



Civil Spectrum

Session 2024-25



Lakshmi Narain College Of Technology, Bhopal
Department of Civil Engineering



Preface

In the Department of Civil Engineering at Lakshmi Narain College of Technology, Bhopal. We believe in sustainable excellence while staying aligned with our vision to produce socially responsible engineers and our mission to impart quality education and foster innovation. Our department prides itself on having state-of-the-art laboratories, highly qualified and experienced faculty, ICT-enabled classrooms, and a conducive environment for learning and innovation.

To ensure our students are well-prepared for the technological advancements in the construction and infrastructure industry, we take proactive steps to connect them with the industry through initiatives such as specialized workshops, industry-sponsored projects, site visits, and collaborative internships with leading construction firms.

This not only makes them aware of real-world challenges but also provides them with the opportunity to build the skill set required to thrive in a dynamic environment. Our carefully designed pedagogy fosters creative thinking, technical expertise, and leadership skills among students, enabling them to excel and make a meaningful impact.

Since our inception in the Department of Civil Engineering has achieved significant milestones such as establishing advanced material testing facilities, successfully organizing annual technical symposiums like "Construct," and achieving high placement rates for graduates in leading infrastructure firms. These accomplishments reflect our commitment to nurturing the latent potential of our students and faculty members to contribute meaningfully to society. The department offers a Bachelor's Degree in Civil Engineering, equipping students with both theoretical knowledge and practical skills.

As we present this magazine, we reflect on the achievements of our students and faculty, showcasing remarkable projects like the award-winning sustainable housing design, innovative research in smart construction materials, and success in national-level competitions. These highlights are a testament to the relentless efforts that define our department's ethos. We are immensely grateful to all our stakeholders - students, faculty, parents, alumni, technicians, and the community at large — for playing an integral role in our journey toward excellence.

Dr. Sandeep Choudhary
Head of the Department
Civil Engineering Department
Lakshmi Narain College of Technology, Bhopal



Editorial Note

Dear Reader,

It is with immense pride and enthusiasm that we present the latest edition of the Civil Engineering Department Magazine of Lakshmi Narain College of Technology. This publication stands as a reflection of the intellectual curiosity, technical excellence, and creative spirit that define our students and faculty.

Civil engineering, as one of the oldest and most impactful branches of engineering, continues to shape the world we live in—from sustainable infrastructure and smart cities to resilient transportation systems and environmental stewardship. In this evolving landscape, our department remains committed to nurturing engineers who are not only technically proficient but also socially responsible and innovative thinkers.

This magazine is a testament to that commitment. Within these pages, you will find a diverse collection of articles, technical insights, project highlights, and creative contributions that showcase the talent and dedication of our students. It also highlights departmental achievements, academic milestones, and collaborative initiatives that continue to elevate our standards of excellence.

We encourage every reader to engage with the ideas presented here, draw inspiration, and contribute to the ever-growing body of knowledge in civil engineering. Let this magazine serve not only as a record of accomplishments but also as a platform for expression and innovation.

We extend our heartfelt gratitude to all contributors, editors, and faculty members whose efforts have made this publication possible. Your dedication ensures that this magazine continues to inspire and inform.

Wishing you an enriching and insightful reading experience.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Vision of the Department

To be a fountain head of new ideas and innovation in Civil Engineering.

Mission of the Department

- To offer assured quality programs in Civil Engineering with state of art technology and moral values.
- To culcate the quality of entrepre-neurship among graduating students.
- To be a centre of excellence in Civil engineering programme.



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LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Expert Lectures

The Department of Civil Engineering organized an expert lecture for the students of 6th semester on 06 March 2025. At Vikram Sarabhai Conference Hall by Mr. Sanjay Agrawal Professor, Structural Engineer and Planner NITDP training institute Bhopal., will deliver a lecture on his area of expertise "Scientific and Practical insides of Vastu Shastra in modern Construction".



