

**COLLEGE OF ENGINEERING & TECHNOLOGY, AKOLA 444104**



**Research and Development Cell**

**“TECHNICAL NEWS LETTER”**

**November-2024 To February-2025**

**Academic Year: 2024-2025**



## COLLEGE OF ENGINEERING & TECHNOLOGY, AKOLA

November 2024 to February 2025

## CONTENTS

DEPARTMENTS	PAGE NO.
First Year	4
Mechanical Engineering	13
Architecture	17
Chemical Engineering	25
Computer Science and Engineering	28

## From Editorial Desk

This technical newsletter issue would be a snapshot of the various activities of different departments. Proper communication plays a vital role in the developments of the institution, this newsletter will serve to reinforce and allow increased awareness, improved coordination and integration among all the departments. It provides a platform for exposing the merits and academic achievements of the faculty and students of various departments. This enhances the documentation culture of the institute.

I invite all the staff and students to read this technical newsletter.

Sincerely

Dr. R. S. Jaiswal

# FIRST YEAR

A workshop is organized for first year students on the topic “**Magic Outside Your Comfort Zone**” on 18<sup>th</sup> December 2024, featuring expert speaker Aditi Pohare. President for this Program was principal of the college Dr. P. V. Thorat, and the chief guest was engineer Aditi Pohare, an entrepreneur, famous counselor and motivational speaker. As for this national education policy 2020, Sant Gadge Baba Amravati University in the curriculum, for the overall personality development number of measures are taken. Under that heading first year department has organized this personality development program as a one-day workshop with the topic of ‘Magic outside your comfort zone’. Host for the program was Dr. P. S. Ardark, First year head, And all the staff members and students attended the workshop with active participation.



## Student Induction Program 2024-25

Transition from school to college life is one of the most challenging events in a students' life. When students enter an institution, they come with diverse thoughts, backgrounds and preparations. They come into a new unfamiliar environment, and many of them have little knowledge of about the institution. Student Induction program is designed to welcome new students to Higher Education and prepare them for their new role.

### **Purpose of Student Induction Program is to**

Familiarize the new student with the various branches, methods of study, various facilities, the academic and administrative set up in the Institute.

- To develop a sense of aesthetics and enhance creativity among students.
- To generate favorable attitudes towards peers, senior students, teaching and non-teaching staff in the Institution.
- To inculcate value systems, ethics and leadership qualities among students.
- To promote entrepreneurial thinking among students.
- To inculcate effective communication skills, team work skills, multi-disciplinary approach, and develop a desire to apply knowledge of engineering for the real-life problems.
- To sensitize students towards environmental issues and to develop an attitude to protect and conserve environment among students.
- Help new students adjust and feel comfortable in the new environment.
- Inculcate in them the ethos and culture of the institution.

- Help them build bonds with other students and faculty members.

It is expected that an engineering graduate, work for solving the problems of society using the modern technologies and practices. Along with the good academic knowledge it is needed to cultivate the human values in Engineering graduates to fulfil their responsibilities as an Engineer, a citizen and a human being. The Induction programme for the first year was conducted from 18.09.2024 to 25.09.2024 with various activities which enable the students to overcome fear, adapt to college, and motivate them to perform well in their chosen branch of admission.



Dr. P. V. Thorat, Principal, COET Akola was the Chief Guest for Inauguration. Head of departments of all branches was present for this function.



Semester toppers Miss. Disha Lahoti and Miss. Renuka Ruikar of academic year 2023-24 shared their views and motivates students



Our Alumini Mr. Vishwajit Wankhade said in the face of challenges and setbacks, remember that it's not the failure that define you but how you rise from it. The world is filled with opportunities waiting for those who are willing to take risks and work hard.

Principal, COETA gives welcome address to Students and said our primary goal is to provide you with an environment where you can explore, innovate, and develop the skills necessary to excel in your chosen field. We believe in holistic education, which means not only excelling academically but also nurturing your character, ethics, and social consciousness. Our dedicated faculty is here to support and guide you throughout this journey.



Parent expressed his views and wish best luck to all admitted students

As a part of Student Induction program, Training and Placement Cell in Association with Department of Applied Science and Humanities conducted a program, which was held in order to boost student's fluency in English speaking. They often lack the confidence in how to speak English fluently. Due to this they are not able to perform well in all the fields. Therefore Dr. Sunil Agrawal, Coordinator of T & P cell COETA was called to give a session on 'How to improve communication'. Numerous techniques were explained to the students on the topic, he was able to clear all the queries of our students. Along with the lecture he incorporates activities to make them interesting.

