Hope Foundations'

FINOLEX ACADEMY OF MANAGEMENT AND TECHNOLOGY, RATNAGIRI

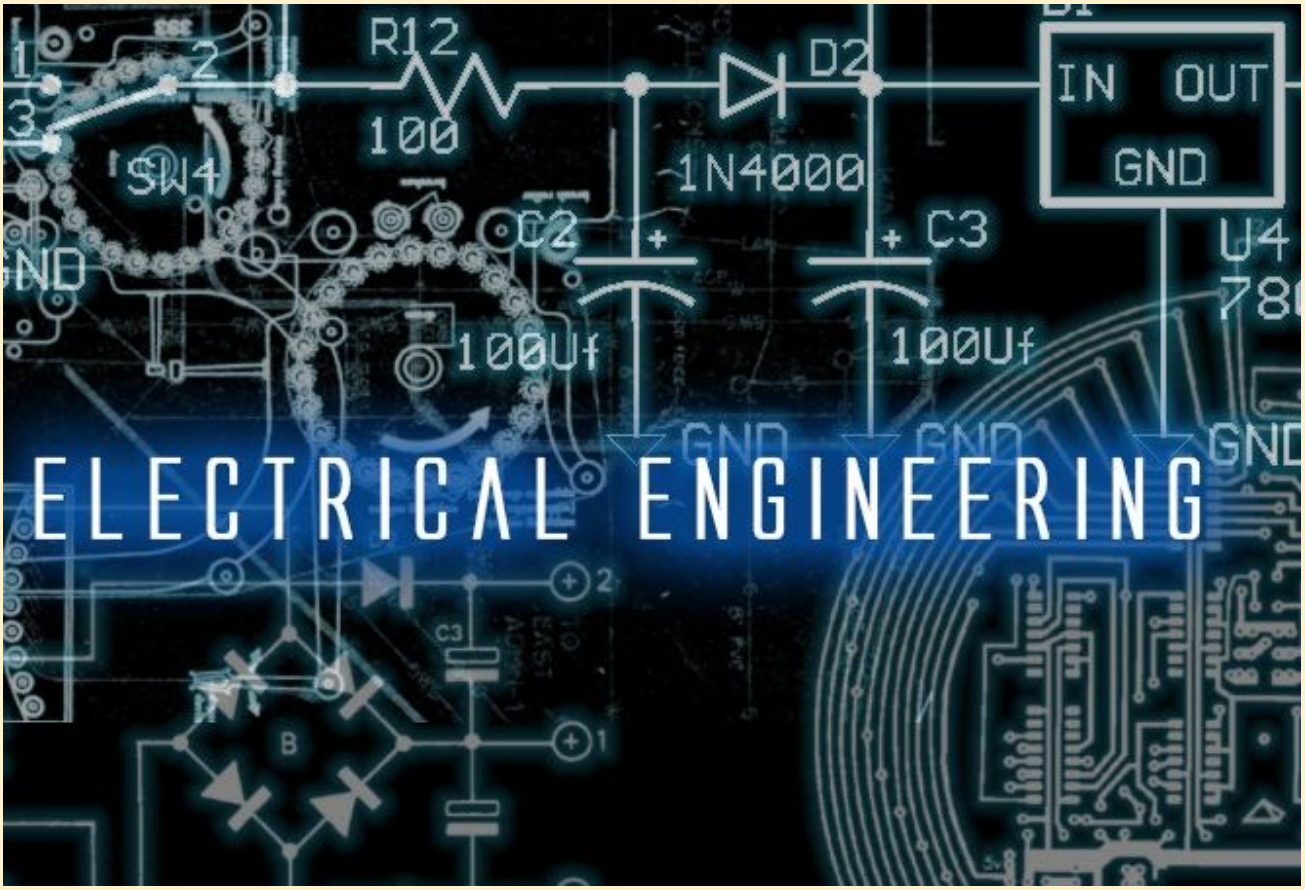
(Approved by AICTE, recognized by DTE, and Affiliated to Mumbai University, NAAC Accredited with B+)