Finally Mr. Sanjay Agrawal conclude the lecture by highlighting the importance of "Scientific and Practical insides of Vastu Shastra in modern Construction". The students gain valuable knowledge.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

On 29 May 2025, the Department of Civil Engineering organized an expert lecture for the students of the 4th semester with the objective of enhancing their understanding of contemporary issues in transportation engineering. The session was delivered by Dr. Rakesh Meher, Associate Professor at SATI, Vidisha, who is well known for his expertise in the field. The lecture focused on the important topic of "Road Safety Audit & Pedestrian Safety."



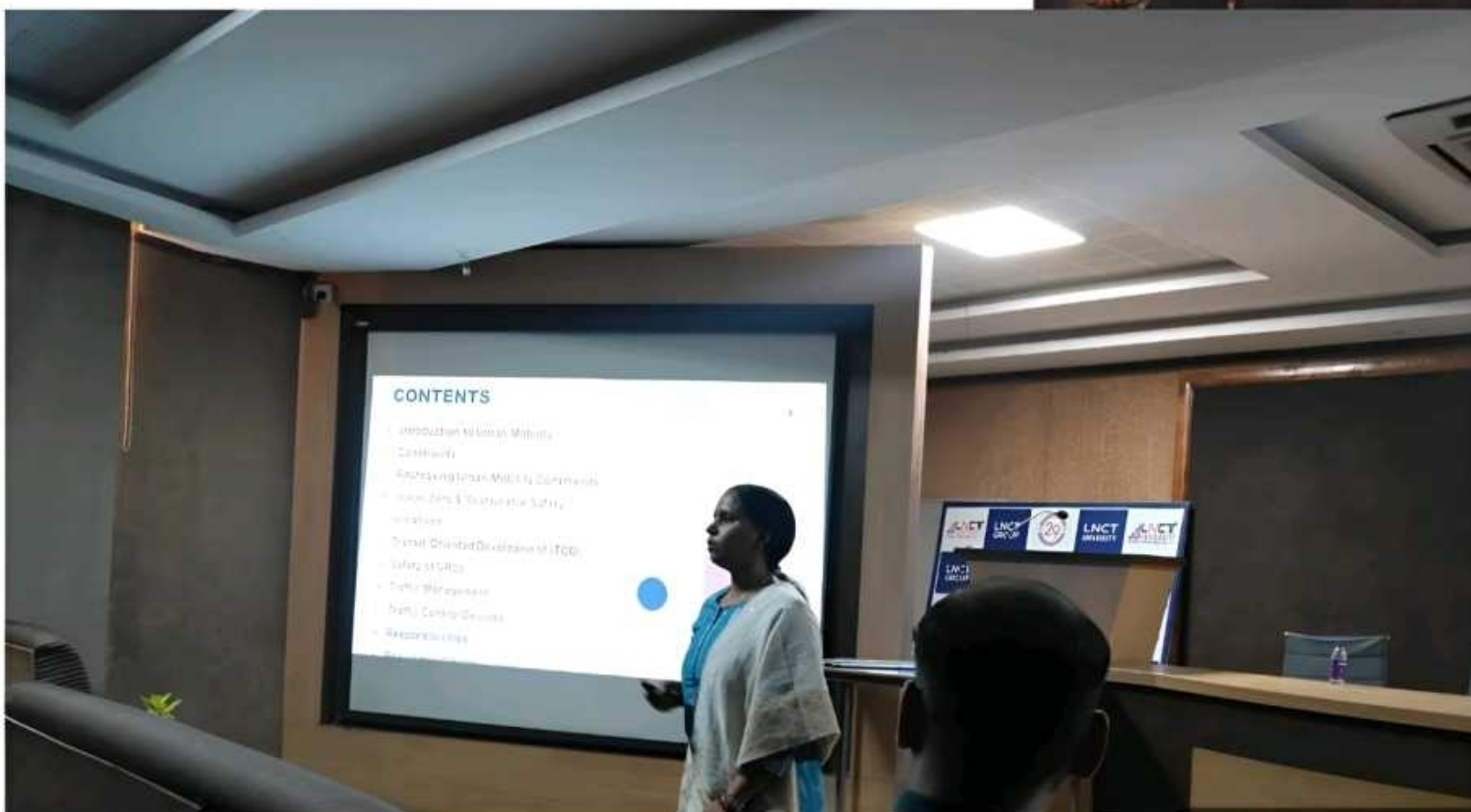
The session was highly informative and interactive, allowing students to gain practical knowledge beyond their academic curriculum. It helped them understand real-world challenges in road safety and the importance of adopting a systematic approach to create safer transportation systems.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

