



Civil Spectrum

Session 2025-26



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. Bikram prasad
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 fountainhead of innovation, sustainable solutions, and professional excellence in Civil Engineering.

MISSION OF THE DEPARTMENT

- To offer quality Civil Engineering programs through effective teaching–learning processes, state-of-the-art technology, and strong ethical values.
- To inculcate entrepreneurial skills, professional competence, and leadership qualities among graduating civil engineering students.
- To evolve as a centre of excellence in Civil Engineering education through innovation, research, industry interaction, and societal engagement.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

PROGRAM SPECIFIC OUTCOMES

1. Apply principles of surveying, mapping, planning, and layout to execute, supervise, and coordinate civil engineering works such as buildings and infrastructure projects in collaboration with multiple agencies.
2. Identify, analyze, and propose innovative and sustainable civil engineering solutions for societal and regional needs such as housing, sanitation, waste management, irrigation, and renewable energy systems.
3. Plan, analyze, design, and prepare techno-economic cost estimates for civil engineering projects by integrating engineering standards, safety, sustainability, and entrepreneurial considerations.

PROGRAM EDUCATIONAL OBJECTIVES (PEO'S)

1. To provide a conducive academic environment and effective teaching–learning processes that establish strong foundations in civil engineering principles and practices.
2. To prepare graduates to become employable, ethical, accountable, and professionally competent civil engineers, capable of designing, implementing, and managing civil engineering projects in complex and multidisciplinary environments.
3. To motivate graduates towards higher studies, research, innovation, and lifelong learning, enabling them to contribute to academia, research organizations, and advanced professional practice in Civil Engineering.
4. To equip graduates with modern engineering tools, software, computational techniques, and emerging technologies, enabling them to demonstrate leadership, entrepreneurial capability, and effective performance in industry and global professional environments.



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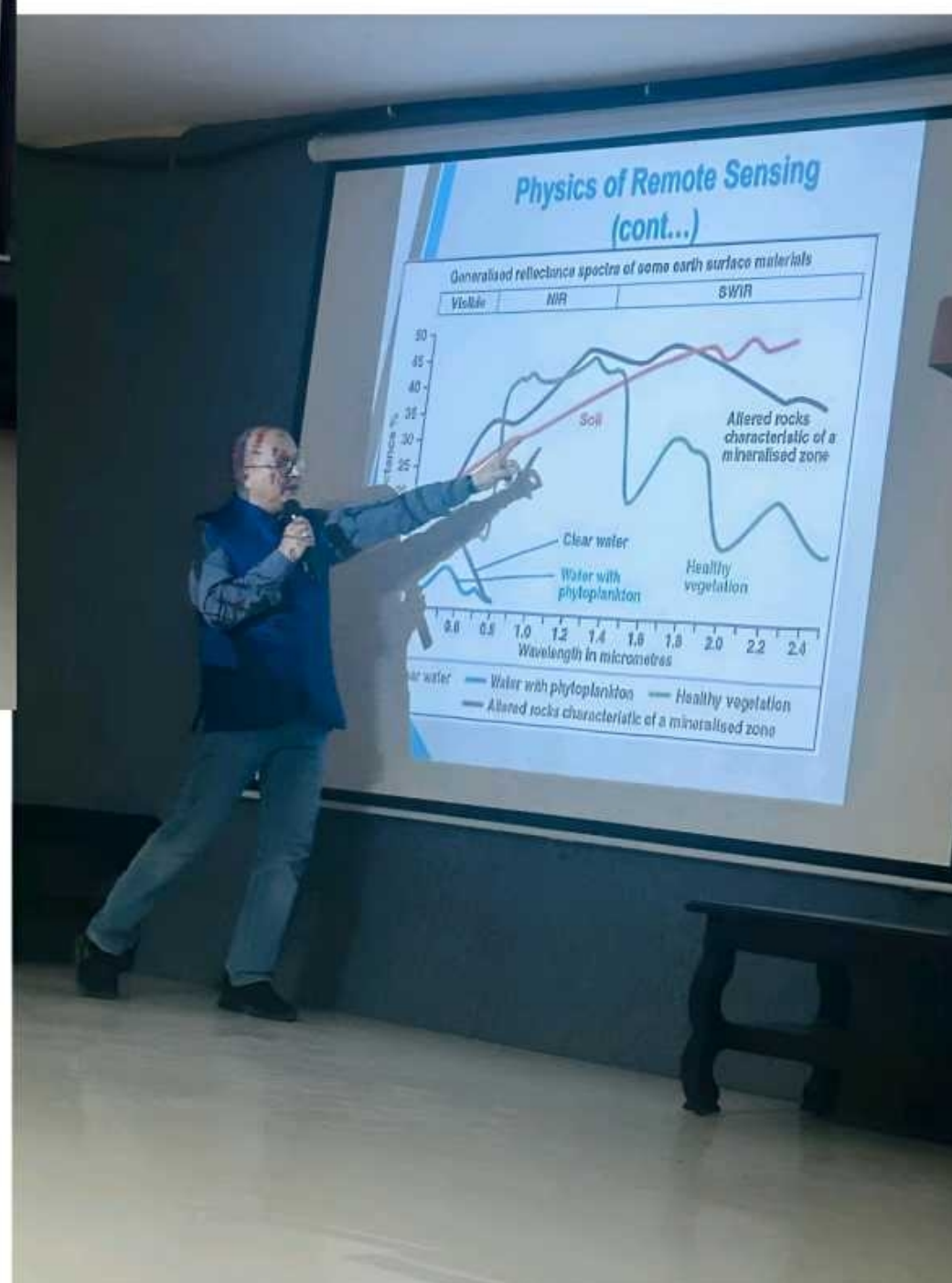


LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Expert Lectures

The Department of Civil Engineering organized an expert lecture for the students of 3rd and 5th semester on 25 Nov. 2025. On the topic "Application of RS & GIS for Water Resource Management". It will be delivered by Dr. Rahul Kumar Jaiswal, Scientist-F, National Institute of Hydrology, Regional Centre Bhopal, WALMI Campus, Kolar Road, Bhopal (M.P.) India.



Finally Dr. Rahul Kumar Jaiswal conclude the lecture by highlighting the importance of Remote sensing & GIS for Water Resources Management. The students gained valuable knowledge.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

An expert lecture by Dr. Vikas Poonia was arranged in the seminar hall of LNCTS on 9th Feb 2026 on the topic "Climate Change Impacts on civil Infrastructure: Smart, Sustainable, and AI-Driven Solutions". It was attended by students of civil engineering as well as by all faculty members.



In conclusion, the insightful lecture delivered by Dr. Vikas Poonia underscores the urgent need to rethink how we design, build, and manage civil infrastructure in the face of accelerating climate change. The discussion clearly highlighted that conventional approaches are no longer sufficient to withstand increasing environmental stresses such as extreme weather events and resource constraints.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

An expert lecture by Dr. Aditya Singh Rajput was arranged in the seminar hall of LNCTS on 30th Dec 2025 on the topic ."India's Deteriorating Infrastructure, Challenges and Solutions: A Researcher's Point of View". It was attended by students of civil engineering as well as by all faculty members.



In conclusion, the expert lecture by Dr. Aditya Singh Rajput provided a comprehensive and thought-provoking analysis of India's deteriorating infrastructure from a researcher's perspective. By systematically highlighting the structural weaknesses, policy gaps, and implementation challenges, the lecture underscored the urgency of addressing infrastructure deficits in a rapidly developing nation.

