



Hope Foundations'

FINOLEX ACADEMY OF MANAGEMENT AND TECHNOLOGY, RATNAGIRI

(Approved by AICTE, recognized by DTE, and Affiliated to Mumbai University)

ELECTRAZINE

E – Newsletter of

Electrical Engineering Department

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Publishers

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List of Faculty/Staff Members in Department

Faculty Members

Dr. Sandeep Chawada (HOD)	Prof. Sudhir S. Wamane (Assistant Professor)
Prof. Milind N. Tagare (Associate Professor)	Prof. Leslie Fernandes (Assistant Professor)
Prof. Suhas H. Mhabadi (Assistant Professor)	Prof. Priya A. Potdar (Assistant Professor)
Prof. Nitin V. Kelkar (Assistant Professor)	Prof. Vaibhav A. Sansare (Assistant Professor)
Prof. Jayant J. Mane (Assistant Professor)	Prof. Nilashri P. Sakhalkar (Assistant Professor)
Prof. Mangesh S. Modak (Assistant Professor)	

Staff Member

Mr. Shriprakash H. Hardikar (Lab Assistant)

Department Vision

The department shall become the foremost seat in advanced and progressive learning, with excellent professional skills and character to lead and serve the society at large.

Department Mission

M1: To provide conducive environment in view to transform students into quality engineers who will excel globally with creative and entrepreneurial skills.

M2: To enhance teaching - learning process through relevant pedagogies and continual assessment.

M3: To promote the versatile development of students through training of interpersonal skills, managerial skills, leadership communication skills.

M4: To inculcate moral, ethical and social values among the 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.

Highlights of the Department

- Department has 11 faculty members
- All of them have completed Post Graduation (ME or M. Tech), 1 faculty with Ph.D and 1 faculty is pursuing Ph.D.
- They have completed their PG from renowned institutes like VNIT Nagpur, VJTI Mumbai, COEP Pune, COE Walchand Sangali, PVG COET Pune etc.
- Average Experience is of 13 years.
- Published almost 65+ papers at National level and 35+ papers at International level.
- Well-furnished and well equipped 8 Laboratories including 2 computer labs with 36 Computers.
- 3 Classrooms with minimum 80 students seating facility.
- 1 ICT classroom, 2 classrooms with internet facility available.

Department of Electrical Engineering, FAMT Ratnagiri

List of Laboratories:

Drives and Control Lab	Computer Lab -I
Switchgear and Protection Lab	Computer Lab -II
Electrical Measurement Lab	Control System Lab
Electrical Machines and Drives Lab	Power Electronics and Automation Lab/ PLC Lab

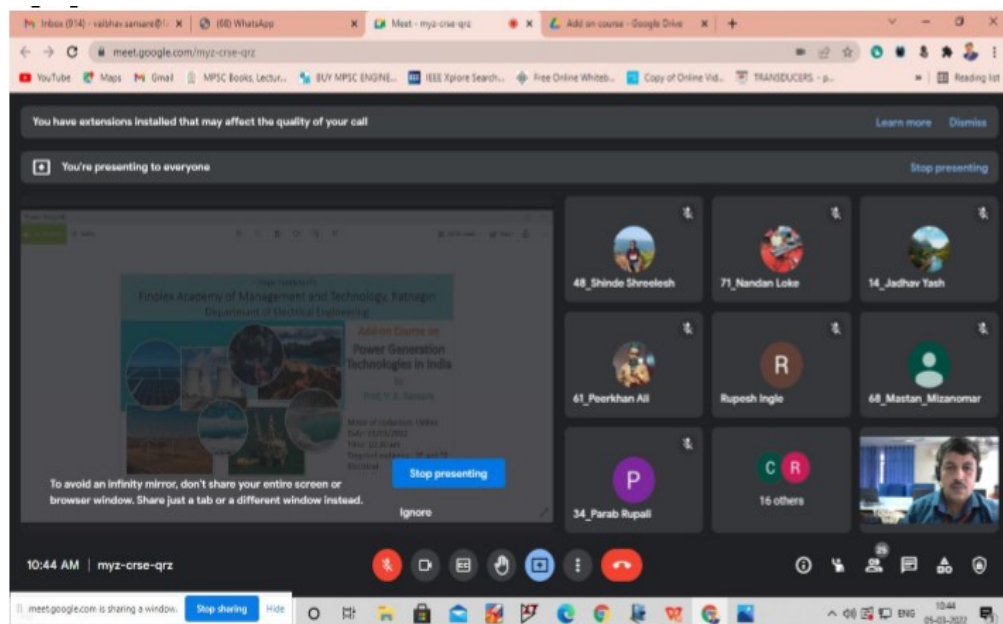
- Computer Lab - I and II consists total 36 computers with SciLab, MPLab, PROTEUS, Eagle software etc.
- LAN Facility is available in Computer Labs
- Free Wi-Fi facility is available to students.
- Department Library with 531books.
- One smart classroom with LCD projector, OHP projector and LAN Facility.
- Study material for GATE exam
- Video lectures of NPTEL courses conducted by all IITs (funded by MHRD, Govt. of India).
- One computer with printer for students
- Programmable Logic Controller Lab with 3 Micro-Logix 1400Series-B
- Conduct varies Workshop/Training/ Bridge and Enrichment Courses for the students.