Dr. G. S. Zamare, Dean Academics COETA explained importance of academics. He focused of NEP-2020 and the scheme newly implemented by SGBAU. This session covered complete ideas on NEP, minor courses and Honors, credit systems, and criteria for activity points.

Dr. P. D. Bhanawat, Coordinator Scholarship Section introduce about different scheme of Maharashtra Govt for different categories. He explained in details benefits and procedure of getting these schemes.

Prof. Mrs. K. U. Deshmukh, Chairman First Year Monitoring Committee talked about creating positive attitude and vibes around respect the self, respond the self, response to the ability of the self and having a smiling face. Smile is the best way to learn and earn and live life successfully.

Faculty Contribution in Research Paper/STTP/FDP/Conference/Workshop						
Sr. No	Name of Faculty	Title of Research Paper/Work shop/STTP/FDP/conference/Patent /Copy right	Research Paper/Conference/Seminar/STTP/Patent /Copy right	Name of Journal	ISSN No./Vol.No./Page No.	Duration From – To
1	Dr. P. S. Ardk	Comparative Study of Inventory Control Models under Different Parameters	Research Paper	Indian Journal of Technical Education	Volume 48, Special Issue No. 01, Jan 2025	-
2	Dr. P. S. Ardk	Application of Engineering for Sustainable Development" (ICAESD-2024)	Conference	-	-	20 <sup>th</sup> & 21 <sup>th</sup> December 2024

3	Dr. P. S. Ardkak	AI-Driven Educational Technologies for Enhanced Teaching and Learning	STTP	-	-	20/01/2025 to 25/01/2025
4	Dr. P. S. Ardkak	Passenger Recognition System in Trains	Copy right	-	Diary No: - 37450/2024-CO/L. Certificate Number: - LD-20250164326	
5	Dr. P. S. Ardkak	Solar Water Heater	Design Patent	-	Application No. 428862-001	
6	Prof. K. V. Nile	ATAL FDP 6 days on "Global Scenario of Sustainable Energy and Climate Change"	ATAL FDP	-	-	27/01/2025 to 01/02/2025
7	Prof. K. V. Nile	3-day Face to Face FDP on the theme "Inculcating Universal Human Values in Technical Education"	FDP	-	-	16/01/2025 to 18/01/2025
8	Prof. K. V. Nile	NPTEL-AICTE 4 weeks Faculty Development Program "Partial Differential Equations (PDE) For Engineers: Solution by Separation of Variables"	FDP	-	-	Jan-Feb 2025
9	Prof. R. U. Pote	Mastering AI Tools for Faculty Excellence	FDP	-	-	23 <sup>rd</sup> to 27 <sup>th</sup> December 2024.
10	Prof. R. U. Pote	Integrating Electric Vehicles with Smart Grids: Innovations for Sustainable Mobility Solutions	ATAL FDP	-	-	16/12/2024 to 21/12/2024
11	Prof. R. U. Pote	Data Analytics for Smart Mobility	ATAL FDP	-	-	03/02/2025 to 08/02/2025

12	Prof. R. U. Pote	Electric Vehicles: Technology, Power System, Energy Management, Testing and Certification	ATAL FDP	-	-	23/12/2024 to 28/12/2024
13	Dr Mrs. D. D.Raut	Data Analytics for Smart Mobility	ATAL FDP	-	-	03/02/2025 to 08/02/2025
14	Dr Mrs. D. D.Raut	3 Day Face to Face FDP on the them “Inculcating Universal Human Values in Technical Education”	FDP	-	-	16/01/2025 to 18/01/2025
15	Dr Mrs. D. D.Raut	AI-Driven Educational Technologies for Enhanced Teaching and Learning	ATAL FDP	-	-	20/01/2025 to 25/01/2025
16	Dr. Jyoti Shegokar	Physico chemical parameter and statistical studies of agriculture soil from Eastern region of Yavatmal district.	Research Paper	Journal of nonlinear analysis and Optimisation theory and applications	Vol-15,issue02,No.3 If-7.62 ISSN:1906-9685	July to December 2024
17	Dr. Jyoti Shegokar	Study the effect of discharged of RO rejected water on water quality parameter of water reservoir	Research Paper	-	-	3 <sup>rd</sup> and 4 <sup>th</sup> Jan 2025
18	Dr. Jyoti Shegokar	Data Analytics for Smart Mobility	ATAL FDP	-	-	03/02/2025 to 08/02/2025