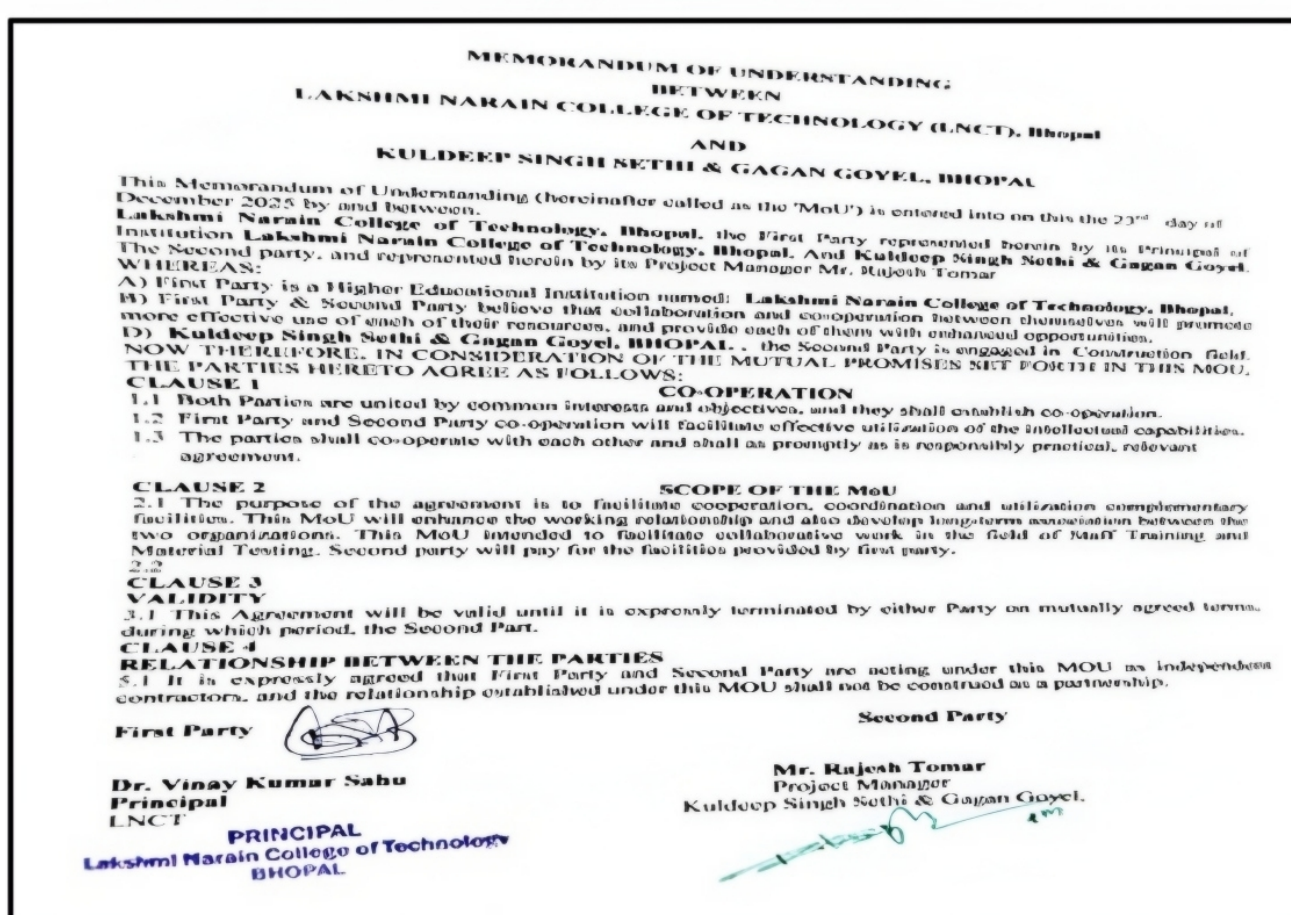


LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Industry Collaboration through MoU

The Department of Civil Engineering, LNCT Bhopal, strengthened its industry–academia collaboration by signing a Memorandum of Understanding (MoU) with Kuldeep Singh Sethi & Gagan Goyal, Bhopal, on 23 December 2025. The MoU aims to promote collaborative activities in staff training, material testing, technical consultancy, skill development, and industry-oriented learning, providing enhanced practical exposure for students and faculty.



