

Samrat Ashok Technological Institute

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2nd Edition (23-24)

NEWS LETTER



CIVIL ENGINEERING DEPARTMENT

We shape our buildings, thereafter they shape us.

-Winston Churchill





OUR VISSION

To be at the forefront in the field of Civil Engineering by contributing towards the service and development of the society.

OUR MISSION

To provide quality education and research facilities at an affordable price, so as to produce competent civil engineers with human values to develop quality civil engineering infrastructure for mankind.

From the HoD desk



It's the great pride and satisfaction in presenting the first edition of its newsletter, i.e. **"CIVIL SCOPE"**, which has been released by the Department of Civil Engineering. The department has made significant progress in all areas, including academics, non-academics, and capacity building for both staff and students. The department has also achieved a significant milestone by obtaining accreditation from the National Board of Accreditation (NBA). It is my belief that this issue of the department newsletter will send a positive message to staff, students, and those interested in technical education and technology-based activities. A newsletter serves as a mirror that reflects the various activities undertaken by a department and helps to develop writing skills among students and teaching faculty. I would like to extend my congratulations to the Dr. Pramod Sharma Prof Civil engineering and his team for their outstanding work in completing this task within a record time. Finally, I extend my heartfelt congratulations to the all faculty members, staff members and students for their fruitful efforts. Best wishes to all.

Dr. Rajeev Jain

HoD,

Department of Civil Engineering

Advancements in Civil Engineering we need to Know-

Civil Engineering is an area that lets the world operate. From roads to bridges to skyscrapers, Civil Engineers take the reins and provide us with things that are standard in life. Civil engineering advancements continue to disrupt and improve production.

The field of civil engineering deals with the overlap of design, construction and maintenance of public works like roads, waterways, buildings and railways. While skyscrapers and bridges are a part of the scope, many civil engineers work on other projects that keep society afloat. The advancements that civil engineers have achieved in recent years range from vertical farming to self-healing concrete to photovoltaic glazing etc.

1.Vertical Farming

Vertical farming is a trend that is most affecting urban areas or places where regular agricultural practices aren't possible. The idea involves a multi-storey building to grow food year-round using less space than traditional agriculture.

This practice would give civil engineers the chance to implement irrigation systems and LED lighting, which reduces energy, water and fertilizer use. And this will also reduce the transportation and related emission.

2. Kinetic Energy

Kinetic energy derives from motion, and soon, civil engineers may learn how to use it to their advantage. With kinetic footfalls, for instance, the flooring harnesses the energy of people's footsteps, a setup that will work exceptionally well in high-traffic areas. Civil engineers can apply the same concept to roads, vehicles will be able to transfer energy into sustainable electricity

3. Self-Healing Concrete

Concrete is one of the most popular building materials. Yet it's one of the most harmful to the environment, contributing a significant amount to the world's overall carbon emissions. That's why experts are looking for a way to help civil engineers and the environment.

Researchers want to develop a form of concrete that's self-healing. Civil engineers would use a mix containing bacteria, which would germinate when water enters in to a crack and produce limestone, filling the fissure before corrosion starts. This implementation would be sustainable and save significant costs in terms of material production.

4. Plastic Roads

Plastic pollution is a serious problem in society, and civil engineers are trying to find a solution. One idea is to repurpose plastic waste into roads. This practice would reduce the need for concrete and aid the plastic issue.

India began testing this idea when they built plastic roads that last without damage for years. However, there are concerns regarding micro plastics that will leach into the soil and pollute it, harming animals and ecosystems. With better integration, though, this concept could be a game-changer.

5. Photovoltaic Glazing

Solar energy is one of the leaders of renewable energy. On roofs, windows and other building materials, photovoltaic glazing can replace the traditional glass. This setup will be beneficial for civil engineers as they can invest and implement more sustainable construction materials into their plans. It will help companies and residences that opt in as well since they can reduce their carbon footprint.

MAJOR ACHIEVEMENTS OF THE DEPARTMENT

1. Dr J.S. Chauhan Sr. Prof. of Civil Engg Deptt has received a prestigious life time achievement award on his excellent contribution in the area of Science, Technology, Engineering, & Mathematics. In a grand During the award ceremony Dr.V. K. Saraswat Advisor Niti Aayog, handed over the prestigious award to Dr.J.S. Chauhan in the gracious presence of UGC Chairman Dr Jagadish Mamidala, Chairman of AICTE Dr TG Sitharam & Dr. Raj kumar Shamra President AICRA New Delhi, and ISRO Chandrayan -3 mission Senior lady scientists Dr.Ritu Karidhal, Ms Nadini, Harinath , Dr.Kalpana Arvind Ms Gomathi Saratha , Smt Roopa M.V, Smt Ceena Sunil etc were also present during the function.



2. Dr Bablu Kirar Assistant Professor CED has successfully completed two, 12 weeks NPTEL courses on

(i) Soil Mechanics/ Geotechnical Engineering by securing 81% during July Oct 2023.

(ii) Ground Improvement by securing 61% during July Oct 2023.



3. Dr. Rakesh Mehar Assistant Professor of the Department was Invited as an expert for evaluating research papers in 39th M P Young Scientist Congress & Science festival held at Madhav Institute of Science & Technology, Gwalior, M.P. during February 21 – 23, 2024, He was also Invited as a Resource Persons by

Central Academy for Police Training, Bhopal for One Week of Training on “Capacity Building in Smart Traffic Management” For Police Officers from 09/10/2023 To 14/10/2023.

Other Achievements of Dr. Rakesh Mehar are

1. Successfully completed a 4-Week Faculty Induction/Orientation Programme for **“Faculty in Universities/Colleges/Institutes of Higher Education”** from 22 October – 20 November, 2023 and obtained Grade A+

2 Successfully Completed online two - week Interdisciplinary Refresher Course in **“ADVANCED RESEARCH METHODOLOGY”** from 22 September – 06 October, 2023 and obtained Grade A+

3 Successfully completed online one-week Faculty Development Programme on **“Advanced Pedagogical Techniques”** from 16 – 22 January, 2024 and obtained Grade A.

4 Published research papers tilte **“A Performance Analysis and Design of Skewed Intersection at Vivekanand Tiraha (Vidisha) : A Case Study”** in ADBU-Journal of Engineering Technology (UGC care list Journal)

5 Published Book Chapter title **“Experimental Study on Aging of Different Grades of Bitumen for Bituminous Mixes Concrete”** Latest Developments in Civil Engineering. RACE 2022. Lecture Notes in Civil Engineering, vol 352. Springer, Singapore. https://doi.org/10.1007/978-981-99-2676-3_58 **(Scopus Index)**

6 Published Book Chapter title **“Comparison Study on R.A.P with Old Asphalt Aggregate with Virgin Bitumen”** Latest Developments in Civil Engineering. RACE 2022. Lecture Notes in Civil Engineering, vol 352. Springer, Singapore. https://doi.org/10.1007/978-981-99-2676-3_60 **(Scopus Index)**

Students Achievement

1.Final Year Student Mr.Ankit Rathore has been selected in V.E. Commercial Vehicles.

2.Final year student Ms.JEENIE ROHIT has successfully qualify the prestigious GATE exam 2024 by securing all India rank as 18197.



The S.A.T.I. and Department of Civil Engg. family congratulated to Dr J.S.Chauhan, Dr Bablu Kirar , Dr Rakesh Mehar , Mr.Ankit Rathore and Ms.JEENIE ROHIT on their magnificent achievement.



Congratulations!