About the Department

The Department of Applied Physics has been providing quality teaching, research and expert advice. Our academic and technical staff members are well equipped with the best qualifications and experience to meet the University's expectations. The Department always strives to stay abreast of technology growth and development and recognizes the fact that learning is a multifacted continuous process. The Department has a number of excellent laboratories with advanced facilities for teaching and research and also shares other facilities within the College.

There are several active research groups within the Department, which have been producing a steady stream of research publications of international caliber and which maintain strong research collaborations with international institutions. All staff members are highly committed and they work together to achieve our common goal: the development of students' minds and skills as well as providing a basis for their personal, social and cognitive development.

Vision

To become one of the premier department in the state and country which is taking part to deliver excellent professionals and research scholars from the institute and to create such an

environment where faculty, staff and students can conduct result-oriented research and meet societal needs.

Mission

- Developing new methodology of teaching.
- Creation of practical skills and knowledge related environment around students and to give problem-oriented assignment and providing basic facilities and guidance.
- To develop critical & analytical abilities.
- To motivate the students for extra-curricular activities.
- To develop the ability to relate & use technical knowledge in real life situations.
- Plan to run few Post-Graduate courses in the areas of Applied Physics, Nano-Science & Technology etc.
- Accelerated Research & Development works in the department by our faculty members.
- More Interaction/Collaboration with the scientists and institutions of national and international repute.

Programme Specific Outcome (PSOs) for U.G. Programme

- Apply Principles of Engineering, Electronics and Computer Science, Physics, Chemistry, Environmental Science, Mathematics (including differential equations, Discrete Mathematics, linear algebra and complex variables) and laboratory skills for building, testing, operation and maintenance of high currents electrical systems, such as, Electrical Machines, Power and Energy Systems.
- Model, analyse, design, and realize physical systems, components or processes related to high current Electrical Engineering Systems.
- Work professionally in Power Systems Engineering, Control Systems Engineering and Software Industries.

Programme Outcome (POs) for U.G. Programme

- **Engineering knowledge:** Apply the knowledge of Mathematics, Science, Engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of Mathematics, Natural Sciences, and Engineering Sciences.
- **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with

appropriate consideration for the public health and safety, the Cultural, Societal, and environmental considerations.

- **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- **Modern tool usage:** Create, select, and apply appropriate techniques, resources, modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- **Environment and sustainability:** Understand the impact of the professional engineering solution societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- **Ethics:** Apply ethical principles and commit to professional ethics, responsibilities and norms of the engineering practice.
- **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- **Project management and finance:** Demonstrate knowledge and understanding of the Engineering and Management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.