Industry–Academia Collaboration with ORIGIN X

The Department of Civil Engineering, LNCT Bhopal, signed a Memorandum of Understanding (MoU) with ORIGIN X, Bhopal to strengthen industry–academia collaboration. The partnership aims to provide students with industry-oriented training, skill development, and enhanced placement opportunities, equipping them with the latest technological knowledge and industry-relevant competencies.





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Academic Excellence

Top ranking students of VIII semester (LNCT)

Enrollment No	Name	SGPA	CGPA
0103CE211009	AMAN KUMAR SAHU	8.89	8.23
0103CE211021	HARSH KHARE	8.83	8.71
0103CE211040	ROHIT KUMAR CHOURASIA	8.50	8.06
0103CE211039	RISHABH SINGH SENGAR	8.50	8.04
0103CE211041	ROHIT PRAJAPATI	8.44	7.81

Top ranking students of VI semester(LNCT)

Enrollment No	Name	SGPA	CGPA
0103CE221004	ADITI PRAGYA	9.04	8.42
0103CE221039	SALONI MUWEL	9.04	8.15
0103CE221018	DEV KUMAR SHARMA	8.92	8.49
0103CE233D06	MANMOHAN LODHI	8.75	7.92
0103CE221033	PURUSHOTTAM KUMAR	8.75	7.79



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Top ranking students of IV semester (LNCT)

Enrollment No	Name	SGPA	CGPA
0103CE243D09	SUMIT KUMAR	8.54	8.13
0103CE231051	SHUBHAM KUMAR	8.33	8.09
0103CE231028	MANJEET SINGH	8.21	7.48
0103CE243D07	MUKESH KUMAR	8.17	7.94
0103CE243D01	ANAND MOHAN	7.96	7.22

Top ranking students of II semester (LNCT)

Enrollment No	Name	SGPA	CGPA
0103CE241004	ABHISHEK SINGH	8.43	8.07
0103CE241037	NAKUL SINGH RAJPUT	8.33	8.22
0103CE241050	ROHIT KUMAR GIRI	8.29	8.31
0103CE241066	TANMAY PATHAK	8.19	8.17
0103CE241029	INDRAJEET CHOURSIYA	8.19	7.53



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Students Achievement

We are thrilled to share a moment of immense pride and celebration as Lakshmi Narain College of Technology has emerged victorious in the prestigious RGPV Nodal Hockey Championship. Adding to this remarkable achievement, two talented students from the 5th Semester, Civil Engineering Department—Himanshu Punde and Krishna Punde—played a significant role in securing this victory. Their dedication, teamwork, and exceptional performance on the field have brought great honor to the institution.





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Four students Mr Atharv Dubey, Mr Hemendra Magare, Ms Anshika Chaurasiya and Ms Palak Suryawanshi, of Lakshmi Narain College of Technology (Civil Engineering, 4th semester). Who proudly represented our institution at the prestigious Indian Institute of Technology Madras during the Building Bharat Sampark Innovation Boot Camp & Hackathon.

This remarkable event brought together some of the brightest young minds from across the country, fostering innovation, collaboration, and problem-solving. Being selected to participate in such a highly competitive platform is an achievement in itself, reflecting the dedication, creativity, and hard work of our students.



In a commendable display of environmental responsibility, the students of 4th semester Civil Engineering actively participated in a walkathon organized by World Wide Fund for Nature – MP & Chhattisgarh State Office. The event was conducted as part of the globally recognized Earth Hour 🌍, an initiative dedicated to raising awareness about climate change and the importance of sustainable living.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Civil Engineering Students Showcase Innovation at IIT Gandhinagar

Fifteen students from the Department of Civil Engineering, LNCT Group of Colleges, participated in the Building Bharat Sampark – Innovation Bootcamp in Civil Engineering at IIT Gandhinagar, Gujarat from 17–19 December 2025. The students presented their innovative projects before national and international experts, gaining valuable exposure to innovation, design thinking, and practical problem-solving. They also received Certificates of Participation, proudly representing LNCT Group at the national level.