19	Dr. Jyoti Shegokar	AI-Driven Educational Technologies for Enhanced Teaching and Learning	ATAL FDP	-	-	20/01/2025 to 25/01/2025
20	Prof. S. D. Deshmukh	Data Analytics for Smart Mobility	ATAL FDP	-	-	03/02/2025 to 08/02/2025
21	Prof. S. D. Deshmukh	3 Day Face to Face FDP on the theme "Inculcating Universal Human Values in Technical Education"	FDP	-	-	16/01/2025 to 18/01/2025
22	Prof. S. S. Kale	AI TOOLS	FDP			17/2/2025 TO 21/2/2025
23	Prof. S. S. Kale	Data Analytics for Smart Mobility	ATAL FDP	-	-	03/02/2025 to 08/02/2025
24	Dr. V. R. Thakare	Short Term Training Program Latest Advances in Renewable Energy,	STTP			27/01/25 to 31/01/25

# MECHANICAL ENGINEERING

## ❖ Activities Conducted/ organized by the Mechanical Engineering Department

**A) Department of Mechanical Engineering organizes Industrial Visit to Poonam Engineering works, Design-X and S. K. Edutech & Agro. Ind. MIDC, Akola on 25 February 2025. This industrial visit is organised for third year and final year students of Mechanical Engineering Students.**

### **1) Objectives of the Practice**

The objective of this visit, is to develop better understanding and Practical approach of the engineering concepts of LASER cutting, manufacturing processes, Glow-sign board Mfg. Design and fabrication works of seed processing plants.

### **2) The Context**

Students learn different manufacturing processes and operations under the subject of Manufacturing Technology. Practical application of the technical knowledge is very essential to make their understanding better. In order to meet this objective Department organizes such visit under the best practices for students.

### **3) The Practice**

An Industrial visit was organized on 25th February, 2025 for Mechanical Engineering Students. College provided a Bus facility for students from college campus to MIDC, Akola which is around 5 km away from college. Two teaching staff from department was assigned to coordinate this industrial visit for students

#### 4) Evidence of Success



Photo: S. K. Edutech & Agro Industries



Photo: Poonam Engineering works



Photo: Design-X

**B) Department of Mechanical Engineering organized Expert Lecture on the topic “AUTOCAD” for Mechanical Engineering Students on 28 February 2025.**

Expert: Dr. Sanjaykumar C. Makwana, Associate Professor



**C) Department of Mechanical Engineering organized Expert Lecture on the topic “AUTOMATION” for Mechanical Engineering Students on 29 February 2025.**

Expert: Dr. S. K. Patil, Professor & HOD



## **D) Faculty Achievement**

- ❖ **Dr. S. C. Makwana** presented paper in the 3<sup>rd</sup> International Conference on Data Science & Management (ICDSM-24) on Soft Computing Strategies for Anticipating Global Stock Index Price Trends & Future Opportunities held during 13<sup>th</sup> & 14<sup>th</sup> December 2024.
- ❖ **Dr. S. C. Makwana** published a paper entitled “Comparative Study of Inventory Control Models under Different Parameters” in Indian Journal of technical Education: [www.isteonline.in](http://www.isteonline.in) Vol. 48 Special Issue No. 1 in January 2025, ISSN 0971-3034
- ❖ **Dr. Pankaj Ardark** published a paper entitled “Comparative Study of Inventory Control Models under Different Parameters” in Indian Journal of technical Education: [www.isteonline.in](http://www.isteonline.in) Vol. 48 Special Issue No. 1 in January 2025, ISSN 0971-3034

# ARCHITECTURE

## 1.COA Student Interaction Meeting- 28NOVEMBER 2024

- **TITLE:** COA STUDENT INTERACTION MEETING
- **Date** -28 November2024
- **Venue:** -Conference Room, School of Architecture, Akola
- **Coordinator:** - Ar. Radhika R. Raut and Ar. Saiyam S. Chaturvedi
- **Faculty Present:** - Ar. Radhika R. Raut and Ar. Saiyam S. Chaturvedi

On 28 November 2024, the Council of Architecture (COA) organized a meeting to interact with students pursuing architecture. The session aimed to gather insights from students on their journey, challenges, and experiences within the field. The COA representatives posed several questions to the students, encouraging open dialogue and reflection. The questions focused on key aspects of architectural education and practice, such as:

**Inspiration for pursuing architecture:** Students shared personal stories about what sparked their interest in architecture, with many citing influences from childhood experiences, travel, or family backgrounds.

