

NEWS LETTER

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Vision of the Department

To impart technical competencies in Electrical Engineering and build a quality citizen to fulfill the need of the nation and globe.

Mission of the Department

M1: *To provide the basic and analytic knowledge in Electrical Engineering with an overall background suitable for building a successful engineer in industry, research or higher education.*

M2: *To enhance the problem-solving capability wherein students learn to develop communications and leadership abilities to unfold as a professional.*

M3: *To ensure that every graduate is aware of the roles and responsibilities of the professional engineer in society through exposure to ethics, equity, and safety.*

M4: *To develop life-long learning skills that allows them to be adaptive and responsive to change in society, technology, and the environment, as well as career demands.*

Program Educational Objectives (PEOs) of Department

PEO1: *Graduates will accomplish basic and practical knowledge with modern designing tools, technologies and software in Engineering.*

PEO2: *Graduates will have the expertise in problem analysis, solving, designing and equipped with necessary information for a successful career in the field of Electrical Engineering.*

PEO3: *Graduates will be outstanding in communication, teamwork and multidisciplinary approach related to engineering issues in national and global context.*

PEO4: *Graduates will excel in competitive environment towards leadership and life-long learning needed for a successful professional career.*

Program Specific Outcomes (PSOs)

Graduates will be able to:

PSO1: *Develop creative and competent skills in the field of design, research and operations of electrical systems.*

PSO2: *Apply technical knowledge effectively with modern software's for design and analysis of power network and systems.*

PSO3: *Implement the technical concepts and principles through experimentation and hardware realization.*

Engineers Day

Engineers Day 2022: Engineers' Day is celebrated every year on September 15 across India on the birth anniversary of Dr. M. Visvesvaraya to recognize his contributions in the field of science and technology. For his excellent work done in the field of engineering (dams, reservoirs and hydroelectric projects), he was honoured with Bharat Ratna in the year 1955. **Department of Electrical Engineering**, celebrated the Engineer's Day 2022 with their faculty, staff and students.



Industry Institute Interaction Programme

1. Parle Factory, Industrial Area, Naini, Prayagraj

An Industrial visit to 'Parle Factory, Industrial Area, Naini, Prayagraj' was successfully organized by the Department of Electrical Engineering, on Saturday, 15/10/2022.

Since 1929, Parle has grown to become India's leading manufacturing of biscuits and confectionery, which symbolizes quality, nutrition and superior taste, and visiting such plant with fresh minded scholars, was a great experience to put into words. The students of EE with their Faculty Members (**Mr. Kuldeep Kumar Singh, Dr. Dinesh Kumar Singh**) visited the factory to make them understand about the production activity, management process, technology concern and also acquire other aspect of knowledge of industry.



In Industry premises, **Mr. Sanjay Ratnani (Director Tirupati Bakers Pvt. Ltd.)**, **Mr. Shyam Singh (Public Relation Manager)** interacted with students. **Mr. Sumit (Executive Manager, Parle)**, an intelligent and experienced personnel, addressed the students with required instructions and guidance in detail about the activities happening in the plant, he cleared student's tangled doubts and allowed to go inside the workplace, his cooperating nature towards the students was praiseworthy.

2. Prayagraj Power Generation Company Ltd.

An industrial visit to **Prayagraj Power Generation Company Ltd.** Vill - Khanshemra, Tehsil- Bara, and, Dist- Prayagraj (U.P) for 5th Sem. Electrical Engineering students was organized on 12th Nov 2022.



It was organized with the prior permission and guidance of Head of the department Professor Niraj Kumar Shukla. It was coordinated by Assistant Professor Kuldeep Kumar Singh. 35 students of the Third Year visited PPGCL (3 x 660 MW) coal-based steam Power plant, on receiving the letter of permission from Prayagraj Power Generation Company Ltd. Students with two faculty members (Mr. Kuldeep Kumar Singh, Mr. R. K. Maurya) went on an industrial visit to the Prayagraj Power Generation Company Ltd. one on 12th Nov 2022.

PPGCL in-charge of production received us at the entrance and gave a brief introduction to the PPGCL. Visit started with briefing about security rules and following all safety protocol. With this industrial visit, students enhance their practical knowledge and they learn all about the operational activities of thermal power plant.