ELECTRAZINE

E – Newsletter of

Electrical Engineering Department

Volume 11, Issue 1 (1st July. 2025 to 31st Dec. 2025)



Publishers

Department of Electrical Engineering

Head of Department

Dr. Jayant J. Mane

Contents

List of Faculty/Staff Members in Department

Faculty Members	
Dr. Jayant J. Mane (HOD, Electrical)	Prof. Rupesh B. Ingale (Assistant Professor)
Dr. Sandeep D. Chawda (Associate Professor)	Prof. Priya A. Potdar (Assistant Professor)
Prof. Milind N. Tagare (Associate Professor)	Dr. Aswantkumar Sharma (Assistant Professor)
Prof. Suhas H. Mhabadi (Assistant Professor)	Prof. Nikhil N. Kasar (Assistant Professor)
Prof. Nitin V. Kelkar (Assistant Professor)	Prof. D. Rajeshkumar Reddy (Asst. Professor)
Prof. Mangesh S. Modak (Assistant Professor)	Prof. Madhumati Mohire (Asst. Professor)
Prof. Sudhir S. Wamane (Assistant Professor)	

Staff Member
Mr. Swapnil P. Mohite (Lab-Assistant)
Mr. Parshuram B. More (Lab-Assistant)

Department Vision

The department shall become foremost seat by imparting advanced and progressive education in electrical engineering along with excellent professional skills and character to meet industrial and social challenges.

Department Mission

M1: To ascertain qualitative teaching learning process through art of teaching pedagogy and meticulous continual assessment.

M2: To provide a supportive environment that facilitates industrial exposure to produce quality engineers who will excel globally.

M3: To promote the versatile development of students through training of soft skills.

M4: To imbibe moral, ethical and social values among students.

Program Specific Outcomes (PSOs)

PSO1: Students will be able to design, simulate and analyze electrical systems using software tools.

PSO2: Students will be able to understand, implement concepts of electrical systems through experiments and apply it to solve industry specific problems.

Program Educational Objectives (PEOs)

PEO1: Students should be able to have a successful career or pursue higher studies to meet future challenges of technological development.

PEO2: Students should be able to pursue analytical and logical skills that will enable them to analyze and design Electrical Systems and its Controls.

PEO3: Students should be able to undertake research and development activities in emerging multidisciplinary fields.

PEO4: Students should be able to achieve professional and interpersonal skills by giving an opportunity as an individual as well as a team.

Highlights of the Department

- The department has 13 faculty members and 02 Lab assistants.
- All faculty members have completed Post Graduation (ME or M. Tech), 03 faculty are having Doctoral Research Degree (Ph.D.), and 03 faculty members are pursuing Ph.D.
- Faculty members have completed their Post Graduations from renowned Engineering institutes like VNIT Nagpur, VJTI Mumbai, COEP Pune, COE Walchand Sangali, PVG COET Pune etc.
- Faculty Average Teaching Experience is 15 years.
- Published almost 100+ papers at National and International level.
- State of Art and well equipped 08 Laboratories including Computer Lab - A and B consists of 40 computers (Acer, Intel i5) with MATLAB, Sci-Lab, MP-Lab, Eagle software and LCD projector installed.
- Separate 17 computers are distributed in faculty members, classrooms, Department office, Project Lab and PLC Lab.
- 1 ICT classroom with Digital board, audio-visual and internet facilities, 2 classrooms with LCD projector and internet facilities are available.
- Programmable Logic Controller Lab with 3 Micro-Logix 1400 Series-B
- LAN Facility is available in Computer Labs. Free Wi-Fi facility is available.
- Department Library with 531 books
- Plagiarism Checker x2019 Business available in project lab.
- Video lectures of NPTEL courses conducted by all IITs (funded by MHRD, Govt. of India).

List of Laboratories:

Basic Electrical Engg. Lab	Computer Lab - A
Switchgear and Protection Lab	Computer Lab - B
Electrical Measurement Lab	Control System Lab
Electrical Machines and Drives Lab	Power Electronics and Automation Lab/ PLC Lab

Programs Organized by the Department

1. Parents Meet of Electrical Engineering Department for AY 2025-26

The Department of Electrical Engineering conducted a Parents Meet for S.E., T.E., and BE Electrical Engineering, batch (2025-2026) on 04 October 2025 through Google Meet and offline.