**Challenges faced as architecture students:** Students discussed the demanding nature of their coursework, design blocks, time management issues, and the complexity of balancing creativity with technical requirements. They also shared strategies for overcoming these hurdles, such as seeking mentorship, collaborating with peers, and practicing resilience.

**Fulfillment in architecture:** Many students expressed that the most rewarding part of architecture is the ability to create spaces that have a positive impact on people's lives, blending functionality with aesthetic appeal.

**Creative blocks:** In response to the question about creative blocks, students mentioned techniques like taking breaks,

engaging in different creative activities, or researching new materials and design approaches to refresh their ideas.

**Favorite architectural elements:** When asked about their favorite features to work with, students highlighted aspects like natural lighting, sustainable materials, and spatial organization due to their functional and aesthetic significance.

**Social and cultural relevance of architecture:** Students discussed how architecture can address the evolving needs of communities by creating spaces that are inclusive, culturally sensitive, and adaptable to social changes.

**Prioritizing sustainability, accessibility, and technology:** When discussing project priorities, students emphasized the importance of integrating eco-friendly practices, ensuring designs are accessible to all, and incorporating cutting-edge technology for improved performance and user experience.

## Conclusion

The COA student interaction meeting was a successful platform for fostering meaningful discussions on the challenges, inspirations, and aspirations of architecture students. The exchange of ideas highlighted the student's dedication to innovation, sustainability, and social responsibility in their future architectural practices. The session served as an enriching experience for both the students and the COA representatives, contributing to a deeper understanding of the evolving needs and priorities within the field of architecture.

## Photos



## 2. SITE VISIT TO MARUTI SHOWROOM

A site visit was organized for student of 3<sup>rd</sup> and 4<sup>th</sup> year of Architecture department, C.O.E.T Akola. Students saw the process of false ceiling and construction standards of Maruti Suzuki showroom. Site architect explained all the working and procurement process of Maruti showroom. All the standards and detail measurements were noted down by the students. location of light fixture and installation of led screens were also noted by the students



### 3. RAMPCON 2025

**Event Title:** RAMPCON 2025 - National Exhibition and Workshop on "Recent Advancements in Construction Materials and Practices in Construction Technologies"

#### Organizers:

- Association of Consulting Civil Engineers (India) (ACCE(I))
- The Indian Institute of Architects (IIA) – Akola Centre

**Date:** January 25 - January 27, 2025

**Venue:** Mungilal Bajoria School Ground, Akola

**Faculty incharge:** Dr.Sudhir Dhomane, Prof. Malini Nathe, Prof. Gulfam Shaikh, Prof. Saiyam Chaturvedi, Prof. Radhika Raut

**Students Participated:** First Year, Second Year, Third Year, Fourth Year, Fifth Year



#### **4. GUEST LECTURE ON EXPERIENCE AND LEARNING WITH LATE AR. CHARLES CORREA**

School of Architecture, COET Akola organized a guest lecture on Experience and Learning with late Ar. Charles Correa - by Senior Architect T.D. Gadgil, Sangali on 1<sup>st</sup> Feb. 2025 at Visvesvaraya Hall.

Coordinator of the program Ar. Anand A. Pande efficiently worked for the success of this event.

Ar Gadgil Sir shared his Fond Memoirs of Working with the Master Architect with Students and Faculties of Architecture and Civil Engineering. Dr. P. V. Thorat gifted him the Book-'Rise of Religion from Vedic Literature' (The Ph.D. Thesis) by Dr. Panjabrao alias Bhausaheb Deshmukh, Er. Manoj Bonde, Dr. S. V. Dhomne, Head, School of Architecture were at the dais.

The Lecture was appreciated & well received by all department Head, Faculties and students of Architecture & Civil Engineering.



## 5. VISIT TO BRICK FACTORY AT ANDURA AND CHOTTA BAJAR

Date 15 February 2025

Students of First year B.Arch. School of Architecture COET Akola, visited brick factory at

- 1)Swamy Brick, Andhura and
- 2) Borchate Brick Chohotta Bajar Akola on, 15 Feb. 2025.