The Department of Civil Engineering organized an Expert Lecture for VI semester Civil Engineering students of LNCT/LNCTS on 19/02/2025 at APJ Abdul Kalam Conference Hall. The session will be delivered by Dr. Pritikana Das, Professor, MANIT Bhopal, who is a distinguished academician and expert in the field of Civil Engineering and Transportation Planning. She will deliver an insightful lecture on the topic: "The Future of Urban Mobility: Balancing VRUs Safety with Emerging Traffic Safety Measures."



The lecture aims to provide students with valuable knowledge regarding the future challenges and opportunities in urban transportation systems, with special emphasis on the safety of Vulnerable Road Users (VRUs) and the role of modern traffic safety measures in creating sustainable and secure urban mobility solutions.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Academic Excellence

Top ranking students of VII semester (LNCT)

Enrollment No	Name	SGPA	CGPA
0103CE211040	ROHIT KUMAR CHOURASIA	9.17	8.01
0103CE223D01	ASHUTOSH KUMAR	8.92	8.20
0103CE211038	RISHABH CHOUHAN	8.92	8.09
0103CE211045	SAKSHI KUSHWAHA	8.92	8.07
0103CE211021	HARSH KHARE	8.79	8.70

Top ranking students of V semester (LNCT)

Enrollment No	Name	SGPA	CGPA
0103CE221004	ADITI PRAGYA	9.38	8.29
0103CE221018	DEV KUMAR SHARMA	9.33	8.40
0103CE221039	SALONI MUWEL	9.21	7.97
0103CE221028	NAMRATA JATAV	9.04	7.23
0103CE221045	SHUBHAM PATEL	8.92	7.99



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Top ranking students of III Semester (LNCT)

Enrollment No	Name	SGPA	CGPA
0103CE231051	SHUBHAM KUMAR	8.42	8.00
0103CE231027	MANGLAM KUMAR	7.88	7.63
0103CE231033	MUNNA KUMAR	7.75	7.93
0103CE231009	AMIT KUMAR	7.75	7.26
0103CE231010	ANUGRAH TRIPATHI	7.75	6.89

Top ranking students of I semester (LNCT)

Enrollment No	Name	SGPA	CGPA
0103CE241050	ROHIT KUMAR GIRI	8.33	8.33
0103CE241066	TANMAY PATHAK	8.14	8.14
0103CE241037	NAKUL SINGH RAJPUT	8.1	8.1
0103CE241003	ABHISHEK SHRIVASTAVA	8.05	8.05
0103CE241004	ABHISHEK SINGH	7.71	7.71



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

List of students Participated in Professional Events

Students of the Department of Civil Engineering actively participated in the CIVIL FISTA Quiz, organized by UIT RGPV, Bhopal, at the National Level on 03 April 2025. A total of five students—Shubham Kumar, Pawan Pandey, Munna Kumar, Amit Kumar, and Manglam Kumar—participated in the event. The participation provided students with an opportunity to enhance their technical knowledge, problem-solving skills, competitive spirit, and academic exposure. Notably, Munna Kumar secured the Second Prize in the event. Such participation and achievement reflect the department's continuous efforts to encourage students to engage in academic competitions and develop their professional and technical competencies, in alignment with NBA accreditation requirements.