Civil Engineering Department Celebrates GATE 2026 Success

The Department of Civil Engineering, LNCT Bhopal, proudly celebrates the outstanding performance of its faculty members, students, and alumni in GATE 2026. Dr. Abhishek Soni, Assistant Professor, secured an All India Rank (AIR) 7770 with a GATE Score of 379. Among the students, Rohit Raj achieved an AIR 4664 with a GATE Score of 449, while Sumit Kumar secured an AIR 10926 with a GATE Score of 236. Adding another feather to the department's cap, alumna Samiksha Upadhyay secured an impressive AIR 362 with an outstanding GATE Score of 745. These remarkable achievements reflect the department's strong academic environment, dedicated mentorship, and commitment to excellence in competitive examinations and higher education.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Civil Clubs

Civil Impact Club: Empowering Future Civil Engineers

The Department of Civil Engineering, LNCT Bhopal, launched the Civil Impact Club (CIC) as a student-driven initiative to bridge the gap between classroom learning and industry practice. The club provides students with opportunities to enhance their technical and professional skills through software training, expert lectures, industrial visits, technical competitions, field exposure, project development, and leadership activities. By fostering innovation, teamwork, and practical learning, the Civil Impact Club prepares students to become competent and industry-ready civil engineers.

CIVIL IMPACT CLUB
Design. Develop. Deliver

ABOUT THE CLUB:
A student-led initiative to build practical civil engineering skills through real-world learning, technical workshops, and industry exposure.

WHO CAN JOIN?
*Civil Engineering Students (2nd-4th Year)
*Other Branch Students (for management/design roles)

WHAT YOU'LL GET:
*Software Sessions: AutoCAD
*SketchUp | STAAD Basics
*Construction Site Visits
*Survey & Field-Work Training
*Technical Competitions
*Expert Talks & Industry Insights
*Project-Making Support
*Portfolio & Resume Building

REGISTRATION STEPS
1. Scan QR Code
2. Fill the Form
3. Shortlisting

ROLES AVAILABLE:
*Core Member
*Event Management
*Technical Team
*Design & Creative
*Marketing & Promotions
*Documentation
*Photography/Videography

Scan me:

Contact:
Vipin Kumar Pandey : 6264971021
Atharv Dubey : 9713559328





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Bridge Mania 2026: Showcasing Innovation in Structural Engineering

The Department of Civil Engineering, LNCT Bhopal, under the Civil Impact Club (CIC), successfully organized Bridge Mania 2026. The Ultimate Bridge Making Competition on 6 June 2026. The event provided students with an opportunity to design, construct, and test model bridges, encouraging innovation, teamwork, and the practical application of structural engineering concepts. The competition offered hands-on learning and strengthened students' problem-solving, design, and analytical skills while bridging the gap between classroom knowledge and real-world engineering challenges.





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

The Department of Civil Engineering, LNCT Bhopal, successfully organized the Inaugural Function of Avadhan Society on 25 June 2026. The event was graced by Dr. Amitbodh Upadhyay, OSD, LNCTS, who delivered an inspiring keynote address on "Ancient Wisdom of Our Country", emphasizing the enduring relevance of India's rich knowledge traditions. Dr. Bikram Prasad, Head of the Department, highlighted the significance of the Bhagavad Gita in shaping values, leadership, and ethical decision-making. Dr. R. S. Parihar, Professor and Faculty Coordinator of the Avadhan Society, shared valuable insights on the Indian Knowledge System (IKS) and its integration with modern education for the holistic development of students.





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Nirman 2026: Civil Engineering Model Competition

The Department of Civil Engineering, LNCT Bhopal, successfully organized Nirman 2026 – Civil Engineering Model Competition under the Civil Impact Club (CIC). The event provided students with an excellent platform to showcase their creativity, technical knowledge, and innovative engineering solutions through working and conceptual models. Participants presented projects on sustainable infrastructure, smart construction, water resources, and environmental engineering, promoting practical learning, teamwork, and problem-solving skills.