Programs Organized by the Department

1. The Department of Electrical Engineering conducted the Add-on Course on “Power Generation Technologies in India” for Second Year Electrical Engineering students. This course was designed, developed and conducted by Prof. V. A. Sansare under the guidance of Dr S. D. Chawda and Prof. M. N. Tagare.

The basic objectives of the course were to describe various energy resources and electricity generation technologies in India. The course was conducted on 05th March 2022 for the duration of more than 06 hours in three sessions. During the first session, Prof. V. A. Sansare shared various energy resources, their formation. Further, he explained the impact of non-renewable energy resources on the environment and the need for renewable energy resources. During the second session, he elaborated on various power generation technologies and explained the working of different power plants with figures and animation. In the last session, he focused on the current power generation status in India and mission 2030 for enhancing renewable power generation capacity in India. The session ended with a question-answer session and a vote of thanks.

The seminar was attended by 24 students and was coordinated successfully by Prof. S. H. Mhabadi, Prof. S. S. Wamane.

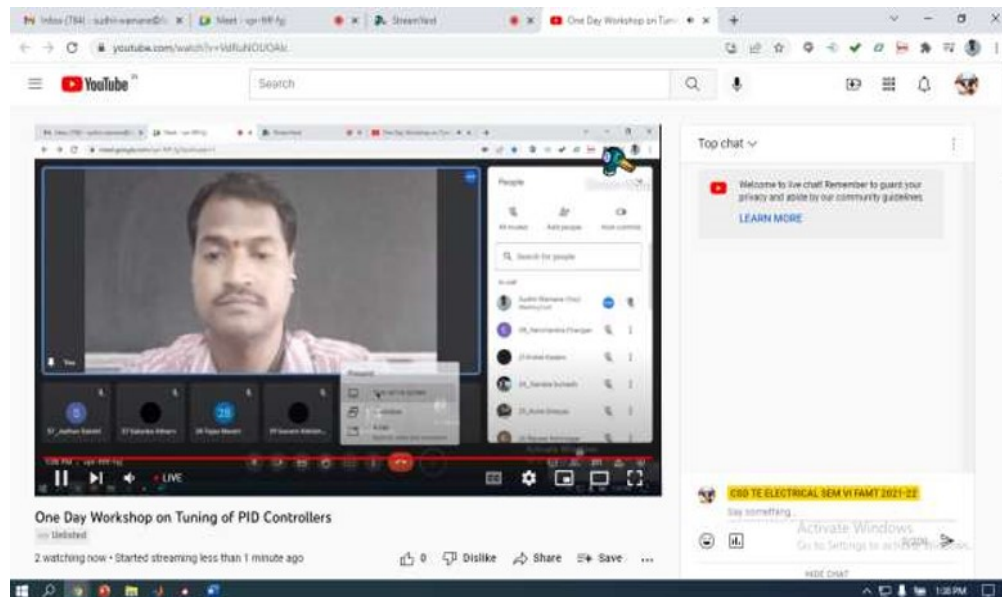


Prof. V. A. Sansare addressing to the participants

2. A one-day Workshop on “Tuning of PID Controllers” was organized by the Electrical Engineering Department on 5th March 2022. Dr Sandeep Chawda, the HoD, inaugurated the program with an informative and motivational talk on PID controllers. The workshop was conducted by Prof. Sudhir S. Wamane, Assistant Professor Electrical Engineering. The workshop aimed to brief the students about the PID control algorithm and its usage in the control and automation industries.