List of student publications

During the academic year, students of the Department of Civil Engineering actively participated in research and academic activities through paper publication and presentation at national/international conferences. Bimlandu Goutam (VIII Semester) published a research paper entitled “Seismic Behaviour of Tall Structure with RC Shear Wall and Configuration of ETABS 2021” in the Global Journal of Research in Engineering, Volume 23, Issue 3. Further, Sakshi Kushwaha, Rishabh Chouhan, Ashutosh Kumar, and Surbhi Jat (VII Semester) participated in the International Conference on Expanding Horizons in Artificial Intelligence & Data Science (ICEHAIDS-2024) and presented their research work. These activities demonstrate the department's efforts to promote research aptitude, technical knowledge, innovation, academic exposure, and active participation of students in scholarly activities, in alignment with the requirements of NBA accreditation.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Faculty Publication Details

Dr. Sandeep Choudhary, Head of the Department, Department of Civil Engineering, has demonstrated strong academic, research, and administrative leadership. He has contributed 7 peer-reviewed journal papers, 1 peer-reviewed conference paper, and 1 book chapter. As HOD, he has actively promoted research, faculty development, student engagement, technical activities, and continuous improvement, contributing significantly to the department's academic excellence and alignment with NBA/NAAC quality benchmarks.

Details of Patents /Published working Models and prototypes developed by faculty members

Faculty Name	Patent Title	Granted/Published	Patent Application No
Parul Omare	Automated Concrete crack detection and repair system for infrastructure maintenance	Published	202421103814
Sunil Kumar Vishwkarma	and repair system for infrastructure maintenance	Published	202421103814
Vikas kumar Singh	Water pollution source locating device	Published	202521021123
Dr.Prabhat Kumar Tiwari	A Portable smart concrete strength analyzer with real real time IOT feedback	Published	202521086994 A
Dr. Subha Agarwal	IOT Based Air Pollution Monitoring Device	Published	431682-001
Rajeev Singh Parihar	Smart Traffic Management System for optimizing roadway Congestion in Ubran areas	Published	202421103813 A
Dr. Bikaram Prasad	System for predictive urban flood management using dynamic runoff modelling	Published	432463-001
Dr. Bikaram Prasad	Portable micro-irrigation device	Published	4590805-001
Dr. A.K JHA	Smart Traffic Management system for optimizing roadway congestion in urban areas	Published	202421103813 A

Consultancy Work

Prof.Name	Co-Plames if any	Name of the Dept..Where Project is sanctioned	Project Title	Name of the Funding Agency	Duration of the project	Amount (Lacs)ie. 15.25
Prof. Rashmi Sakalle	Prof. Vikas Kumar Singh	Civil Engineering Department	Design and Testing of Materials	Ananjay Construction and Contracts Private Limited	1 Year	17.10



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Articles

Sustainable Construction: The Future of Civil Engineering

Sustainable construction is becoming one of the most important topics in civil engineering today. With rapid urbanization and increasing environmental concerns, engineers are focusing on building structures that are safe, efficient, and eco-friendly. Sustainable construction aims to reduce waste, save energy, and use resources wisely while meeting the needs of modern society.

Civil engineers play a major role in designing green buildings, smart roads, and efficient water management systems. They use materials such as recycled steel, fly ash concrete, and energy-saving insulation to lower the environmental impact of construction projects. Solar panels, rainwater harvesting systems, and natural ventilation are also common features in sustainable buildings.

Modern technology has made sustainable construction more effective. Tools like Building Information Modeling (BIM), drones, and advanced software help engineers reduce errors, save costs, and improve project planning. These innovations increase efficiency and minimize damage to the environment.

Sustainable construction offers many benefits, including lower energy consumption, reduced pollution, and healthier living spaces. It also supports long-term economic growth by lowering maintenance and operating costs.

