

JULY 2023

VIDYUT

NEWSLETTER FOR DEPARTMENT
OF ELECTRICAL ENGINEERING



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Biannual Newsletter of Department of Electrical Engineering



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VIDYUT

Biannual Newsletter of Department of Electrical Engineering
Rajarambapu Institute of Technology, Rajarnanagar, Islampur,
Maharashtra

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From HOD Desk
Vision, Mission & PEOs

VISION , MISSION

PEO

"Never give
up on
something you
believe in."

From HOD Desk

Dear Friends,

It's immense pleasure to present this biannual newsletter "Vidyut". Electrical Engineering department is the dynamic and vibrant department with the blend of young and experienced Faculty. Department is actively involved in academic as well as research work



in current areas of Electrical Engineering and multi-disciplinary streams. The department has well-equipped labs with the state of the art software, hardware, and machinery. The faculty members are constantly publishing technical papers in national and international journals and conferences. Also, they are involved in consultancy activities. The department is fortunate to have dedicated teachers, devoted students, and committed supporting staff and expert technical staff. Especially, I congratulate my students to participate in various extra-curricular activities, research work, and competitive exams. My best wishes to all for their bright carrier and successful life.

Dr. V. N. Kalkhambkar

Vision, Mission & PEOs

Vission

Develop globally competent electrical engineers to serve future needs and challenges of the society.

Mission

To impart technical education and research skills in close interaction with industry and society for the development of young minds, sensitive to ethical and environmental issues.

Programme Educational Objectives(PEOs)

PEO 1: Apply knowledge and skills to pursue successful career in power sector, manufacturing and process industries.

PEO 2: Utilize expertise to become an academican, practicing engineer and entrepreneur to serve the society, ethically and responsibly with concern to environment.

PEO 3: Engage in lifelong learning to seek excellence in professional life.



"Be
positive,
patient
and
persistent."

Department of Electrical Engineering

BRIEF ABOUT DEPARTMENT:

The department is involved in energy auditing work to cater to the needs of local industries. Also promotes the use of renewable energy. The department has well-equipped laboratories. It has a laboratory of 'Automation & control' equipped with PLC trainer kit, SCADA & HMI especially for final year B. Tech students. E-Yantra is a central facility located in the department. Newsletter-'Vidyut' is published half-yearly. One of the strengths of the department is different Papers are published in reputed journals, and international & national Conferences by faculty, PG and UG students. The main features are MOU's with different industries, Industry-Institute interaction for training as well as placement activities, GATE coaching & Guest Lectures. The scope of employment is in various organizations like the Indian Army, Reliance Energy, TATA Power, GSW, Bharat Forge Ltd., Simens and Syntel and Government Organizations like DRDO, ISSRO, and DAE. The first batch is passed out in May 2008 with 90% placement in reputed companies like Reliance Energy, JSW, Bharat Forge, Uttam Steel, Ocean Shipping company etc. with the Salaries ranging from 1.85 to 4.5 lakh per annum.

One of the strengths of the Department is paper publication in reputed journals, international & national Conferences by faculty, PG, and UG students. The main features are MOU's with different industries, Industry-Institute interaction for training as well as placement activities, GATE coaching & Guest Lectures. The scope of employment is in various organizations like the TATA Power, GSW, Bharat Forge Ltd., Siemens and Syntel, TCS, Cognizant, KPIT, Capgemini, Wipro, HCL technology, SLK software, torrent power, and Government and semi-government organizations like DRDO, ISRO, PGCL, Railway, Mahadiscom, Mahatransco, and Mahagenco Pvt. Ltd.

ACADEMIC PROJECTS

Industry Internship Project (IIP)

1

PROJECT NAMES-

- Object Name Detection
- Self Learning AI Chat Bot
- Pattern Analysis using Data Set
- Salary prediction using Machine Learning
- Matrimonial Web Application
- Face detection and recognition for employees

FACULTY NAME -

Dr. V. N. Kalkhambkar

3

PROJECT NAMES -

- Audio processing from speech to text and text to speech
- Human Voice language Translator
- Audio Processing
- Text to Different Language audio converter
- Solar system Output Power Predictor
- OCR/any text speech
- Cardiovascular Disease Prediction.