The meeting commenced under the guidance of the Principal, Dr. Kaushal Prasad, and the Head of the Department, Dr. J.J Mane., along with the Class Teacher, Faculty members, and Mentors. The parents were welcomed to the meeting by the Head of the Department.

Dr. Mane gave a presentation about the department, faculty, staff, labs, and other relevant information. The HoD also shared the department's vision-mission, the Teaching-Learning process, Co-curricular and extracurricular activities, Mentoring system, Alumni interaction, and achievements of the students and faculty members. He highlighted various points like the Purpose of parent meet, Introduction to the institute, importance of Training activities, Placements, and Higher Education details, Institute Recognitions, and involvement of parents in students' academic progress.

The parents appreciated the efforts taken by the institute and department for the overall development of their wards and suggested continuing the same in the future. Suggestions were given by the parents and were noted for further reference. A total of 12 parents were present offline and 16 online. The meeting concluded with a vote of thanks by the head of the department, Dr. Mane.

HoD briefing parents on departmental activities and student development during the Parents Meet.

2. Visit to 10KW Rooftop Solar PV Plant, Zadgaon

On 03/10/2025, the Electrical Engineering Department organized an industry visit to the 10 kW On-Grid Rooftop Solar PV Plant at Vinayak Apartment, Zadgaon, Ratnagiri, offering students content beyond the syllabus of Renewable Energy Systems (RES).

The visit, from 2:15 PM to 5:15 PM, included 21 students and was coordinated by Prof. Nikhil N. Kasar, Subject In-Charge RES and T&P Faculty Coordinator. The session was led by Mr. Hrishikesh Kondekar, Founder of Saurmandal Solar Enterprises, to bridge the gap between theoretical learning and practical applications in solar PV systems.

During the visit, students gained hands-on exposure to solar PV panel selection, calculations, net meter connections, inverter and grounding concepts, and the role of lightning arrestors. Practical demonstrations included mounting techniques, maintenance procedures, cost structure analysis, and net profit calculations. Students actively engaged with the expert, discussing challenges and solutions involved in real-world solar installations, providing a rich understanding beyond classroom theory.

The visit proved highly effective in enhancing students' practical knowledge and industry readiness. It not only reinforced theoretical concepts of RES but also provided insights into operational, safety, and economic aspects of solar PV projects. The department expresses heartfelt gratitude to Saurmandal Solar Enterprises and Mr. Hrishikesh Kondekar for invaluable guidance and support in this enriching learning experience.

Group photo of students with Mr. Hrishikesh Kondekar

3. Online Guest Lecture on Rainwater Harvesting

The Department of Electrical Engineering organized an online guest lecture on the theme "Rainwater Harvesting in Urban & Rural Areas" on 29th September 2025. The session was conducted by Shri U.M. Paranjpe, Trustee of Jalvardhini Pratishthan and a renowned Water Management Consultant.

Shri U.M. Paranjpe has executed many RWH projects through his NGO in Maharashtra and outside. He has delivered more than 70 seminars and written 3 books on the same topic. A total of 70 students attended the session.

The program began with the introduction of the guest speaker by *Prof. M. N. Tagare*. The lecture highlighted the importance of Rainwater Harvesting (RWH) as a sustainable solution to water scarcity. Shri Paranjpe discussed various methods of RWH, its applications in both urban and rural areas, and its role in groundwater recharge, prevention of saltwater intrusion, and reduction of urban flooding. He also shared real-world case studies from across Maharashtra, demonstrating successful rainwater harvesting systems in schools, hospitals, farms, and residential complexes.

Online Guest Lecture on "Rainwater Harvesting in Urban & Rural Areas

4. Electrical Engineering Students Visit Ratnagreen Techno Services, Ratnagiri

A Visit on "Solid Waste Management" at "Ratnagreen Techno Services, Ratnagiri" was arranged for SE Electrical students on Thursday, 19th September 2025. The visit was held as a part of an experiment under the Environmental Science Subject.