In the future, civil engineering will continue to focus on smart cities, renewable energy systems, and climate-resistant infrastructure. Sustainable construction is not only a trend but a necessity for protecting the planet.

In conclusion, sustainable construction represents the future of civil engineering by combining innovation, responsibility, and progress for a better world.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Building the Future: Civil Engineering in Modern Society

Civil engineering is one of the most important branches of engineering because it creates the infrastructure that supports everyday life. Roads, bridges, buildings, dams, airports, and water supply systems are all designed and maintained by civil engineers. Their work helps societies grow, connect, and function efficiently.

Civil engineers play a vital role in urban development. As cities expand, there is a growing need for safe housing, better transportation, and proper drainage systems. Engineers design structures that are strong, durable, and able to withstand natural disasters such as earthquakes and floods. This makes communities safer and more sustainable.

Technology has greatly improved the field of civil engineering. Tools like Computer-Aided Design (CAD), Building Information Modeling (BIM), and drones help engineers plan projects with greater accuracy and speed. Modern materials and eco-friendly construction methods are also reducing environmental impact.

Civil engineering includes many fields such as structural engineering, transportation engineering, geotechnical engineering, and environmental engineering. Each branch focuses on solving different challenges related to construction and public welfare.

The future of civil engineering is bright, with smart cities, green buildings, and renewable energy projects becoming more common. Civil engineers will continue to solve problems caused by rapid population growth and climate change.

In conclusion, civil engineering is not just about construction; it is about building a safer, smarter, and better future for everyone.

By:- Indrajeet Choursiya



Poetry

“The Silent Builder”

We shape the earth with patient hands,
From dusty roads to shining lands.
No spotlight falls, no trumpet calls,
Yet cities rise from silent walls.

In steel and stone, our stories stay,
Strong through time, they do not sway.
While others dream and poets write,
We build the stage for life's great sight.

“Blueprint Dreams”

On paper thin, a world appears,
Of lines and curves, of hopes and fears.
A simple sketch, a fragile start,
Becomes a city, part by part.

Each measure drawn with steady care,
A future built from lines so fair.
For every bridge and tower tall,
Begins as dreams within a wall.

By:- Amit Kumar

“Ode to Concrete”

You may seem plain, a lifeless gray,
Yet hold our world in firm array.
Through heat and storm, through time's demand,
You stand unshaken, strong and grand.

In pillars high and pavements wide,
Your silent strength we cannot hide.
For in your core, resilience lies,
The backbone where our progress ties.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Field Visit

The Department of Civil Engineering, Lakshmi Narain College of Technology, organized an educational field visit to the Agricultural Block for the students to provide practical exposure to real-world applications of civil engineering.



The field visit was highly informative and beneficial for students as it bridged the gap between classroom learning and practical implementation. It enhanced their technical understanding, observational skills, and awareness of the role of Civil Engineering.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

The Department of Civil Engineering at Lakshmi Narain College of Technology organized an educational geological site visit to Sanchi Stupa, Vidisha, for the 2nd-year students under the subject Engineering Geology and Remote Sensing (CE 405) as prescribed by the RGPV curriculum. The visit was conducted on 03 June 2025 under the guidance and supervision of faculty members.



The visit proved to be highly informative and enriching, helping students bridge the gap between classroom theory and practical field knowledge. It also enhanced their observational skills, technical understanding, and appreciation of India's rich historical heritage.



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Plantation

On 9 July 2024 the department of civil engineering, Lakshmi Narain College of Technology, successfully organized a Plantation Drive within the college campus with the objective of promoting environmental awareness and encouraging sustainable practices among students and faculty members.



The plantation activity was not only a step toward environmental protection but also an inspiring learning experience that highlighted the role of youth in building a sustainable society. It reflected the department's commitment to social responsibility and eco-friendly development.



Department of Civil Engineering

Lakshmi Narain College Of Technology

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