomes, Programme Specific Outcomes and Course Outcomes

Department of Physics – UG

B.Sc. Physics

Programme Outcomes

- The undergraduate programme is aimed at making the students capable of comprehending the postgraduate syllabus and be able to analyse simple as well as complex situations involving application of scientific concepts in real life situations.
- The graduates will have knowledge of fundamental laws and principles in a variety of areas of Physics along with their applications.
- The graduates will develop research skills which might include advanced laboratory techniques, numerical and mathematical techniques, and computer oriented skills.
- Graduates from this programme will be eligible to continue M.Sc. degree or joint M.Sc. Ph.D. courses and become a scientist.
- There are many career opportunities such as a teacher, research analyst and scientific assistant in scientific bodies or industries and would be competent and independent to carry out their specified work.

Programme Specific Outcomes

The programme will enable the students

- to understand the basic concepts of Physics and applying mathematical and computing techniques into it, and to develop the scientific attitude.

- to practise problem solving in all the areas of Physics.
- to apply theories of Physics and its relevance in present day technology.
- to explore important connections between theory, experiment and current applications.
- to develop a basis for future learning and work experience.

Course Outcomes

On the completion of the course the students will enable to

- understand the concept of properties of matter viz. elasticity, viscosity, low pressure, surface tension and oscillations (free, damped and forced oscillation).
- learn the basics of geometrical optics, physical optics and modern optics.
- explain the concept of gravitation, planetary motion, conservation laws, rotational motion of rigid body, moment of inertia, concept of linear and angular momentum, Newton's laws of motion (mechanics) and relativity.
- acquire knowledge on basics of thermodynamics and to understand the kinetic theory of gases and transport phenomena.
- to understand the electrostatic properties, magnetostatics, magnetism and the basics of electromagnetic waves.
- provide knowledge about the basics of computer programming in C++ and to solve problems by writing programs.
- get an overview about the concept of statistical mechanics and quantum mechanics.
- understand the basics of solid state physics, atomic physics, nuclear physics and spectroscopy.
- describe the principle and working of different kinds of analog and digital electronic devices.
- acquire experimental skills such as handling the instruments, error determination, calculation and analysing the result while handling the laboratory courses.

- handle the electrical and electronic equipments safely and independently by educating the skill based subjects.