



Khandesh Bahuuddeshiya Sanstha's
College of Engineering & Technology,
North Maharashtra Knowledge City, Jalgaon

Approved by AICTE, Recognized by DTE & Affiliated to DBATU, Lonere, & MSBTE (M.S.)

(Accredited by NAAC & ISO 9001:2015)

News Letter

ELECTICAL ENGINEERING DEPARTMENT

(Academic Year 2024-25)

VISION

- We will offer value added quality technical education & excellent academic training to our students
(आम्ही आमच्या विद्यार्थ्यांना मूल्यवर्धित गुणवत्तापूर्ण तांत्रिक शिक्षण आणि उत्कृष्ट शैक्षणिक प्रशिक्षण देऊ.)

MISSION

- Continuously updating and reviewing the curricula benefiting industry, students, society for technological development of the country.

प्रकारे (देशाच्या तांत्रिक विकासासाठी उद्योग, विद्यार्थी आणि समाजाला फायदा होईल अशा

अभ्यासक्रमात सतत बदल करणे आणि त्याची पुनरावृत्ती करणे.)

- Laying special emphasis on Indian culture and value system.
- (भारतीय संस्कृती आणि मूल्य प्रणालीवर विशेष भर देऊ.)
- Promoting innovative attitude among the faculty and students.
(प्राध्यापक आणि विद्यार्थ्यांमध्ये नाविन्यपूर्ण दृष्टिकोनाचा प्रसार करणे.)

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1	▪ Graduates will able to, Graduates should excel in engineering positions in industry and other organizations that emphasize design and implementation of engineering systems and devices.
PEO2	▪ Graduates should excel in best post-graduates engineering institutes, reaching advanced degrees in engineering and related discipline
PEO3	▪ Within several years from graduations , Alumni should have established a successful career in an engineering related multidisciplinary field , leading or participating effectively in interdisciplinary engineering projects, as well as continuously adapting to changing technologies..
PEO4	▪ Graduates are expected to continue personal development through professional study and self learning.
PEO5	▪ Graduates are expected to be good citizens and cultured human being, with full appreciation of the importance of professional, ethical, and societal responsibilities

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1	▪ Pursue research in advanced areas of Electrical Engineering to offer ethical engineering .
PSO2	▪ Demonstrate proficiency in use of software and hardware required to practice electrical profession
PSO3	▪ Operate and maintain electrical machines, switchgears, power electronics and electrical systems. Projects with State of the art tools .

PROGRAM OUTCOMES (PO)

PO1	▪ Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	▪ 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.
PO3	▪ 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..
PO4	▪ 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
PO5	▪ 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
PO6	▪ 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
PO7	▪ 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
PO8	▪ Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice
PO9	▪ Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings
PO10	▪ 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.
PO11	▪ 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.
PO12	▪ 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.

LIST OF MOU'S

Sr.No.	Name of Mentor Institute/College/Industry
1	Electrosoft System ,Jalgaon
2	Trans Electricals ,Jalgaon-3
3	Dwaraka Industries , Jalgaon
4	Electrosoft System, Pune
5	Geeta Solar System,Jalgaon

LIST OF EXPERT/WEBINAR/WORKSHOP

Sr. No.	Name of Lecture/Webinar/Workshop	Date
1	Emerging Technologies & Career Opportunities Expert Lecture	10/10/2024
2	How to Start up in Automation Sector Workshop	16/01/2025
3	Personality Development Self Assessment Programme Expert Lecture	11/02/2025

Glimpses of Expert/Webinar/Workshop

Objectives and Outcomes of Program

Topic : **Emerging Technologies & Career Opportunities**

Guest/Expert Name: Mr.Nilesh Wagh(Co Founder,CEO Electrosoft System Pvt.Ltd. Jalgaon)

Date : 10/10/2024

Program Objectives:

The main goals of this lecture are to:

- **Introduce New Trends:** Explain the latest tools and breakthroughs in tech, including AI, Cloud Computing, and the Internet of Things (IoT).
- **Show Real-World Use:** Connect classroom learning to everyday industry practices and modern business problems.
- **Guide Future Career Paths:** Help students recognize new and emerging jobs (e.g., Prompt Engineer, Data Analyst) and understand the skills they need.

Program Outcomes:

By the end of this lecture, participants will be able to:

- **Identify In-Demand Roles:** Understand high-growth career options and the specific technical abilities employers want today.
- **Understand Industry Needs:** Grasp how fast-growing technologies change the way companies work.
- **Build an Action Plan:** Feel motivated to learn new tech skills and build professional networks to stay relevant.