A total of 72 students and 01 faculty member participated in the visit. Solid waste management is important because it protects public health by preventing the spread of diseases, safeguards the environment by reducing pollution and conserving resources

through recycling, and contributes to economic growth through job creation and resource recovery.

The two types of waste are handled by them – Solid wet and dry waste. Ratnagreen has biogas plants and compost units to handle and dispose of wet waste at the source. Ratnagreen provides services to handle municipal solid waste management. All the solid waste collected by the local Gram Panchayat gets processed in the plant. Wet waste gets converted into compost. Dry waste is segregated into 26 types of grades. By pressing it in a hydraulic press machine, all the dry waste is transported to the recycling plant for further processing.

Prof. Madhumati P. Mohire arranged this visit. The visit ended with thanks to Shri. Shubham Ghagave and Shri. Manish Apate, the owner of Ratnagreen.

Students of Electrical Engineering exploring practical insights at Ratnagreen Techno Services, Ratnagiri.

5. Hands-on MATLAB Workshop on Motor Design and Simulation for EV Applications

A hands-on workshop on Motor Design and Simulation for Electric Vehicle (EV) Applications was conducted for second-year Electrical Engineering students on 18/09/2025. The workshop provided practical exposure to MATLAB/Simulink and Simscape tools for designing, modeling, and simulating electric motors used in EVs, including DC motors, BLDC motors, and PMSMs. It emphasized practical skills and enabled students to visualize motor characteristics, perform parameter analysis, and understand motor behavior under various operating conditions relevant to EV applications.

Objectives

Introduce students to the MATLAB/Simulink environment for motor simulation.

Design and simulate DC, BLDC, and PMSM motors for EV applications.

Understand motor performance parameters like speed, torque, current, and efficiency.

Provide hands-on experience analyzing motor behaviour under different load conditions. Enhance students' understanding of EV propulsion systems.

Resource Person and Topics Covered

Resource Person: Ankit Kumar, Application Engineer, Design Tech Pvt. Ltd., Pune

Topics Covered: 1. Introduction to MATLAB and Simulink 2. DC Motor Design and Simulation in Simscape 3. BLDC Motor Design and Simulation from Scratch 4. Introduction to PMSM Motors 5. PMSM vs. BLDC – Key Differences for EV Applications.

Dr. J. J. Mane (HoD, Electrical) along with Mr. Ankit Kumar

6. BIS Standards Club Orientation for SE Electrical Engineering Students

The BIS Standards Club Orientation for Second Year Electrical Engineering students was held on 17th September 2025 from 11:30 AM to 12:30 PM at EN 0/14, SE Classroom. The session was organized under the BIS Standards Club of the Department of Electrical Engineering and coordinated by Prof. Nikhil N. Kasar, Faculty Mentor of the club. A total of 46 SE Electrical Engineering students were present at this event.

The program created awareness about the Bureau of Indian Standards (BIS), its functions, and the role of standards in day-to-day life. Students were introduced to the activities of the Standards Club, the importance of maintaining quality and safety through standards, and various initiatives taken up under the club. A hands-on demonstration of the BIS Care App was conducted to familiarize students with its consumer-oriented features, followed by the distribution of BIS kits.

The event was highly informative and engaging for the students. It enhanced their understanding of the relevance of BIS in professional and social contexts and motivated them to participate actively in upcoming Standards Club activities. The orientation successfully met its objectives and was well received by the participants.

Participants of the BIS Standards Club Orientation with Faculty Mentor Prof. Nikhil N. Kasar.

7. Introduction to AI & Machine Learning in Electrical Engineering Using MATLAB Tools and Apps

The Electrical Engineering Department of FAMT conducted a one-day workshop on 17/09/2025 for teaching staff to enhance their skills in Artificial Intelligence (AI) and Machine Learning (ML) using MATLAB tools and apps. The workshop focused on Artificial Neural Networks (ANN), Convolutional Neural Networks (CNN), and Reinforcement Learning (RL), demonstrating how MATLAB's built-in apps and toolboxes can simplify AI/ML modeling and simulation for electrical engineering applications.

