NEWSLETTER

DEPARTMENT OF

ELECTRICAL AND ELECTRONICS ENGINEERING

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR

COLLEGE OF ENGINEERING (AUTONOMOUS),

ANANTHAPURAMU – 515002,

ANDHRA PRADESH, INDIA

CONTENTS

About the Department

The Department of Electrical Engineering was established in 1946 offering B.Tech course (Electrical and Electronics Engineering) with an intake of 30 students, which was enhanced to 50 in the year 1995 and subsequently to 60 in the year 2009. In 1946 the college was established at Guindy, Chennai and was shifted to Anantapur in 1948. The Electrical Engineering Department offers various M.Tech programs. M.Tech, with specialization in “Electrical Power Systems” was started in the year 1971 with an intake of 25. “Power and Industrial Drives” was started in the year 2001 with an intake of 25. “Control Systems” started in the year 2001 with an intake of 25 and “Reliability Engineering” started in the year 2009 which is an interdisciplinary area with an intake of 18. The Department is having research facilities for Ph.D Programme in Electrical Engineering Discipline.

Institutional Vision

- Committed to expanding the horizon and inspiring young minds towards academic excellence.
- Aims at scaling new heights through advanced research and innovative techniques to keep pace with the ever-changing needs of industry and society at large.

Institutional Mission

- To identify and implement, proven, prevention-oriented, forward-looking solutions to critical, scientific and technological problems.
- To make technology a principal instrument of economic development of the country and to improve the quality of life of the people through technological education, innovation, research, training and consultancy.

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PROGRAM OUTCOMES

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, review 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.

PROGRAM EDUCATIONAL OBJECTIVES

PEO 1: To excel in professional career and/or higher education by acquiring knowledge in mathematics and Basic sciences, Basic Electrical Sciences, Power Systems, Power Electronics and Electrical Drives.

PEO 2: To identify the problems in society and design electrical systems appropriate to its solutions using latest technologies that are technically sound, economically feasible and socially acceptable.

PEO 3: To exhibit professionalism, ethical attitude, communication skills, team work in their profession and adapt to current trends in technology by engaging in continuous professional development.

PROGRAM SPECIFIC OUTCOMES

PSO 1: The student can apply fundamental knowledge gained during the various courses of the program to analyse and solve the complex problems of Electrical Machines, Control Systems, Instrumentation System, Power Systems and Power Electronic systems.

PSO 2: The student can design electrical, electronics and allied interdisciplinary projects to meet the demands of industry and to provide solutions to the current real time problems.

PSO 3: The student can utilize the knowledge regarding recent techniques and sustainable technologies for developing the projects related to Control Engineering, Smart Grid, Power Quality and Advanced Power System protection to engage in lifelong learning

FACULTY ACTIVITIES

Papers Published:

- Muqthiar Ali Shaik, Padma Lalitha Mareddy and **Visali N, "Enhancement of Voltage Profile in the Distribution System by Reconfiguring with DG placement using Equilibrium Optimizer"**, Alexandria Engineering Journal, pp. 4081-4093, Volume 61, Issue 5, May 2022.
- **Sridhar Savarapu**, MD Qutubuddin and Yadaiah Narri, **"Modified Brain Emotional Controller-Based Ripple Minimization for SVM-DTC of Sensorless Induction Motor Drive"**, IEEE Acces, Volume 10, April 2022.
- Boini Somesh, **P Rizwan and Y Manasa**, **"Distribution System Restoration for Reliability Enhancement using Optimization Techniques"**, High Technology Letters, Vol. 28, Issue 5, May 2022.
- Baddam Rajasekhar Reddy and **Y Manasa, "Fault Overload Control Method for High-Proportion Wind Power Transmission Systems with Model Predictive Control DFIG"**, International Journal of Analytical and Experimental Modal Analysis, Volume XIV, Issue VI, June 2022.

Workshops / FDP's Attended:

- **Sri P. Rizwan** has participated in 5-day Online FDP on **"Greening the Grid"**, during 17th – 21st May, 2022 organized by Dept. of EEE, Mahatma Gandhi Insitute of Technology, Gandipet, Hyderabad.

PATENTS

- M Dilip Kumar, B. Pooja, G. Sumanasri, P. Yashwanth, Shaik Abdul Rasheed, A Sudhakar, **P. Sujatha** and M Sreenivasa Reddy, **"Sun Tracking Solar Panel"**, App. No. 202241029321 A, Publication Date 17/06/2022.

EDITORIAL TEAM

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