Prof. Sudhir S. Wamane discussed the characteristics and industrial thumb rules to design the PID controllers with examples. The workshop covered various open and closed loop tuning methods of PID controllers’ viz. Ziegler - Nichols, Tyreus - Luyben, Cohen - Coon, Chien - Hrones - Reswick and damped oscillation tuning method. These tuning methods and their comparison in MATLAB software were also demonstrated by Prof. Suhas H Mhabadi.

A total of 45 students actively participated in the workshop. The students shared positive feedback and enjoyed learning the methods to tune PID controllers. Prof. Suhas H. Mhabadi coordinated this workshop successfully.



Mr. Sudhir S. Wamane streaming the workshop through YouTube channel

3. A Two-day workshop on “Microcontroller based Project Design using Proteus” was organized by Electrical Engineering Department from 11th to 12th March 2022.

Dr Sandeep Chawda, the Head of Electrical Engineering Department, inaugurated the workshop with a briefing about the objectives of the workshop i.e., to create awareness about hardware simulation software Proteus and programming software MP-Lab, which have wide industrial applications. Prof. Suhas H. Mhabadi and Prof. Sudhir S Wamane, Assistant Professors conducted the workshop for the students of second-year Electrical Engineering.

Prof. Sudhir S. Wamane shared information on Proteus and MP-Lab. Thereafter, Prof. Suhas H. Mhabadi emphasized the Project design by the interfacing of different IO devices with the microcontroller. Furthermore, hands-on practice was given to the participants to interface the keyboard, 7-Segment Display, Liquid Crystal Display (LCD), Analog to Digital Converter (ADC) and Timer. In the later session, the complete projects of Traffic Signal controller and Voltage, Current and Phase angle measurement were demonstrated to the students. The software support for the Peripheral interfacing with the microcontroller was provided using Mp-Lab software.

A total of 18 students actively participated and shared Feedback regarding the workshop. They enjoyed learning peripheral interfacing for project design. Prof. Vaibhav A. Sansare, Assistant Professor, coordinated the workshop successfully.



Mr. Suhas H Mhabadi Interacting with the Participants

- An expert lecture on the “Fundamentals of Power Electronics & Application in Power Systems” was organized for the students of second-year electrical engineering on the 12th March 2022. The program was inaugurated by the head of the Electrical Engineering Department Dr Sandeep Chawda by briefing the objectives of the lecture.

Resource person: Dr Ajay Kumar (Assistant Professor at Birla Institute of Technology, Mesra).

In Gracious Presence: Dr Sandip Chawda, Head, Electrical Engineering Department

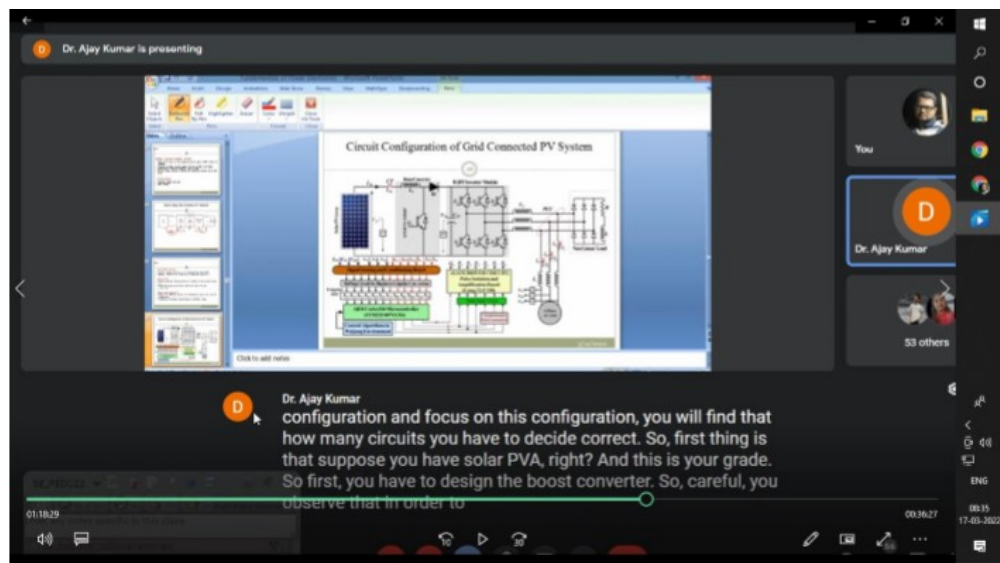
Event Coordinator: Dr Sandip Chawda and Jayant Mane