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

SWAYAM–NPTEL Success of Civil Engineering Students

A total of 8 students from the Department of Civil Engineering, LNCT Bhopal, successfully completed SWAYAM–NPTEL certification courses during the academic session 2025–26. The students earned Elite and Successfully Completed certifications in specialized subjects such as Reinforced Concrete Design, Structural Dynamics for Earthquake-Resistant Structures, and Basic Construction Materials. These accomplishments reflect the students' enthusiasm for continuous learning, technical excellence, and skill enhancement through nationally recognized online certification programs..



Lakshmi Narain College of Technology, Bhopal

Department of Civil Engineering

Congratulations to B. Tech 6th Sem Students for successfully Completing NPTEL Certification Course



NPTEL ONLINE CERTIFICATION

Presented by the NPTEL Unit of India

This certificate is awarded to
KARAN PRAJAPATI
for successfully completing the course
Reinforced Concrete Design
with a consolidated score of **47 %**

Online Assignments	16/19/25	Practical Exam	30/75
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Total number of candidates certified in this course: **83**

Jan-Apr 2026
(13 month session)

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit



NPTEL ONLINE CERTIFICATION

Presented by the NPTEL Unit of India

This certificate is awarded to
RAHUL KUMAR
for successfully completing the course
Reinforced Concrete Design
with a consolidated score of **49 %**

Online Assignments	13/11/25	Practical Exam	26/75
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Total number of candidates certified in this course: **83**

Jan-Apr 2026
(13 month session)

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit



NPTEL ONLINE CERTIFICATION

Presented by the NPTEL Unit of India

This certificate is awarded to
MANJAN KUMAR
for successfully completing the course
Reinforced Concrete Design
with a consolidated score of **48 %**

Online Assignments	18/06/25	Practical Exam	30/75
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Total number of candidates certified in this course: **83**

Jan-Apr 2026
(13 month session)

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit



NPTEL ONLINE CERTIFICATION

Presented by the NPTEL Unit of India

This certificate is awarded to
PAVAN PANDIT
for successfully completing the course
Reinforced Concrete Design
with a consolidated score of **48 %**

Online Assignments	17/10/25	Practical Exam	30/75
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Total number of candidates certified in this course: **83**

Jan-Apr 2026
(13 month session)

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit



NPTEL ONLINE CERTIFICATION

Presented by the NPTEL Unit of India

This certificate is awarded to
MUNDA KUMAR
for successfully completing the course
Reinforced Concrete Design
with a consolidated score of **62 %**

Online Assignments	10/11/25	Practical Exam	41/70/75
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Total number of candidates certified in this course: **83**

Jan-Apr 2026
(13 month session)

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit

Dr. Ravi Ranjan
Coordinator, Institute for Skill Development & Technology
NPTEL Unit



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Faculty Participation and Certification in NPTEL/Online Courses

The faculty members of the Department of Civil Engineering actively participated in NPTEL and other online certification courses during the academic sessions July–December 2025 and January–June 2026. The courses covered diverse areas including Engineering Geology, Remote Sensing, GIS, Structural Engineering, Geotechnical Engineering, Concrete Technology, Environmental Engineering, Construction Management, Sustainability, and Engineering Education. Faculty members secured Gold, Silver, Elite and other certification categories, demonstrating their commitment to continuous professional development and lifelong learning. For example, Dr. Bikram Prasad secured Elite/Silver certifications in several technical courses, while Rashmi Sakalle and Dr. Sandeep Choudhary achieved Gold-level/top-performer recognition in Technical Communication for Engineers.





