

PROGRAM OUTCOMES, PROGRAM SPECIFIC OUTCOMES, COURSE OUTCOMES

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| Program Outcome | Physics deals with a wide variety of systems, certain theories are used by all physicists. Each of these theories were experimentally tested numerous times and found to be an adequate approximation of nature. Physics uses mathematics to organize and formulate experimental results. The results from physics experiments are numerical measurements. Technologies based on mathematics, like computation has made computational physics an active area of research. |
| Program Specific Outcome | Understand the relationship between particles & atom, as well as their creation & decay. Relate the structure of atoms & subatomic particles Understand physical properties of molecule the chemical bonds between atom as well as molecular dynamics. Analyze the applications of mathematics to the problems in physics & develop suitable mathematical method for such application & for formulation of physical theories. Learn the structure of solid materials & their different physical properties along with metallurgy, cryogenics, electronics, & material science. |
| Course: BSC PHYSICS | Outcomes |
| General physics -I General physics-II | Relative motion. Inertial and non inertial reference frames. Parameters defining the motion of mechanical systems and their degrees of freedom. Study of the interaction of forces between solids in mechanical systems. Centre of mass and inertia tensor of mechanical systems. Application of the vector theorems of mechanics and interpretation of their results. Newton's laws of motion and conservation principles. Introduction to analytical mechanics as a systematic tool for problem solving. 8 Use of mechanical simulation software. |
| Optics | To provide a good foundation in optics To provide a knowledge of the behaviour of light To inspire interest for the knowledge of concepts is physical and geometrical physics |
| Electricity and X-ray crystallography | To gain knowledge about the electrical energies in order to learn motion of charges |
| Condensed matter physics | 1) have an understanding of the elastic properties of solids and lattice vibrations; 2) have an understanding of the properties of metals on the basis of the free and nearly-free electron gas models; 3) have an understanding of the essence of density functional theory and its underlying building blocks; 4) have an understanding of the magnetic properties of condensed matter; 5) have an understanding of the optical properties of solids and the relation to their electronic properties; Demonstrate their understanding of the fundamental postulates and principles of special relativity and quantum mechanics. |

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| Modern physics | Apply the principles of quantum mechanics to predict the results of measurements in simple systems such as a free particle, simple potential wells, and central potentials. |
| Nuclear physics Electronics | <p>Study of the structure of nucleus</p> <p>Know the formation of nucleus and their binding energy</p> <p>To motivate the students and analyze the energy released by the nucleus during the fission and fusion process</p> <p>To acquire knowledge and apply it to various electronically instruments</p> <p>To apply the development of the electronic instruments</p> <p>To motivate the students to apply the principles of electronics in their day-to-day life.</p> |