NEWSLETTER

DEPARTMENT OF
ELECTRICAL AND ELECTRONICS ENGINEERING

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
COLLEGE OF ENGINEERING, 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:

- P Malleswara Reddy, Dr. A Srinivasula Reddy, **Dr. P Sujatha and Dr. P Bharath Kumar "A Comparative analysis of DPFC with UPQC performance using various control techniques to Improve Power Quality in Smart Grid",** Turkish Journal of Computer and Mathematics Education, Vol. 12, No. 9, April 2021, pp. 2341-2355.
- Hemachandra Reddy K, P Ramkishore Kumar Reddy and **P Sujatha "Optimal allocation of FACTS devices based on heuristic approach considering ATC along with device cost and voltage variations",** International Journal of Engineering Research and Applications, Vol. 11, Issue 5 (Series-V), May 2021, pp. 56-68.
- Venkatasupura Vemulapati, Dr. Y N Vijaykumar and **Dr. N Visali, "Prototype Model for High Speed Railway Power Supply System Suitable for Indian Traction Sub Station using Multi modular Converter"**, Turkish Journal of Computer and Mathematics Education, Vol. 12, No. 10, April 2021.
- Venkatasupura Vemulapati, Dr. Y N Vijaykumar and **Dr. N Visali, "Implementation of Multi-Modular Converter with Droop characteristics for High Speed Railway Traction System",** CVR Journal of Science and Technology, Vol. 20, No. 1, June 2021.
- S Venkataramana, **K Nagabhushanam, Dr. R Kiranmayi and M Rathaiah "Maximum Power Point Tracking of PV Array using Hybrid Controller"**, International Journal of PENSEE, Vol. 51, Issue 4, April 2021, pp. 442-453.
- M Anil Kumar, **R Kiranmayi, K Nagabhushanam** and **K Firdose Kowser Ahamadia "Development of a Fuzzy logic Control System to Improve Performance of a PMSG based Wind Energy Conversion System under Normal and Grid Fault Conditions"**, International Journal of PENSEE, Vol. 51, Issue 4, April 2021, pp. 969-981.
- P V Yogananda Reddy, **K Nagabhushanam** and **R Kiranmayi, "Design and Tuning of Improved Two Degree of Freedom PID Controller for Higher Order and Oscillatory Response Processes",** International Journal of PENSEE, Vol. 51, Issue 4, April 2021, pp. 1694-1703.
- K Naveen Kumar, **R Kiranmayi, K Nagabhushanam** and **N Swathi "PI/PID Controller Design for Multi-Loop Processes Based on their Minimum, Phase Transfer Function Model",** International Journal of PENSEE, Vol. 51, Issue 4, April 2021, pp. 186-193.
- P Vineethsai, **R Kiranmayi, K Nagabhushanam** and **K Firdose Kowser Ahamadia "Performance of Water Pumping PV System using ANFIS Controller",** International Journal of PENSEE, Vol. 51, Issue 5, April 2021, pp. 195-207.

- **Sridhar Savarapu** and Yadaiah Narri, **"Real-Time Implementation of Brain Emotional Controller for Sensorless Induction Motor Drive with Adaptive System"**, Springer, Modern Approaches in Machine Learning and Cognitive Science: A Walkthrough, Volume 956, April 2021, pp. 95-113.
- Chakka Jashmitha, **K. Jithendra Gowd, "An ANN Based Frequency Response of VSWT with Distinct Control Strategies",** Journal of Shanghai Jiaotong University, Vol. 17, Issue 4, April 2021, pp. 1-12.

Workshops / FDP's Attended:

- **Mr. P. Rizwan** has participated in a Faculty Development Program on **"Greening the Grid"**, held during 17th – 21st May, 2021 organized by Dept. of EEE, Mahatma Gandhi Institute of Technology, Gandipet, Hyderabad.

Others:

- **Dr. M. Vijaya Kumar** was appointed as a Rector, JNTUA on 01/05/2021.
- **Dr. N. Visali** was appointed as a Head of the Department, Electrical and Electronics Engineering, JNTUA CEA on 03/05/2021.

- **Dr. P. Sujatha** was appointed as a Principal to the JNTUA College of Engineering, Ananthapuramu on 03/05/2021.

- **Dr. R. Kiranm**ayi was appointed as Director to Foreign Affairs and Alma Matters, JNTUA on 03/05/2021.

- **Sri S. Sridhar** was appointed as Additional Controller of Examination, JNTUA on 03/05/2021.

- **Dr. M. Anka Rao** was appointed as Office incharge of Academic Section on 04/04/2021.

- **J. Sreenivasulu,** Assistant Professor, JNTUA College of Engineering (Autonomous), Ananthapuramu is awarded with Ph.D. in Department of Electrical Engineering by Jawaharlal Technological University Anantapur for the thesis entitled, **"Certain Key Performance Issues in Restructured Power Systems"**, on 24th April, 2021 (Viva-Voce held on 19th Oct., 2019).

- **M. Ramasekhara Reddy,** Assistant Professor, JNTUA College of Engineering (Autonomous), Ananthapuramu is awarded with Ph.D. in Department of Electrical Engineering by Jawaharlal Technological University Anantapur for the thesis entitled, **"Mitigation of Certain Power Quality Issues with Custom Power Devices Using Intelligent Controllers"**, on 24th April, 2021 (Viva-Voce held on 18th Jan., 2020).

- **M. Anka Rao,** Assistant Professor, JNTUA College of Engineering (Autonomous), Ananthapuramu is awarded with Ph.D. in Department of Electrical Engineering by Jawaharlal Technological University Anantapur for the thesis entitled **"Certain Performance Improvement Aspects of Sensorless Induction Motor Drives Using MRAS Techniques"**, on 24th April, 2021 (Viva-Voce held on 18th Jan., 2020).

STUDENT ACTIVITIES

Others:

- **E Tharun** (16001A0241) from B.Tech received **Prof. Tiruvengalam Endowment Gold Medal** (for 2019-20) on 11th Convocation held at JNTUA on 24th April 2021 for being class topper with 85.67%.

- **R Nandini** (15001A0222) from B.Tech received **Prof. Tiruvengalam Endowment Gold Medal** (for 2018-19) on 11th Convocation held at JNTUA on 24th April 2021 for being class topper.
- **R Nandini** (15001A0222) from B.Tech received **Prof. T. S. Raghavan Endowment Gold Medal** (for 2018-19) on 11th Convocation held at JNTUA on 24th April 2021 for best academic performer among girls with 85.82%.

- **Potta Umasree** (18001D9102) from M.Tech (Reliability Engineering) received **Prof. Tiruvengalam Endowment Gold Medal** (for 2019-20) on 11th Convocation held at JNTUA on 24th April 2021 for being class topper with 83.42%.

- **Y Bharathi Devi** (17001D2124) from M.Tech (Electrical Power Systems) received **Prof. M. S. Naidu Endowment Gold Medal** (for 2018-19) on 11th Convocation held at JNTUA on 24th April 2021 for being class topper with 86.92%.

- **Shaik Salma** (17001D9103) from M.Tech (Reliability Engineering) received **Prof. Tiruvengalam Endowment Gold Medal** (for 2018-19) on 11th Convocation held at JNTUA on 24th April 2021 for being class topper with 86.07%.

EDITORIAL TEAM

1. T S Galeeb
2. O Nanda Kishore
3. B Vinod
4. Y Siva Sree
5. P Rachana

COMPILED BY

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2. Smt. Y. Manasa, Asst. Professor (Contract)

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