Objectives and Outcomes of Program

Topic : [How to Start up in Automation Sector](#)
Guest/Expert Name: Mr. Rajesh Thakare (CEO Electrosoft System Pvt.Ltd.Pune)
Date : 16/01/2025

➤ Why Start in Automation?

- **Cost Savings:** Automation lowers labor costs and reduces errors.
- **High Demand:** Factories and offices want to scale up. Global market sizes are expected to grow significantly.
- **Efficiency:** Machines do repetitive tasks so humans can do more complex work.

➤ Objectives of an Automation Startup Program

Lectures and courses focus on specific goals: **Identify Problems:** Find manual tasks in businesses that can be replaced with software or robotics.

- **Master Tech Tools:** Learn about control systems. Examples include **IoT** (Internet of Things) and robotic arms.
- **Create a Business Model:** Learn how to build a product, set prices, and sell to clients.

➤ Outcomes of the Lecture

After the program, you will be able to

- **Build a Prototype:** Start a simple automation project.
- **Reduce Costs:** Figure out how to save money and time for your future customers.
- **Start a Business:** Take an idea to market using a proven startup process.



Objectives and Outcomes of Program

Topic : **Personality Development Self Assessment Programme**
By **Mr.Ajaj M.Shaikh** (Regional Project Officer of Jeevan Sanjivani
H.R.D. Institute Sangali Br. IFRA Institute Jalgaon)

Date : 11/02/2025

Objectives

- **Find Yourself:** Learn how your brain thinks and how you learn best (like a map for your brain).
- **Set Clear Goals:** Teach you how to build a plan to reach your dreams.
- **Build Confidence:** Give you the power to trust yourself when things are hard.
- **Learn to Share:** Show you how to talk clearly and work well with others in a team.

Expected Outcomes

After this lecture, you will be able to:

- **Know your traits:** Understand what makes you unique and how to use it.
- **Talk better:** Use your voice and body language so people listen to you.
- **Deal with stress:** Stay calm and fix problems when they pop up.

Plan your time: Make a daily schedule so you get your work done fast.





Industrial visits



Department Achievement's

- **Prof.Ms.Pranoti S.Chuadhari had oraganized Central FDP on Program on 1)“Reasearch Methodology & Patent Filling Process & Publication”**
2) “CO-PO Mapping Attainment with practical”
- **Electrical engineering department got Very Good remark from LIC 2024-25.**
- **Mr. Harshal Patil and Mr Rohit Nemade publish paper in International Conference in Academic year 2024-25.**
- **Electrical department Wins the cricket match in college sports week.**
- **Mr. Nainesh Patil Alumina of Electrical Engineering Join as a Asst operational manger in Reliance JIO Mumbai.**

Department Activity

A number of programs like guest lecture industrial visits and training workshops from various institutional organization and industrial experts were organized by department for in-depth understanding of the subject.

Student Articles

Electricity Theft:

The state power utility firm announced that it had detected power thefts to the tune of over Rs 317 crore in 2021-22 by conducting raids at 22,987 places across the state. "We came across pilferage of more than 557 million units of electricity and registered several FIRs at local police stations. We have recovered

finest of nearly Rs 172 crore so far," a senior official said. The detection also helped reduce distribution losses and created a deterrent for other criminals, said MSEDCL managing director Vijay Singhal, who said there will be "zero tolerance" for power thefts across states. There are 71 squads across the state with 345 officials who have been working on tip offs and conducting raids - - resulting in large-scale detection. Stealing electricity is a non-bailable offence. Under section 135 of the Electricity Act 2003, the offender can be punished with a fine, a jail term of up to three years, or both, once proven guilty.

Need of Innovation in Solar Energy

Solar energy is playing a pivotal role in compensating the electrical energy as there is short fall in this energy due to more demand and decline trends of conventional source of energies exhaustion of fuels like coal, petroleum, natural gases and constant of environmental and climatic changes to cope up this photovoltaic installation is being done in an electrical system to compensate and enhance the energy. a photovoltaic installation in an electrical system is made from the assembly of various photovoltaic units that uses solar energy to produce the electricity in a cheaper way from sun power. Till now the use and scope of solar energy is limited and has not reached up to masses Moreover the efficiency of the system is also low due to which the output is not sufficient as compared to input as in some installed solar panel it has been observed that efficiency is not more than 27%.