FACULTY NAME -

Mrs. S S Patil

2

PROJECT NAMES -

- Identify overload condition in MCB
- Capturing face using detection and Face Dataset Creation
- Object Detection using artificial intelligence and machine learning
- Training module for face detection and recognition
- Audio processing from speech to text and text to speech

FACULTY NAME -

Mrs. Y N Bhosale

4

PROJECT NAMES -

- Design & Manufacturing of MCC, PDB. Using switch gear protection for protecting and controlling of AIR jet loom
- Electrical supply installation and electrification for new manufacturing industry

FACULTY NAME -

Dr.D B Talange

5

PROJECT NAMES -

- Monitoring impact of variation in crushing on daily power generation for Warna Sugar Factor
- Design and Development of Portable Air Cooler
- Study of electrical load distribution of various departments in projal Industries Shirala
- Feasibility analysis of roof top solar system for Projal Industries Shirala

FACULTY NAME -

Mr. A S Pandey



ACADEMIC PROJECTS

Industry Internship Project (IIP)

6

PROJECT NAMES -

- Matrimonial Web Application
- Milk Dairy Management Application
- Inventory Management Application
- Job Finder PHP Application
- Data Monitor System Web Application- Center water power research station Pune
- health monitor system

FACULTY NAME -

Dr. Sujil A

8

PROJECT NAMES -

- Design SLD & Ladder logic of Oil Fired Boiler Control Panel for Adhirat industry
- Component Selection for Oil Fired Boiler Control Panel of Adhirat industry
- Testing & troubleshooting of Oil Fired Boiler Control Panel for Adhirat industry
- Design and development of GV 5 Smart LED fan PCB
- Design and development of Impala PCB with LED used in fan.

FACULTY NAME -

Mr. K M Nathgosavi

7

PROJECT NAMES -

- Development and testing of Rms device
- Troubleshooting and data analysis of a solar site
- Development and Testing of Mega device
- Development of Embedded Process for SuryaLog device
- Design SLD for installation of solar monitoring devices
- Development of suryalogic project and plant handovering process

FACULTY NAME -

Mr. S P Burud

9

PROJECT NAMES -

- Design validation of battery pack system.
- Designing and developing monitor based control panel
- Installation of Electrical elements and assembly of control panel as per design
- PLC programming of control panel
- 3D Model design in Bender software
- Analysis of electric vehicles CFR

FACULTY NAME -

Mr. C L Bhattar

10

PROJECT NAMES-

- Making assembly for LBS panel
- Testing of VCB panel
- Testing of LBS panel
- Making assembly for VCB panel
- Direct On Load testing fixture
- Testing of miniature contactor for LT applications

FACULTY NAME -

Dr. A R Thorat



ACADEMIC PROJECTS

Industry Internship Project (IIP)

11

PROJECT NAMES -

- Contactor Testing Fixture.
- GSM based DOL Starter
- Automatic 1-ph digital VA Testing kit.
- Design and development of relay stabilization testing panel.
- Automatic gromet detection system.
- Automatic DOL starter testing kit.

FACULTY NAME -

Mr. S S Kumbhar

13

PROJECT NAMES -

- review of recent developments of solid state transformer
- Design and Development of 1000KVA ,11kv / 430v ,50Hz transformer for chitale dairy
- Testing and performance analysis of 11KVA 1 kV 440v distribution transformer
- Trouble shooting of power transformer

FACULTY NAME -

Mr. A S Pandey

12

PROJECT NAMES -

- Design and Development of Control Panel for Application in Agriculture and food Processor

FACULTY NAME -

Mr. V B Patil

14

PROJECT NAMES -

- Design and development of 100 kVA transformer.
- Design and development of 750 kVA transformer.
- Analysis of Solar Deep Study project
- Analysis of e-Powertrain
- 1x6.25 MW Power Plant at Pinkash Beverages Pvt Ltd., of Thermax SPP Project
- 1x6.25 MW Cogeneration Power Plant at Vishwa Samudra Bioenergy Pvt.Ltd., Nellore (AP)

FACULTY NAME -

Mr. R A Metri

15

PROJECT NAMES -

- Capture face Using Detection and Create Dataset
- Pattern Analysis from Dataset
- Face Detection and Recognition
- Text to Different Language audio converter

FACULTY NAME -

Dr. P P Gupta



R & D ACTIVITIES

1

Title of Project-
Fire Safety audit report of building

Name of the Faculty-
Dr. A. R. Thorat

Amount
5,310/-

Sponsored By
Apang Shikshan Mandal
Islampur

2

Title of Project-
Energy audit of Smt. KRP
Kanya Mahavidyalaya
Islampur

Name of the Faculty-
Dr. V.N. Kalkhambkar

Amount
5,900/-

Sponsored By
Smt. Kusumtai Rarambapu
Patil Kanya Mahavidyalaya

3

Title of Project-
Analysis for Inrush Current of
Overhead crane UPS system

Name of the Faculty-
Dr. A. R. Thorat

Amount
3,000/-

Sponsored By
Dunug Industry Ambap,
Kolhapur



4

Title of Project-
IRG for Switchgear and
Protection Lab practical for
Engineering Students

Name of the Faculty-
Prof. Mrs. Sucheta Patil

Amount
7,500/-

Sponsored By
Shri Santkrupa Institute of
Engineering & Technology,
Ghogaon Tal-Karad Dist-
Satara

5

Title of Project-
Energy audit of Bhor
Nagarparishad Bhor.