Events

FDP: AI and ML applications in electrical and electronics engineering, August 20–25, 2022.

An online Faculty Development Programme on **AI and ML Applications in Electrical and Electronics Engineering** was organized during August 20–25, 2022. The FDP was jointly organized by the departments of Electrical Engineering and Electronics and Communication Engineering, SIET Prayagraj, the Department of Electronics and Communication Engineering, JK Institute of Applied Physics and Technology, Prayagraj, and the Department of Electronics and Communication Engineering, I.E.T., Dr. Rammanohar Lohia Avadh University, Ayodhya. This event was also technically supported by many professional bodies, such as the IETE Allahabad chapter, the IEEE, student branch SIET, and the ISTE student chapter SIET.

The FDP was inaugurated by Chief Guest Prof. Venit Kansal, Director, IET Lucknow, and Guest of Honor Prof. Subodh Waria, Dean, UG AKTU, as well as Prof. Ramapati Mishra, director of our collaborative institute (I.E.T., Dr. RMLAU, Ayodhya), and Prof. R. S. Yadav, head of department, JK Institute of Applied Physics and Technology, Prayagraj. In this FDP, speakers from IITs, NITs, and industry delivered expert talks.



Speaker Details:

1	Dr. Bhaskar Mandal Expert affiliation: NIT Patana	7	Dr. Nitin Singh Expert affiliation: MNNIT Allahabad UP
2	Mr. Mahesh Gour Expert affiliation: Data Scientist, Sivosoft Solution Pvt Ltd	8	Dr. Rajesh Kumar Expert affiliation: DTU, Delhi
3	Dr. Chandrashekhar Azad Expert affiliation: NIT Jamshedpur	9	Dr. Niraj Kumar Choudhary Expert affiliation: MNNIT Allahabad UP
4	Dr. Navneet Kumar Singh Expert affiliation: MNNIT Allahabad UP	10	Dr. Karan Verma Expert affiliation: NIT Delhi
5	Dr. Gurpreet Kaur Expert affiliation: IIIT Una	11	Dr. Asheesh Kumar Singh Expert affiliation: MNNIT Allahabad UP
6	Dr. Arun Kumar Verma Expert affiliation: MNIT Jaipur	12	Dr. Bindeshwar Singh Expert affiliation: KNIT Sultanpur

Workshop on “PYTHON”

The Department of Electrical Engineering organized a seven-day workshop for students on “**Beginners Guide to Python**” on 03 January to 09 January 2023. The workshop was attended by 33 students (Second year Electrical Engineering) and the instructor for the workshop was **Mr. Ashish Rawat, Softronic Automation, Prayagraj, UP India**. After the inauguration, the content flow, objectives and outcomes of the workshop were discussed. In workshop, history of Python programming language, set up of Python Programming environment for Windows, Variables and Data types, Operations in Python were explained. Inbuilt Data Structures in Python and some complicated concepts were discussed which will help students while developing their own code and further, this may help them while seeking placement in software domain.

After learning all the aforementioned concepts, students will be able to successfully apply this knowledge of Python Programming Language in their academic projects, Image Processing, Internet of Things (IoT) and use Python open-source libraries.



The certificate distribution for students of the workshop was conducted at 2.30 PM on 09 January 2023 and certificates were distributed to all the participants. The Seven-day “**Beginners Guide to Python**” program complete successfully, along with encouraging feedback from the students.

Expert Lecture

An expert lecture on “**Small Business and Scalable Start-up Entrepreneurship**” was organized by the department of Electrical Engineering on 23/01/2023. The guest speaker was Mr. Laxmikant Dwivedi, Technical Manager from Gururaj Radiators Pvt. Ltd. Naini, Prayagraj, who enlightened the students by his knowledge of entrepreneurship and start-ups. He provided the information about various avenues for starting the ventures and about the available government schemes. The session began with the introduction and welcome of the guest speaker by departmental program coordinator Dr. Pavan Kumar Singh.



The lecture was organized to make students aware about the practical knowledge in business start-up and management and to make them aware of the strategies and various government schemes to start a business and become a successful entrepreneur.