Topics Covered:

Introduction to MATLAB AI & ML Tools

Overview of MATLAB AI/ML toolboxes such as Deep Learning Toolbox, Reinforcement Learning Toolbox, and Neural Network Toolbox.

Using MATLAB apps like App Designer, Deep Network Designer, and Reinforcement Learning Designer for simulations.

Artificial Neural Networks (ANN) Using MATLAB

Creating, training, and testing ANN models using Neural Network Toolbox.

Applications in load forecasting, fault detection, and predictive control.

Convolutional Neural Networks (CNN) Using MATLAB Apps

Designing CNN models with Deep Network Designer for pattern recognition and signal

classification.

Hands-on exercises demonstrating image and signal processing applications.

Reinforcement Learning (RL) Using MATLAB Toolbox

Designing RL agents for adaptive control of electrical systems.

Using Reinforcement Learning Designer to implement reward-based learning strategies.

Hands-On Demonstration

Faculty practiced model creation, training, and simulation in MATLAB apps.

Examples included ANN for battery SOC prediction, CNN for pattern recognition, and RL for optimal motor control.

faculty participation during MATLAB workshop

8. Two-Day Workshop on Arduino: From Basics to Automation & Robotics

The Department of Electrical Engineering organised a two-day hands-on Workshop titled “Arduino: From Basics to Automation & Robotics” for second-year Electrical Engineering students on 25th July and 2nd August 2025.

A total of 27 students participated in the workshop, actively engaging in interactive sessions focused on embedded systems, sensor interfacing, and real-world automation applications. The workshop was structured into six comprehensive sessions, covering Arduino fundamentals, sensor integration, and automation-based projects.

On Day 1, students were introduced to the basics of microcontrollers, setting up the Arduino IDE, and writing simple programs. They also learned to interface digital and analogue components. Through hands-on exercises, they worked with a variety of sensors, including temperature, humidity, soil moisture, IR, ultrasonic, smoke, and LDR sensors, gaining practical experience in sensor integration and data

acquisition.

Most of the project development was carried out using Tinkercad simulations, allowing students to virtually design and test circuits before moving to real hardware. In addition to simulations, students were also shown practical electronic components and their implementation in working hardware projects, including basic sensor-based setups and a robotic car prototype, providing them with valuable insight into real-world prototyping and physical assembly.

Address by HoD Dr. J. J. Mane on the relevance of Arduino in automation and robotics

9. Workshop on Electrical Panel Manufacturing and Testing Process

The Workshop on Electrical Panel Manufacturing and Testing Process was held on 24th July, 2025, at Electrical Engineering Department. The workshop was conducted by Mr. D. Rajeshkumar, Assistant Professor in the Electrical Engineering Department

The workshop aimed to provide third-year students with valuable insights and practical knowledge in the field of Electrical Engineering. It provided third-year students with a valuable learning experience and practical knowledge in the field of Electrical Engineering.

The event would not have been possible without the dedicated efforts of Mr. D. Rajeshkumar, Mr. Parasuram More, and the support of Dr. Mane J. J. The active participation of 56 students added to the overall success of the workshop. Special gratitude was offered to Dr. J. J. Mane, Head of the Electrical Department at FAMT, for his support and guidance in making the event a reality.

Insightful session on panel manufacturing and testing by Mr. D. Rajeshkumar.

Faculty Achievements

Faculty Development Programs (FDPs)/ Short Term Training Programs (STTPs)/ Workshops