Recent Trends in solar energy:

Today's industrial solar cell technology is dominated by the "standard solar cell process" -a p-type silicon wafer, a phosphorus-doped emitter with a screen-printed front-side contact grid, an aluminum back surface field (BSF) and full-area metallization.

This "simple" BSF process has boosted the solar industry in the last two decades, transforming it from lab-scale pilot lines into an industry that produces several gigawatts per year. Lately, the PERC concept ("passivated emitter and

rear contacts") has received increased attention as a promising way to achieve higher solar cell efficiencies. PERC addresses the losses caused by the rear-side contacts through a dielectric passivation layer on the rear. The full-area contact previously used is reduced to points or lines where the coating is removed locally before metallization. It is expected that PERC will gain a significant market share in the coming years, mostly at the expense of BSF technology. the PERC concept ("passivated emitter and rear contacts") has received increased attention as a promising way to achieve higher solar cell efficiencies. PERC addresses the losses caused by the rear-side contacts through a dielectric passivation layer on the rear. The full-area contact previously used is reduced to points or lines where the coating is removed locally before metallization. It is expected that PERC will gain a significant market share in the coming years, mostly at the expense of BSF technology.

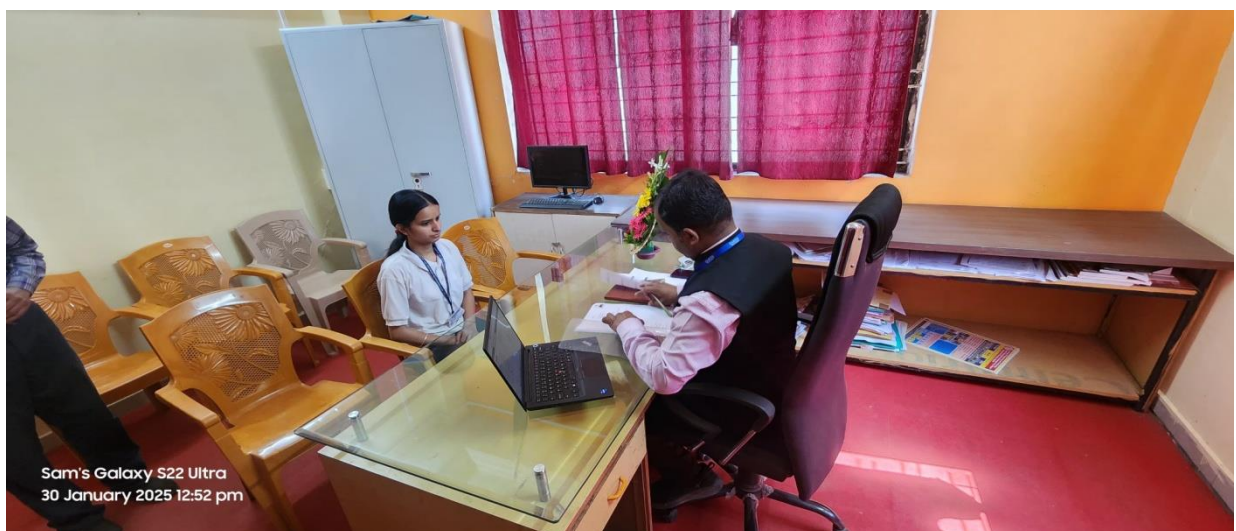
Several other future technologies are soon to be launched on the market- based on concepts that, like PERC, go back in time 20 years. Heterojunction (HJ) solar cells and interdigitated back contact (IBC) cells have already been mass-produced at some "pioneer" companies for years. Now, with dropping cell prices and lower margins, these old and at the same time new designs are again becoming the focus of the entire

Cultural Activities



Training and Placement:

Our few students are selected in campus interview organize by Bajaj Auto Ch. Sambhaji nagar



Glimpses with Final Year Students...





OUR SCHOLAR'S



Dr. Babasaheb Ambedkar Technological University
NORTH MAHARASHTRA KNOWLEDGE CITY,
COLLEGE OF ENGINEERING AND
TECHNOLOGY, JALGAON

College of Engineering and Technology, North Maharashtra City, Gat No-166, NH-06, Infront of North Maharashtra University Gate, Bambhori, Jalgaon, Pincode 425002, Maharashtra, India Contact Number : 9423193610

Department of Electrical Engineering

L.Y B.Tech Academic Year 2024-25

Topper Student

Congratulations



JAYESH AHIRE
1st Topper
9.5 CGPA



UDAY NATHBUVA
2nd Topper
9.5 CGPA



NIKHIL WAG
3rd Topper
9.4 CGPA