The students got motivated when expert gave the examples of some of the entrepreneurs who achieved success at a very young age and in very challenging circumstances. It was a great learning for all the students as the lecture enhances their knowledge and motivated them to start their own venture. Thanks to all the members that helped this expert lecture to be productive and fruitful.

Institutional Training Program on Energy Conservation

An institutional training program on “**Energy Conservation**” was organized by Petroleum Conservation Research Association (PCRA) in Shambhunath Institute of Engineering and Technology on **21st March 2023**. The training program was conducted by Er. Ashwani Gupta (Senior Faculty, Petroleum Conservation Research Association). The expert discussed about the importance, necessity and achievements of India in the field of energy efficiency and reduction of power consumption. During the program, expert highlighted the present energy scenario and need for energy conservation and presented some case studies that outlined the benefits of energy conservation in real life. This institutional training program enriched the knowledge of students as well as faculty members.



Faculty Publications

International/ National Journals

- **D. K. Singh, N. K. Shukla, P. K. Singh,** and K. P. Pandey, “Optimized Dual-Setting Directional Overcurrent Relay Coordination in Meshed Distribution System” Journal of Jilin University (Multidisciplinary Edition), *Jilin Daxue Xuebao (Gongxueban)/Journal of Jilin University (Engineering and Technology Edition)*, vol. 41 (11), pp. 378-399, Nov. 2022. **Online ISSN:** 1671-5497, **DOI:**10.17605/OSF.IO/6CMVG, **Impact factor:** 1.386.
- K. N. Nagesh, P. K. K. Varma, B. Kumar, R. K. Singh, B. Mishra and **D. K. Singh**, “4-port MIMO antenna with novel isolator conducting structure for sub-1GHz/sub-6GHz and RF-energy harvesting applications”, Journal of Electromagnetic Waves and Applications, Taylor & Francis, pp. 1-24, 21-July-2023. **Online ISSN:** 1569-3937, **DOI:**10.1080/09205071.2023.2224081, **Impact factor:** 1.438, **CiteScore** (Scopus): 2.9, (Q2).

International/ National Conferences

- R. K. Shukla, P. K. Tripathi, A. Kumar, V. Prakash and **D. K. Singh**, "To Improve the Identification of Images Using LBPH in Machine Learning," *IEEE, 1st International Conference on Intelligent Computing and Research Trends (ICRT), Roorkee, India*, pp. 1-7, February 2023. **Electronic ISBN: 979-8-3503-3677-1, ISBN: 979-8-3503-3678-8, DOI: 10.1109/ICRT57042.2023.10146722.**

Book Chapters

- **Dinesh Kumar Singh, Niraj Kumar Shukla, and Pavan Kumar Singh**, "Chapter IV: IoT Based Vehicle Tracking and Accident Alert System, *Book Title: Intelligent Control for Modern Transportation Systems, CRC Press, Taylor and Francis Group*, pp. 63-76, 16 October 2023. **eBook ISBN: 978-1-0034-3608-9, DOI: https://doi.org/10.1201/9781003436089.**