1. Prof. S. H. Mhabadi, Prof. S. S. Wamane, Dr. J. J. Mane, Dr. A. K. Sharma, Dr. S. Chawda, Prof. M. N. Tagare, Prof. R. B. Ingle participated and successfully completed the AICTE Training and Learning (ATAL) Faculty Development Program on “Advances in Electric Vehicles and Sustainable Energy Systems: Strategies, AI Applications, and Future Directions”, organized by Amrita Vishwa Vidyapeetham Bengaluru Campus from 15/09/2025 to 20/09/2025.
2. Prof. S. H. Mhabadi, Prof. S. S. Wamane, Dr. S. Chawda, Prof. M. N. Tagare, Prof. P. A. Potdar participated and successfully completed the International Faculty Development Program on “Recent Advances in Smart Grid and Renewable Energy Integration”, organized by Dept. of Electrical and Electronics Engineering of Acharya Institute of Technology, Bengaluru, in association with IEEE Bangalore section, from 02/08/2025 to 06/08/2025.
3. Prof. S. H. Mhabadi participated and successfully completed the NPTEL-AICTE Faculty Development Program on “Charging Infrastructure”, conducted by Ministry of Education, Govt. of India during Jul-Oct 2025.
4. Dr. A. K. Sharma participated in AICTE recognized Faculty Development Programme on Distributed Energy Sources and Smart Grid Conducted by Electrical Engineering Department from 04/08/2025 to 08/08/2025. At NITTTR Chandigarh.
5. Prof. S. S. Wamane, Prof. M. N. Tagare attended Two Week FDP on “NEP 2020 orientation & Sensitization Program” conducted by Banasthali Vidyapeeth, Rajasthan during 9th -17th Oct. 2025.
6. Prof. S. S. Wamane, Prof. P. A. Potdar attended Two Week Certification program on “Industrial Automation” conducted by SkillDzire, during 4th - 8th Oct. 2025.
7. Prof. S. S. Wamane, Prof. P. A. Potdar, Dr. J. J. Mane, Dr. A. K. Sharma, Prof. N. N. Kasar attended Two Week Certification program on “AI Teacher Training Certification” conducted by Agnirva during 23rd Sept. to 8th Oct. 2025.

8. Dr. S. Chawda attended One-Week Short Term Course on "Power Management Applications Through Simulation & Software Tools" jointly organized by Manipal Institute of Technology Manipal, Manipal University Jaipur and NIT Durgapur held from 21st to 25th July 2025.
9. Dr. S. Chawda completed a 12-week NPTEL–AICTE Faculty Development Programme on "Understanding Incubation and Entrepreneurship" organized by the National Programme on Technology Enhanced Learning through the SWAYAM platform, coordinated by Indian Institute of Technology Madras, held from July to October 2025.
10. Dr. S. Chawda completed a course on Understanding Incubation and Entrepreneurship organized by National Programme on Technology Enhanced Learning (NPTEL) through All India Council for Technical Education Faculty Development Programme on SWAYAM platform from July to October 2025 (12 weeks) with Elite certification (97%).

Reviewer

1. Prof. Suhas H. Mhabadi worked as Paper Reviewer in 5TH IEEE International Conference titled, Sustainable Energy and Future Electric Transportation (SEFET 2025), held at Malaviya National Institute of Technology (MNIT) Jaipur, India in A.Y. 2025-26
2. Dr. A. K. Sharma worked as Paper Reviewer in 11th International Conference on Communication and Signal Processing (ICCSP) held at Melmaruvathur, TN, India. 2025

Faculty Publications

International Journal

1. Suresh Chimkode, Jayant Mane et.al. "Recent Advancements in the Field of Nanotechnology Using Artificial Intelligence, Data Science and Machine Learning", Journal of Mines, Metals and Fuels, July 2025.
2. Smita Suhane, Jayant Mane et.al. "The Role of Nano Materials in the Numerous Areas of manufacturing" Journal of Mines, Metals & Fuels, Volume 73, Issue 8, 6th August 2025.
3. Nirmala Kakade, Jayant Mane et.al. "Examining Experimentally the Impact of Spot-Welding Process Variables on Metal Matrix Composites", Journal of Polymer & Composites, 10th August 2025.

International Conference

1. S. H. Mhabadi, V. Prakash, S. Nema, and S. Chawda, "Evolution of EV Charging Infrastructure with Bidirectional Approach: An Overview", in IEEE 4TH International Conference for Advancement in Technology (ICONAT), on 19th to 21st September 2025, Goa, India.
2. A. K. Sharma, Mangesh S. Modak, Sandeep Chawda and D.K. Sambariya, "Application of Golden Eagle Optimization in Reduced Order Modeling" presented 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control December 10-13, 2025 NIT Goa, India.
3. P. A. Potdar attended and presented abstract in International Conference on Empowering Women in Science, Technology, Engineering, Arts and Management (ICEWSTEAM 2025), in Hybrid Mode, conducted by Manipal

University, Jaipur in association with World Forum for Women in Science (WFWS) on 6th and 7th October 2025.