Venue- YouTube Live and Google meet Expert Lecture on Fundamentals of Power Electronics & its Applications in Power Systems (12-03-2022)

Event Objectives:-

- To introduce the practical aspects of power electronics.
- To motivate the students for selecting projects from the power electronics domain.

A total of 53 students actively participated in the program. The students shared the feedback regarding the program and responded that they enjoyed learning about power system project design. Assistant Professor Mr. Jayant Mane coordinated this workshop successfully.



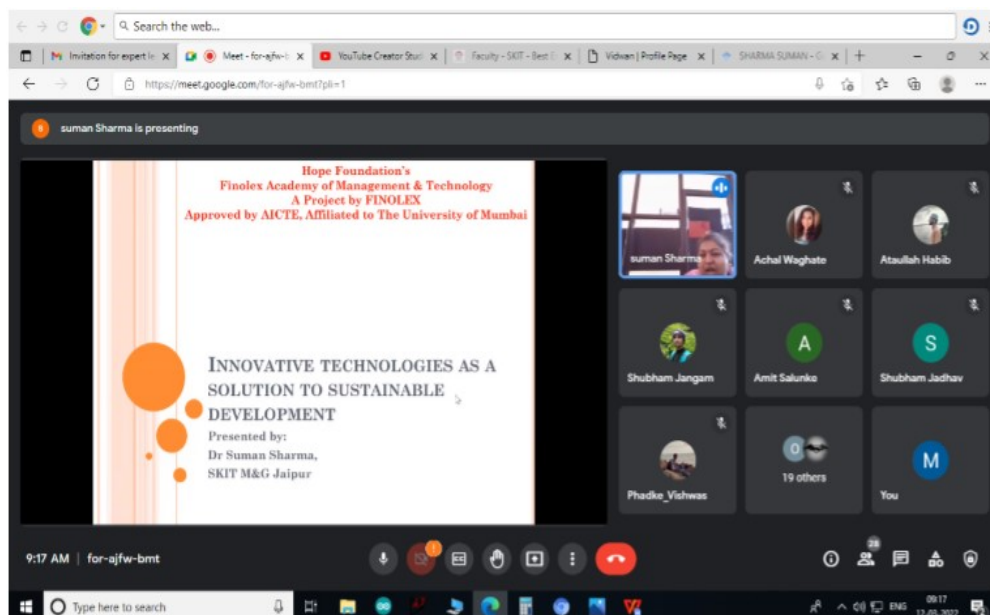
Dr Ajay Kumar addressing to the participants

5. An Expert Lecture on “Innovative Technologies as A Solution to Sustainable Development” was organized by the Department of Electrical Engineering on 12/03/2022. The expert lecture was conducted online by Dr Suman Sharma, Associate Professor, SKIT, Jaipur.

The Head of Electrical Engineering Department, Dr Sandeep Chawda took the initiative. The programme was organized by Prof. Mangesh S. Modak for BE Electrical students for providing insights into Innovative Technologies as a solution to sustainable development. This expert lecture focused on:

1. Market innovations
2. Digitalization of utilities
3. Smart usages of energy
4. Grid modernization

All the participants enthusiastically attended the program and were satisfied by the valuable knowledge delivered by Dr Suman Sharma.