Faculty Participation in FDP's and Short-Term Courses

- **Dr. Niraj Kumar Shukla**, attended one-week Faculty Development Program on "AI and ML Applications in Electrical and Electronics Engineering" jointly organized by Shambhunath Institute of Engineering and Technology Prayagraj, J. K. Institute of Applied Physics and Technology, Prayagraj, and I.E.T., Dr. Ram Manohar Lohia Avadh University, Ayodhya during August 20th -25th, 2022.
- **Dr. Pavan Kumar Singh**, attended one-week Faculty Development Program on "AI and ML Applications in Electrical and Electronics Engineering" jointly organized by Shambhunath Institute of Engineering and Technology Prayagraj, J. K. Institute of Applied Physics and Technology, Prayagraj, and I.E.T., Dr. Ram Manohar Lohia Avadh University, Ayodhya during August 20th -25th, 2022.
- **Dr. Pavan Kumar Singh**, Participated NPTEL-AICTE FDP (full FDP of one week) on Introduction to Smart Grid, during July-Sept 2022.
- **Dr. Pavan Kumar Singh**, Participated NPTEL-AICTE FDP (full FDP of one and half week) on Deep Learning, during July-Oct 2022.
- **Dr. Pavan Kumar Singh**, Participated NPTEL-AICTE FDP (full FDP of half week) on Electric Vehicles - Part 1, during Jan-March 2023.
- **Dr. Pavan Kumar Singh**, Participated NPTEL-AICTE FDP (full FDP of one and half week) on Smart Grid: Basics to Advanced Technologies, during Jan-April 2023.
- **Dr. Pavan Kumar Singh**, Participated NPTEL-AICTE FDP (full FDP of one and half week) on Fundamental of Power Electronics, during Jan-April 2023.
- **Dr. Dinesh Kumar Singh**, attended Online one-week Faculty Development Program (FDP) on "AI and ML Applications in Electrical and Electronics Engineering" during 20 - 25th August 2022, jointly organized by the Shambhunath Institute of Engineering and Technology Prayagraj, J. K. Institute of Applied Physics and Technology Prayagraj, and I. E. T., Dr. Ram Manohar Lohia Avadh University, Ayodhya, U.P. India.
- **Dr. Dinesh Kumar Singh**, attended Online one and half week Faculty Development Program (FDP) and complete Course on "Power System Protection" during July - October 2022, jointly organized by National Program Technology Enhanced Learning (NPTEL) and All India Council for Technical Education (AICTE), Ministry of Education (MoE), Govt. of India.
- **Dr. Dinesh Kumar Singh**, attended Online One-weeks Faculty Development Program (FDP) on "Smart Grid: Challenges and Opportunities" during 20-24 February 2023, jointly organized by Ashoka Institute of Technology and Management Varanasi (AITM) and Motilal Nehru National Institute of Technology Allahabad UP India.

Workshops Attended by Faculty

- **Dr. Dinesh Kumar Singh**, attended Five days' workshop on "Industrial Practices on Design, Operation and Safety" during 14-18 March 2023, at Anand International College of Engineering, Jaipur Rajasthan India.

Faculty NPTEL Course Certification

- **Dr. Pavan Kumar Singh**, attended & completed successfully NPTEL course on "Introduction to Smart Grid", Conducted by IIT Madras (Coordinator – IIT, Roorkee), (8 Weeks), July- September 2022.
- **Dr. Pavan Kumar Singh**, attended & completed successfully NPTEL course on "Deep Learning", Conducted by IIT Madras (Coordinator – IIT, Ropar), (12 Weeks), July- October 2022.
- **Dr. Pavan Kumar Singh**, attended & completed successfully NPTEL course on "Electric Vehicles- Part 1", Conducted by IIT Madras (Coordinator – IIT, Delhi), (4 Weeks), January- February 2023.
- **Dr. Pavan Kumar Singh**, attended & completed successfully NPTEL course on "Smart Grid: Basics to Advanced Technologies", Conducted by IIT Madras (Coordinator – IIT, Roorkee), (12 Weeks), Jan-Apr 2023.
- **Dr. Pavan Kumar Singh**, attended & completed successfully NPTEL course on "Fundamental of Power Electronics", Conducted by IIT Madras (Coordinator – IISc, Bangalore), (12 Weeks), Jan-Apr 2023.
- **Dr. Dinesh Kumar Singh**, attended & completed successfully NPTEL course on "Power System Protection", Conducted by IIT Madras (Coordinator – IIT, Kharagpur), (12 Weeks), July - October 2022.

Faculty other Awards/Achievements

- **Dr. Dinesh Kumar Singh**, reviewed articles in the 7th students conference on engineering and Systems 2022 (SCES-2022) from 1st to 3rd July 2022, organized by the Department of Electrical Engineering, Motilal Nehru National Institute of Technology Allahabad Prayagraj UP, India.