Name of the Faculty-
Dr. V.N. Kalkhambkar

Amount
25,000/-

Sponsored By
Bhor Nagarparishad Bhor



STUDENT ARTICLE

Engineering students, their lifestyle

HARISH V LONDHE (2008010)
FINAL YEAR, B.TECH, EE

Engineering students, their lifestyle "Engineering" is a demanding field that requires constant study and problem-solving. Engineers apply science and math to create efficient solutions. Engineering students often face heavy workloads, little sleep, and limited social lives. To succeed as engineers, they should adopt an engineer's lifestyle. Key aspects of this lifestyle include:

Assignments: Engineering students face numerous assignments, even if they seem insignificant.

Problem-solving: Engineering challenges sharpen problem-solving skills, benefiting both their studies and life.

College Canteen: The college canteen is a popular place for relaxation and socializing, even if the menu isn't great.

Attendance: Students may skip classes due to boring lectures, but it's not advisable.

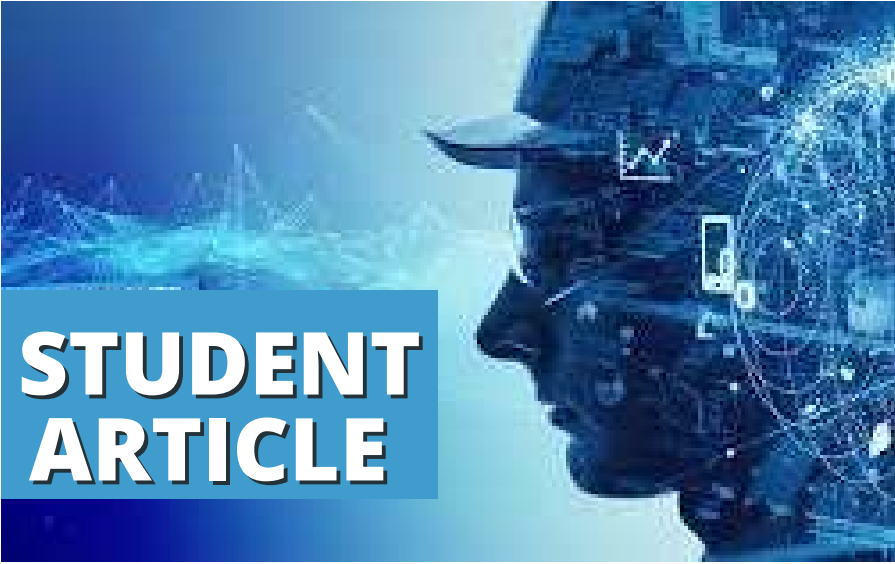
Fests and Events: College fests and events offer a break from regular studies and a chance to showcase creativity.

Last-Minute Study: Engineering students often procrastinate but should consider daily study for better results.

These routines define the life of an engineering student, with both positive and negative aspects. Overall, the four years of engineering education are memorable and full of experiences."

Perfection is achieved, not when there is nothing more to add, but when there is nothing left to take away