### PHOTOGRAPHS:



## 6.GUEST LECTURE ON “CAREER IN INDUSTRIAL DESIGN”

School of Architecture organized a guest lecture for students of Final year B. Arch. students, on Career in Industrial Design for their future developments in as a Post Graduate studies by Dr.Rupesh Surwadeon 21<sup>st</sup>Feb 2025 total of 25 students were present during the event.

Dr. P. V. Thorat, Principal, Dr. S. V.Dhomane Head, Ar.D.L. Jade Prof.In Designchair, Ar. A. A.Pande coordinator and Faculty grace the function.

### Photographs:



## 7. NATURE CLUB ACTIVITY -VISIT TO PDKV

➤ **Date 3<sup>rd</sup> March 2025**

➤ VISIT TO PKV - Students of School of Architecture, C.O.E.T. Akola along with Ar Malini Nathe, visited Dr PDKV Krishi Vidyapith, Horticulture Department on date 3 March 2025. This Activity was under Nature Club. Students studied landscape and studied different flowers, their varieties, colors etc. Students were very much happy to see different varieties of beautiful flowers in our region.

This activity was carried out to study landscape design and also to know about Nature and to develop love and awareness about Nature.

### Photographs:



# CHEMICAL ENGINEERING

## 1. Engineering Day and Teacher's Day Celebration

The Department of Chemical Engineering organized a combined celebration of *Engineering Day* and *Teacher's Day* on **8<sup>th</sup> October 2024**. The event was conducted **offline** and witnessed active participation from **115 students** and **10 faculty members**. The primary objective of the event was to enhance student engagement and promote meaningful interaction between faculty and students, particularly for the first-year cohort. The program featured speeches by faculty members and the **distribution of certificates** recognizing students' academic and extracurricular achievements.

The celebration successfully strengthened student–teacher relationships, encouraged interaction among students from different years, and provided first-year students with valuable insights into the college culture and academic expectations. The event concluded with a formal vote of thanks. The total expenditure for the program amounted to **₹7,070**, and event photographs were attached as part of the documentation.



## 2. Water Quality Testing Activity – Department of Chemical Engineering

The Department of Chemical Engineering organized a **Water Quality Testing Activity** on **8th February 2025** at **Kumbhari** as part of the NSS camp. The session was conducted **offline** with **80 student participants**, including NSS volunteers, and **4 faculty members**.

The objective of the activity was to analyse the **quality of drinking water** collected from various local sources by determining **Total Dissolved Solids (TDS)** levels and assessing overall water safety. Students gained **hands-on exposure** to water testing procedures, data analysis, and understanding water quality parameters and their impact on health. Findings revealed that most water samples exhibited **TDS values between 700–900 ppm**, indicating higher contamination levels, while only RO-treated water showed suitable purity.

The activity enhanced students' practical knowledge, analytical skills, and environmental awareness. No expenditure was incurred for the event, and photographs were included as part of the documentation.





# COMPUTER SCIENCE & ENGINEERING

“The computer was born to solve problems that did not exist before.”—Bill Gates

Students Achievements:

Date	Details
17 Oct 2024	<p>Congratulations to Sudnyesh Nehere, gaurav pawar, Aditya Umale, Gunjan Mansute, Harshal Belurkar, Kalyani Bawane from CSE department for moving forward to the Zonal Round of Eureka to be held on 3 Nov 2024</p>

22 Oct 2024	First Prize UG Category - Engineering and Technology at Avishkar 2024	
22 Oct 2024	First Prize in UG Category Agriculture and Animal Husbandry at Avishkar 2024	
23,24 Dec 2024	1 <sup>st</sup> Prize in Avishkar 2024 University round in Agriculture Category	

## FROM EDITORIAL TEAM

We are indeed enthusiastic to publish the Technical News Letter. Meticulous efforts have been put forward to consolidate, capture all the events of various departments. We strongly hope this newsletter would serve to be more informative for faculty and students. We express our sincere thanks to Dr. P. V. Thorat (Principal) and Dr. R. S. Jaiswal (Overall Coordinator) who have given us the opportunity to work on this. Any Suggestions and feedback will be most welcome.

- Report compiled and submitted by- Prof. M. R. Pundkar

### Editorial Team

1. Dr. S. V. Khedkar	2. Dr. S. S. Agrawal
3. Dr. A. R. Gupta	4. Dr. J. V. Shegokar
5. Ar. Malini Nathe	6. Prof. M. R. Pundkar