NEWSLETTER

DEPARTMENT OF
ELECTRICAL AND ELECTRONICS ENGINEERING

Volume - V Oct. – Dec., 2021 Issue - IV

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

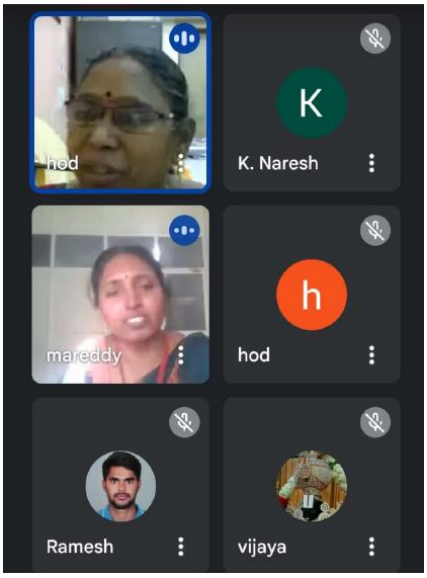
PSO 1: The student can apply fundamental knowledge gained during the various courses of the program to analyse and solve the complex problems of Electrical Machines, Control Systems, Instrumentation System, Power Systems and Power Electronic systems.

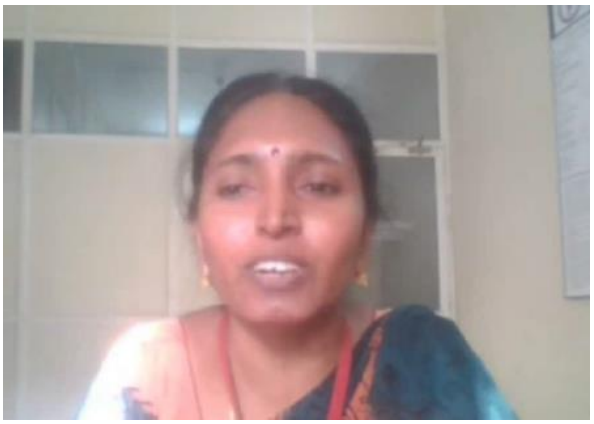
PSO 2: The student can design electrical, electronics and allied interdisciplinary projects to meet the demands of industry and to provide solutions to the current real time problems.

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.

Online Seminar on "Solar Power and its Applications"

An Online Seminar on **"Solar Power and its Applications"** was arranged on 10th Dec. 2021 to students and faculty of EEE Department. The Resource person was Dr. M. Padma Lalitha, Professor and HoD, Dept. of EEE, AITS, Rajampeta.





Online Seminar on "Electric Mobility Trends and Opportunities"

An Online Seminar on **"Electric Mobility Trends and Opportunities"** was arranged on 13th Dec. 2021 to students and faculty of EEE Department. The Resource person was Mr. Babu K S V, Business Head, e-Mobility Automotive Motors & Cooling Solutions, Lucas-TVS Ltd., Chennai.

FACULTY ACTIVITIES

Papers Published:

- Illuru Sree Lakshmi and **Y Manasa, "An Islanding Detection and Control Strategy to Realize the Stable and Autonomous Operation of Microgrids using the Virtual Synchronous Generator"**, International Journal for Research in Applied Science & Engineering Technology, Volume 9, Issue XI, November 2021.
- Velula Lakshmi Prasanna and **Y Manasa, "Controlling the Mitigation Impacts of Communications Delay on Load Frequency Control with an Adaptive Method"**, International Journal for Research in Applied Science & Engineering Technology, Volume 9, Issue XI, November 2021.

Workshops / FDP's Attended:

- **Sri P. Rizwan** has participated in 1 Day Online Webinar on **"Conserving Energy – Revenue Management"**, held on 12th Oct., 2021 organized by Centre of Excellence – Intelligent Energy Systems, Dept. of EEE, CMR Institute of Technology, Bengaluru.

Others:

- Departmental meeting held on 25th Oct., 2021 to discuss the progress of NBA work and allotment of incharges for different laboratories.

- 21st Research Review Meeting (RRM) was held in the Department during 28th & 29th Oct., 2021.

- Departmental meeting held on 30th Oct., 2021 to discuss the CO-PO Attainment of Criteria 3 for NBA.

- Dr. K. Jithendra Gowd, Assistant Professor was appointed as Office incharge of Academic Section on 8th Nov. 2021.
- A BoS meeting was held on 13th Nov. 2021 for finalising the B.Tech II, III and IV year course structure and II year syllabus.
- A BoS meeting was held on 3rd and 4th Dec. 2021 for finalising the M.Tech. - EPS, PID, CS & RE (R21) course structure and syllabus.

- As a part of **"75 Years Celebrations"** Hon'ble Vice-Chancellor visited Department for inspection.

- As a part of **"75 Years Celebrations"** plantation of saplings by Vice-Chancellor, HoD and other faculty members of the department took placed in the premises of the Department.

- As a part of **"75 Years Celebrations"** Alumni interaction with students and faculty.

- The prestigious Technological Institution, JNTUA College of Engineering, Ananthapuramu is celebrating 75 years of glorious existence on 16th, 17th and 18th of December, 2021.
- FIT JNTUA CEA 4K RUN - JNTUA CEA 75 YEARS CELEBRATIONS


RUN
75 YEARS
Celebrations
BHARAT VIKAS
FIT JNTUA 4K RUN


HP

PATENTS

- G Pallavi, K Narasimhaiah Achari, **M Ramasekhar Reddy, M Anka Rao**, A Muni Sankar and **S Sridhar**, **"Method and System for Providing Integrated Solutions to Internet-of-Things (IOT) based Power Grids"**, App. No. 202121043296 A, Publication Date 29/10/2021.

Ph.D. DISSERTATION

S. No.	Name & Admn. No. of the Research Scholar	Title of the Research	Name of the Supervisor and Co- Supervisor	Viva-Voce held on
1.	Mrs. S. Nithya Lavanya 13Ph0202	Spread Spectrum Pulse Width Modulation Methods for Vector Controlled Induction Motor Drives	i. Dr. T. Bramhanada Reddy ii. Dr. M. Vijaya Kumar	30.10.2021
2.	Mr. M. Sankaraiah 13Ph0203	Coordinate Control of DGS and Voltage Control Devices using different Programming Algorithms	i. Dr. S. Suresh Reddy ii. Dr. M. Vijaya Kumar	08.11.2021
3.	Mr. K. Vimala Kumar 13Ph0216	Multi Area Power System Response Enhancement under Deregulated Environment using LFC Employing Fractional Order Controllers	i. Dr. P. Sujatha ii. Dr. Pradip Kumar Sadhu	04.12.2021
4.	Mr. K. Rajasekhara Reddy 14Ph0218	Performance Analysis of Three Phase Single Stage Grid Connected PV System using Non-Linear Controllers	i. Dr. V. Naga Bhaskar Reddy ii. Dr. M. Vijaya Kumar	20.12.2021
5.	Mr. V. Suresh 15Ph0203	Optimized HRES for Off-Grid Electrification of Cluster of Villages	i. Dr. M. Muralidhar iii. Dr. R. Kiranmayi	21.12.2021

EDITORIAL TEAM

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2. O Nanda Kishore
3. B Vinod
4. Y Siva Sree
5. P Rachana

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1. Sri. P. Rizwan, Asst. Professor (Contract)
2. Smt. Y. Manasa, Asst. Professor (Contract)

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