Dr Suman Sharma explaining the concepts

6. The Department of Electrical Engineering arranged an Industrial Visit to Finolex Power Plant, Ranpar Ratnagiri on 05th April 2022 for the students of second-year Electrical Engineering. The subject of Power Plant Engineering was excluded from the Electrical Engineering curriculum since the 2019 revised curriculum. To bridge this gap and to impart knowledge of thermal power plants, the visit was organized. A total of 39 students and 03 faculty members visited the plant.

Mr Yogesh Teredesai, (Dy. Manager HR), Mr Sanjay Kulkarni (Dy. GM) and Mr Ramesh Doiphode (Dy. Manager) gave information about Finolex Industries Limited and Captive power plant. During the visit, Mr Rajesh Teredesai, Mr Swapnil Yelurkar and Mr Jatin Shetye along with Mr Sanjay Kulkarni explained all the technical information about the working of the plant and its auxiliaries.

The students learnt different systems like coal handling system, ash handling system, raw material unloading, water treatment plant, steam boiler, turbine-generator, Air preheater, Economiser, ESP and DCS (Plant control). The students also visited a coal jetty to understand the unloading of coal from ships. The accompanying officers answered questions raised by the students. The visit ended with thanks to Shri. Kakade, Shri. Naikwade and the team associated with the visit for their cooperation. Prof. M.N. Tagare, Prof S. H. Mhabadi and Prof V. Sansare coordinated the activity.



Electrical Engineering Students and faculty with FIL officers

7. An Industrial Visit to M/s Bharat Electricals, Ratnagiri was arranged for TE Electrical students on Saturday, 09th April 2022. A total of 58 students and 02 faculty participated in the visit. Transformers are a very important and crucial part of the power system. A depth and practical understanding of transformer is must for an Electrical Engineering student. Given this, an industrial visit was arranged.

M/s Bharat Electricals is a transformer repair workshop handling a transformer up to 1MVA. During this visit, all the parts of the distribution transformer including CT and PT, their construction and their assembly were explained to the students. HV and LV coil winding machine and its process, ovening process to improve insulation resistance were also demonstrated. The use of megger to measure insulation resistance between Phase to phase, phase to earth and between HV and LV was shown. Various materials like a copper conductor, iron laminations, bushings, breathers etc. were studied. The process of transformer oil filtering and BDV testing and Off load tap changer and its operation were also demonstrated.

Prof. M. N. Tagare arranged this visit. Prof. Mangesh Modak assisted him. The visit ended with thanks to Shri. Mukree, the owner of the workshop and Shri Rakesh, who arranged all the demonstrations during the visit.



Electrical Engineering Students and faculty with Shri. Rakesh from Bharat Electricals

8. The Department of Electrical Engineering arranged an Industrial Visit to Finolex Power Plant, Ranpar Ratnagiri on 12th April 2022 for the students of second-year Electrical Engineering and third-year Engineering. The subject of Power Plant Engineering was excluded from the Electrical Engineering curriculum since the 2019 revised curriculum. To bridge this gap and to impart knowledge of thermal power plants, the visit was organized. A total of 40 students and 03 faculty members visited the plant. Prof. Vaibhav Sansare engaged a session on 11th April 22 to explain the detailed working of coal-based power plant.

Mr Yogesh Teredesai, (Dy. Manager HR) and Mr Sanjay Kulkarni (Dy. GM) shared information about Finolex Industries Limited and the Captive power plant. During the visit, Mr Swapnil Yelurkar and Mr Jatin Shetye along with Mr Sanjay Kulkarni explained all the technical information about the working of the plant and its auxiliaries.

The students learnt different systems like coal handling system, ash handling system, raw material unloading, water treatment plant, steam boiler, turbine-generator, Air preheater, Economiser, ESP, AIS & its components and DCS (Plant control).

At the end of the visit, snacks were served by the company. The visit ended with a vote of thanks to Shri. Kakade, Shri. Naikwade and the team associated with the visit for their cooperation. Prof. M.N. Tagare, Prof J J Mane and Prof V. Sansare coordinated the visit.



Electrical Engineering Students and Faculty with FIL officers

9. The Department of Electrical Engineering arranged an Industrial Visit to JSW Power Plant, Jaigad, Ratnagiri on 22nd April 2022 for the students of final-year Electrical Engineering. It is a 1200MW thermal power plant with Asia's largest coal storage facility. The subject of Power Plant Engineering was excluded from the 2019 revised Electrical Engineering curriculum. To bridge this gap and to impart knowledge of thermal power plants, the visit was organized. A total of 35 students and 03 faculty members visited the plant.