STUDENT ARTICLE

Scope for Electrical Engineers in INDIA

SUCHETA S JAGTAP (2008008)
FINAL YEAR, B.TECH, EE

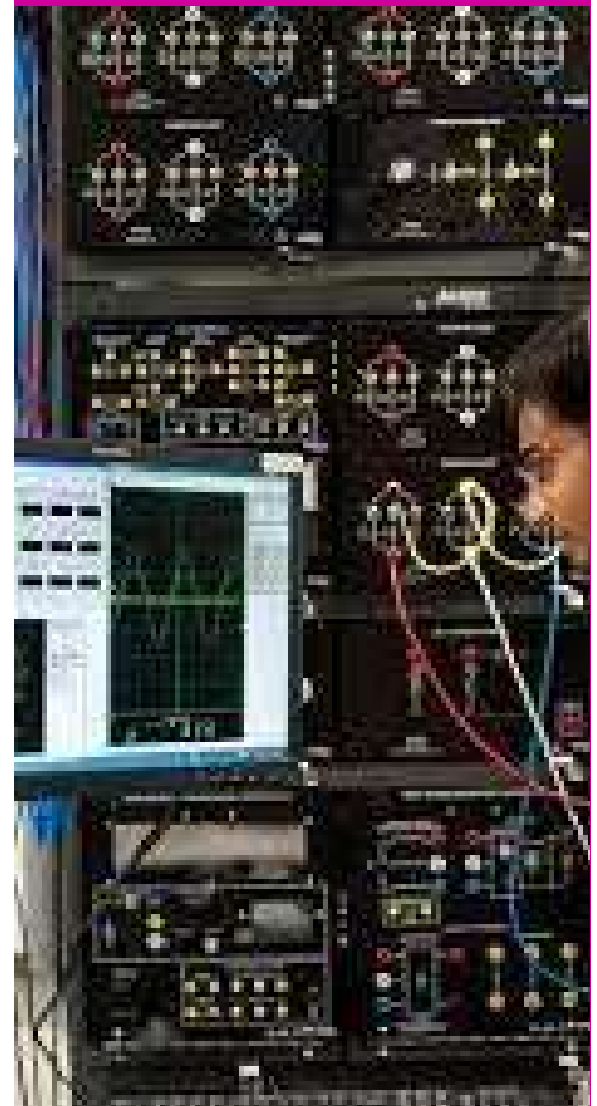
Electrical engineering offers promising career opportunities in India due to the increasing demand for electrical systems and innovations across various industries. As the country continues to invest in infrastructure development, renewable energy, and technology advancements, electrical engineers are in high demand. They play a crucial role in designing and maintaining electrical systems for power generation, distribution, and electronic devices.

Electrical engineering graduates can explore career paths in diverse sectors such as power generation and distribution, telecommunications, automation, and electronics. They can work in both the public and private sectors, taking on roles in electrical design, project management, research and development, and consultancy. Additionally, with the growing emphasis on renewable energy sources like solar and wind, electrical engineers specializing in sustainable technologies can find numerous opportunities in the green energy sector.

In recent years, the government's "Make in India" initiative and the push for a digital economy have further expanded the scope for electrical engineers. They are essential in developing smart grids, electric vehicles, and automation solutions, making electrical engineering a dynamic and promising field for those looking to build a successful career in India.

When you
want to know
how things
really work,
study them
when they're
coming apart

William Gibson



PROGRAMS & PUBLICATIONS

JOURNAL PAPER PUBLICATION

- **Bhattar, Chandrakant L., and Madhuri A. Chaudhari.** "Centralized Energy management scheme for grid connected DC microgrid." *IEEE Systems Journal* (2023).
- **Pandey, Amarjeet S., Vaiju Kalkhambkar, Sachin Kumbhar, and Kiran Nathgosavi.** "Virtual Lab Development to Enhance Student Learning: A Quality Circle Approach." *Journal of Engineering Education Transformations* 36 (2023).
- **Kalkhambkar, Vaiju, and Hemlata Gaikwad.** "E-Learning for Engineering Education During Covid 19 and Impact Assessment." *Journal of Engineering Education Transformations* 36, no. Special Issue 2 (2023).
- **Saini, Vikash Kumar, Rajesh Kumar, Ameena S. Al-Sumaiti, A. Sujil, and Ehsan Heydarian-Forushani.** "Learning based short term wind speed forecasting models for smart grid applications: An extensive review and case study." *Electric Power Systems Research* 222 (2023): 109502.
- **Metri, Rajanikant, Bhooshan Rajpathak, and Harish Pillai.** "Analysis of atypical orbits in one-dimensional piecewise-linear discontinuous maps." *Nonlinear Dynamics* 111, no. 10 (2023): 9395-9408.

EVENT ORGANIZED

IEEE

04

EESA

03

ISTE

08

EVENTS

Farewell Function



Two-Day Workshop on Project report writing



EESA

Electrical Engineering Students association (EESA)

The Electrical Engineering Students' Association (EESA) represents students within the Electrical Engineering department. EESA is an initiative by the students, for the students.

Goal:

The main purpose of the EESA is to provide a variety of educational experiences that will encourage organization members to broaden their knowledge and increase their enthusiasm for their chosen occupational areas (i.e. occupational-related field trips, seminars, etc.).

Objectives:

- To provide opportunities for social interaction among organization members.
- To conduct various events like seminars, industrial visits, guest lectures, soft-skills development programs, fresher's party etc. and also technical and nontechnical events for assisting students
- To increase knowledge and skills in planning, delegating, decision making
- To develop a more positive and realistic attitude toward themselves, their peers and their colleagues.



EDITORIAL BOARD



Dr. V. N. Kalkhambkar
Head Of Department



Dr. Sujil A
Editor in Chief

This newsletter has covered all the events from January 2023 to July 2023 which were organized in and by Electrical Engineering Department. We are here going to invite suggestions for improvement, if any, with warm regards.

Student Editorial TEAM



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