Faculty Patents Granted/ Filed/ Applied

- Devesh Mishra, **Dr. Niraj Kumar Shukla**, Dr. Rohini Saxena, Dr. Krishna Kant Agrawal, Indian Patent Design Application on "Robot for Grain Moisture Monitoring", Application Number: 375460-001, Cbr Number: 209632, Cbr Date: 09/12/2022, Application Status: Application Accepted and Certificate of Design Generated. Design Accepted and Published, Journal No is 04/2023 and Journal Date is 27/01/2023. Design Application Status (ipindia.gov.in).
- P. K. Gupta, A. Gupta, **Dr. Dinesh Kumar Singh**, R. K. Shukla, K. Anand, Dr. A. K. Mourya, K. Chahar, and Dr. R. K. Jain, "Self-Powered Street Light for Highways and Green Electricity", Office of the Controller General of Patents, Designs and Trade Marks Department for Promotion of Industry and Internal Trade Ministry of Commerce and Industry, Government of India, Intellectual property of India, Application Number: 202311003111 (A), The Patent Office Journal No is 03/2023 and Journal Date is 20/01/2023, Accepted and Published.
- Mr Dilip Kumar; Dr Ankit Kumar Srivastava; **Dr. Niraj Kumar Shukla**; Mr. Nitish Kumar Yadav; Mr Rohit Kumar Singh; Mr. Avanish Kumar Jayank; Mr. Rishi Kumar; Mr. Deepak Yadav; Mr. Manvendra Singh; Mrs Gitanjali Verma, "System for Solar Power Bank with Wireless Charging Using IOT" Journal No. 19/2023, Published on 12/05/2023, Patent No. 202311019228 A. Intellectual Property India (ipindia.gov.in).
- Pratiksha Meshram, **Dr. Niraj Kumar Shukla**, Sushil Kumar Singh, Dr. Ashish Manohar Urkude, M Thenmozhi, M.S. Ravi Teja, Pravin R. Kshirsagar, Hariprasath Manoharan, Indian Patent Design Application on "Contactless Medical Testing Device", Application Number: 365363-001, Cbr Number: 202305, Cbr Date: 03/06/2022, Design Accepted and Published, Journal No is 01/2023 and Journal Date is 06/01/2023. Design Application Status (ipindia.gov.in).

PLACEMENTS

A total of **20** students of B.Tech. (EE) are placed in software and hardware companies like Zimetrics, and Vdart Software Services Pvt Ltd. during Academic Year 2022-2023.

PLACEMENTS REPORT ACADEMIC YEAR 2022-2023				
S. No	Name	Roll Number	Company	Pay Package
1.	Abhishek Kushwaha	1901620200002	Zimetrics	5 LPA
2.	Gaurav Pandey	2001620209005	Zimetrics	5 LPA
3.	Mantu Kushwaha	2001620209009	Zimetrics	5 LPA
4.	Rupali Kaithal	2001620209014	Zimetrics	5 LPA
5.	Sachin Saxena	2001620209016	Zimetrics	5 LPA
6.	Abhishek Pandey	1901620200001	Vdart Software Services Pvt Ltd.	2.25 LPA
7.	Anirudh Mishra	1901620200004	Vdart Software Services Pvt Ltd.	2.25 LPA
8.	Arpit	2001620209002	Vdart Software Services Pvt Ltd.	2.25 LPA
9.	Kavita Tiwari	2001620209006	Vdart Software Services Pvt Ltd.	2.25 LPA
10.	Km. Princi Gupta	2001620209008	Vdart Software Services Pvt Ltd.	2.25 LPA
11.	Km. Shailaja Samir	2001620209017	Vdart Software Services Pvt Ltd.	2.25 LPA
12.	Padam Nabh Pandey	2001620209010	Vdart Software Services Pvt Ltd.	2.25 LPA
13.	Pawan Kumar	1901620200011	Vdart Software Services Pvt Ltd.	2.25 LPA
14.	Pravin Kumar	2001620209011	Vdart Software Services Pvt Ltd.	2.25 LPA
15.	Rana Sangram Singh	1901620200014	Vdart Software Services Pvt Ltd.	2.25 LPA
16.	Reetesh Mishra	1901620200015	Vdart Software Services Pvt Ltd.	2.25 LPA
17.	Shwetank Sinha	2001620209018	Vdart Software Services Pvt Ltd.	2.25 LPA
18.	Vaishnavi Sahu	1901620200023	Vdart Software Services Pvt Ltd.	2.25 LPA
19.	Vivek Kumar	2001620209023	Vdart Software Services Pvt Ltd.	2.25 LPA
20.	Yuvraj Singh	1901620200024	Vdart Software Services Pvt Ltd.	2.25 LPA