Initially, Shri Adeesh Devasthali, Sr Engineer JSW shared information about the JSW power plant in detail. During the visit, Shri Adeesh Devasthali and Shri Siddhesh Chavan, Sr Engineer Electrical explained all the technical information about the working of the plant and its auxiliaries.

The students learnt different systems like coal and ash handling systems, raw material unloading, water treatment plant, steam boiler, turbine-generator, Air preheater, Economiser, ESP, AIS and its components and DCS (Plant control). The students also visited the 400KV GIS and SCADA control room. The accompanying officers answered questions raised by the students.

The visit ended with a vote of thanks to Shri. Joshi, the Manager (HR) and the team associated with the visit for their cooperation. FAMT alumni Shri Harshal Joshi (employee of JSW) helped the Electrical Department in arranging the visit. Prof. M.N. Tagare, Prof S.H. Mhabadi and Prof V. Sansare coordinated the visit.



Students and faculty visiting the JSW plant

Faculty Achievements

Workshop/Add-on Courses

1. Prof. S. H. Mhabadi and Prof. S. S. Wamane conducted Two days workshop on “Microcontroller Based Project Designed using PROTEUS Software” at FAMT, Ratnagiri during 11th – 12th March 2022.
2. Prof. V. A. Sansare conducted Add-on Course on “Power Generation Technologies in India” at FAMT, Ratnagiri on 05th March 2022.
3. Prof. N. V. Kelkar worked as resource person for workshop on “Upcoming Course Work for Ph.D students” organized by Sub-center of University of Mumbai, at Ratnagiri on 25th Feb 2022.

Faculty Development Programs

1. Dr. Sandeep Chawda participated and completed One week FDP on “Artificial Antelligence, Robotics and Automation”, organized by Center for School of Automation, Banasthali Vidyapeeth on 09th to 14th March 2022.
2. Dr. Sandeep Chawda participated and completed One week FDP on “Innovative and Research Trends in Artificial Intelligence”, organized by Center for Artificial Intelligence, Banasthali Vidyapeeth on 21st to 26th Feb 2022.
3. Dr. Sandeep Chawda participated in TEQIP-III sponsored 2-Week online Faculty Development Programme on “Recent Advancements in Sustainable Development through Renewable Energy Systems”, organized by Engineering College, Bikaner (Rajasthan) on 07th to 16th March 2022.
4. Prof. S. H. Mhabadi participated and successfully completed the AICTE-ISTE approved Refresher program on “AI Based Condition Monitoring of Electrical Systems”, organized by Amrutvahini College of Engineering, Sangamner, during 28th Jan 2022 to 03rd Feb 2022.
5. Prof. R. B. Ingale participated and completed AICTE Training and Learning (ATAL) Academy One week FDP on “Electric Vehicles – The Future of Mobility”, organized by Rajarambapu Institute of Technology, Sakharale, during 03rd to 07th Jan 2022.

Certification Courses

1. Prof. S. H. Mhabadi successfully participated in “IP Awareness Training program” under National Intellectual Property Awareness Mission organized by Intellectual Property Office, India, held in 8th April 2022.
2. Prof. R. B. Ingale Completed Certification Course on “Introduction to Data Science” offered by Infosys Springboard on 1st April 2022.

3. Dr. Sandeep Chawda successfully participated in “IP Awareness Training program” under National Intellectual Property Awareness Mission organized by Intellectual Property Office, India, held in 8th April 2022.
4. Dr. Sandeep Chawda successfully Completed Certification Course on “Smart Grids: Future Intelligent Electricity Distribution Grids” organized by Malaviya National Institute of Technology Jaipur under program of Ministry of Education, Govt. of India, from 04th -14th Feb 2022.
5. Prof. J. J. Mane successfully participated in “IP Awareness Training program” under National Intellectual Property Awareness Mission organized by Intellectual Property Office, India, held in 8th April 2022.

Placements

Total **43** students from A.Y. 2021-22 have been offered jobs in various organizations, wherein total **86** students are placed in year 2021-22.