NPTEL/ Coursera/ IBM Certification Courses

1. Dr. A.K. Sharma successfully completed Swayam NPTEL Online Certification (Funded by MoE, Govt. of India) course on “DC Microgrid and Control System” held in Jul-Sep 2025.
2. Prof. M. S. Modak successfully completed Swayam NPTEL Online Certification (Funded by MoE, Govt. of India) on Power network analysis”, during July-oct 2025.

Faculty Achievements/ Awards/ Recognition

1. Prof. S. H. Mhabadi recognized as NPTEL Discipline STAR for JUL-DEC 2025 by Indian Institute of Technology, Madras.
2. Prof. S. H. Mhabadi achieved the Elite grade in NPTEL online Certified course offered by Indian Institute of Technology, Roorkee (by Ministry of Education, Govt. of India) in Charging Infrastructure in October 2025.
3. Design Patent Granted for “Smart Obstacle Detection System for Visually Impaired Persons designed using Arduino Uno and HC-SR04” by Dr. A. K. Sharma and Prof. S. S. Wamane (Design No. 465183-001, Issued on 10/07/2025).
4. Design Patent Granted for “Wifi Controlled Classroom Audio System” by Prof. S. S. Wamane and Dr. A. K. Sharma (Design No: 465190-001, Sr. no 209681, Issued on 10/07/2025)
5. Design Patent Granted for “Smart Attendance System with Biometric and Face Recognition” by Dr. J. J. Mane (Application / ref no. 461354-001, Granted on 25/09/25)
6. Design Patent Granted for “IoT Based Parking Management System,” by S. Chawda, M. N. Tagare (Indian Patent 465187-001, Oct. 30, 2025)
7. Design Patent Filled for “Adaptive Traffic Light System with Emergency Vehicle Priority,” by S. Chawda, S. H. Mhabadi (Indian Patent 465184-001, filed Oct. 07, 2025)
8. Design Patent Filled for "Testing Panel of Transformer and Testing Bench for All Electrical Equipment" by Prof. D. Rajeshkumar (Application No.: 466379-001, under Ref./Sub. Order No.: D/25-26/1070.)

Placements

Hope Foundation's
Finolex Academy of Management & Technology, Ratnagiri
Electrical Engineering Department

PLACEMENT RECORD

Table No. 01: Year-wise placement record

Academic Year	Total No. Students	Eligible Students for Placement	Total Placement Offered
2020-21	75	74	35
2021-22	94	90	83
2022-23	76	69	83
2023-24	63	34	53
2024-25	44	44	40
2025-26	53	53	09*

* Placements are in progress

Our Recruiters

Asahi India Glass Ltd.

SFC Environmental Technologies Pvt. Ltd.

Electromech Infraprojects Pvt. Ltd.

Invented for life

Marine Electricals

FINOLEX ACADEMY OF MANAGEMENT & TECHNOLOGY, RATNAGIRI

DEPARTMENT OF ELECTRICAL ENGINEERING

Our Esteemed Entrepreneurs

Mr. Manish Apte
Founder of Ratnagreen Techno Services

Mr. Ajinkya Jadhav
Founder of A J Engineers & Contractors

Mr. Yash Patil
Founder of Dhiraj Electricals & Engineers

Mr. Ninad Behere
Director at Dhruva Shipping Consultants & Services Pvt. Ltd.

Mr. Umesh Chougale
Founder Director, and CEO of PowerZone Electro Systems

Mr. Suraj Patil
Managing Director at Affordable Solar Energy Pvt. Ltd.

FINOLEX ACADEMY OF MANAGEMENT & TECHNOLOGY, RATNAGIRI

DEPARTMENT OF ELECTRICAL ENGINEERING

Industry Collaboration with Mahindra Susten