Guru Nanak Educational Society's

GURU NANAK INSTITUTE
OF ENGINEERING & TECHNOLOGY
APPROVED BY AICTE, DTE & AFFILIATED TO RTM NAGPUR UNIVERSITY, NAGPUR
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Department of Electrical Engineering

VISION

To produce globally competent technocrats in the field of electrical engineering capable of accepting challenges, serve the nation for the growth of stakeholders.

MISSION

- To transform rural and under privileged students into skilled, globally competent and ethical professionals in the field of Electrical Engineering and improving the individuals' quality of life, their family, industries and the society.

- To implement a curriculum that involves analytical tools, design techniques and efficient management principles to bridge the gap between academia, research and industry.

- To nurture their sustainability in such a way that they predict the dynamics and appropriately accommodate themselves in changing market scenario through Industry/Institute Interaction for innovation and product development.

Department of Electrical Engineering

PROGRAM EDUCATIONAL OBJECTIVES

PEO-I: Preparation: To prepare students to succeed in employment/profession and/or to pursue post graduate and research educations in Electrical Engineering discipline in particular and allied Engineering discipline in general.

PEO-II: Core Competence: To provide students with a solid foundation in mathematical, scientific and engineering fundamentals required to formulate, analyze and solve engineering problems requiring knowledge of Electrical Engineering.

PEO-III: Breadth: To prepare students with engineering breadth to innovate, design, and develop software products and to contribute in providing solutions related to multidisciplinary real life problems.

PEO-IV: Professionalism: To inculcate in students professional and ethical attitude, effective communication skills and team work to become a successful professional.

PEO-V: Learning Environment: To provide students with an academic environment that makes them aware of excellence and lifelong learning in emerging technologies.

Department of Electrical Engineering

PROGRAMME SPECIFIC OUTCOMES: UG

PSO [1]: Graduates will demonstrate their knowledge in effective implementation during their practice of profession of Electrical Engineering with due regard to environment and social concerns.

PSO [2]: Graduates will demonstrate their knowledge in analysis, design, erection and laboratory experimentation regarding Electrical Engineering.

PSO [3]: Graduates will be motivated for continuous self learning in engineering practice and pursue research in advanced areas of Electrical Engineering in order to offer engineering services to the society, ethically.

PROGRAMME SPECIFIC OUTCOMES: PG

PSO [1]: Demonstrate specialized knowledge in power electronics & power systems, its operation and control with an ability to combine existing and recent practices.

PSO [2]: Analyze and solve complex problems to obtain optimal solution in power system operation and control to meet the needs of industry and society.

PSO [3]: Demonstrate research competence in power system to design innovative products and provide services in the field of power electronics & power systems and related areas.

PSO [4]: Apply modern tools, techniques and resources to provide solutions to complex engineering problems related to power electronics & power systems.

Department of Electrical Engineering

PROGRAMME OUTCOMES: UG

PO [1]: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO [2]: Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO [3]: 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, and the cultural, societal, and environmental considerations.

PO [4]: 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.

PO [5]: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO [6]: 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.

PO [7]: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO [8]: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO [9]: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO [10]: 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.

PO [11]: 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.

PO [12]: 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.

Department of Electrical Engineering

PROGRAMME OUTCOMES: PG

PO [1]: Acquire in-depth knowledge in the domain of power systems.

PO [2]: Ability to critically analyze various power system components, models and their operation.

PO [3]: Ability to apply fundamentals and concepts to analyze, formulate and solve complex problems of electrical power systems and its components.

PO [4]: Apply advanced concepts of electrical power engineering to analyze, design and develop electrical components, apparatus and systems to put forward scientific findings at national and international levels.

PO [5]: Ability to use advanced techniques, skills and modern scientific and engineering tools for professional practice.

PO [6]: Preparedness to lead a multidisciplinary scientific research team and communicate effectively.

PO [7]: Demonstrate and apply knowledge and understanding of engineering principles for project management.

PO [8]: To motivate exploring ideas and to encourage for independent, reflective and lifelong learning.

PO [9]: To understand the impact of engineering solutions in a global, economic, environmental and societal context.