List of Patent Achievements by Civil Engineering Faculty

The Department of Civil Engineering has actively promoted innovation, research, and technology development through faculty participation in patent-related activities. During the academic year, faculty members contributed to several innovative inventions, including systems for concrete bridge health monitoring, smart concrete strength analysis, seismic-resistant building frameworks, roadside air purification, autonomous landslide risk assessment and mitigation, and organic bio-fertilizer preparation. The patents include “System and Method for Concrete Bridge Health Analysis Using Integrated Sensors and Data Processing,” “A Portable Smart Concrete Strength Analyzer with Real-Time IoT Feedback,” “AI-Driven Adaptive Seismic-Resistant Building Framework with Integrated Energy-Dissipating Components for Earthquake-Prone Regions,” “Autonomous Landslide Risk Assessment and Mitigation System,” and “Roadside Air Purification System.” These innovations were reported as published patents, with application/publication numbers such as 202521079583, 202521086994, 202521091978, 202521125422, and 202521130281, among others. The involvement of faculty members in patent filing and publication demonstrates the department’s commitment to innovation, research, interdisciplinary technology development, and conversion of academic knowledge into practical engineering solutions, thereby supporting the objectives of NBA accreditation and Outcome-Based Education (OBE).

(12) PATENT APPLICATION PUBLICATION	(21) Application No.202621009153 A
(19) INDIA	
(22) Date of filing of Application :29/01/2026	(43) Publication Date : 13/03/2026
(54) Title of the invention : A Self-Adaptive System for Real-Time Load and Stress Optimization in Industrial Equipment	
(51) International classification	(71)Name of Applicant : 1)Lakshmi Narain College of Technology Address of Applicant :Lakshmi Narain College of Technology, Kalchuri Nagar, Raisen Road, Bhopal, Madhya Pradesh, 462022, India Madhya Pradesh India
	(72)Name of Inventor : 1)Dr. Hitesh Kumar 2)Dr. Anoop Kumar Pathariya 3)Dr. Ashok Kumar Rai 4)Dr. M Zahid Alam 5)Jatin Agarwal 6)Dr. Devendra Kumar Bajpai 7)Dr. Rakesh Agrawal 8)Dr. Shubha Agarwal 9)Dr. Anoop Kumar Chaturvedi 10)Dr. Pratima Ojha
(31) Priority Document No	:G05B 1304, G05B 2302, G06F 1900, G01M 9900, G05B 1302
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No	:NA
Filing Date	:03/01/1900
(87) International Publication No	:NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

(12) PATENT APPLICATION PUBLICATION	(21) Application No.202521191971 A
(19) INDIA	
(22) Date of filing of Application :25/09/2025	(43) Publication Date : 12/12/2025
(54) Title of the invention : AI-Driven Adaptive Seismic-Resistant Building Framework with Integrated Energy-Dissipating Components for Earthquake-Prone Regions	
(51) International classification	(71)Name of Applicant : 1)Lakshmi Narain College of Technology Address of Applicant :Lakshmi Narain College of Technology, Raisen Road, Kalchuri Nagar, Bhopal, Madhya Pradesh 462022, India Madhya Pradesh India
(11) Priority Document No	(72)Name of Inventor : 1)Vikash Kumar Singh 2>Rachini Sahasr 3>Kajal Tiwari 4>Dipali Jainwal 5)Abhishek Saini 6)Deepak Patel 7)Rishabh Mishra
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No	:NA
Filing Date	:01/01/1900
(87) International Publication No	:NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA
(57) Abstract: ABSTRACT: AI-Driven Adaptive Seismic-Resistant Building Framework with Integrated Energy-Dissipating Components for Earthquake-Prone Regions. The present invention relates to an AI-driven adaptive seismic-resistant building framework designed for earthquake-prone regions. The system integrates structural sensors, energy-dissipating components, and artificial intelligence to monitor seismic activity and building response in real-time. By analyzing the collected data, the framework can dynamically adjust damping, stiffness, and load distribution to minimize structural damage, reduce occupant injury, and improve building resilience during earthquakes. The framework comprises a modular structural system equipped with integrated energy-dissipating devices, such as viscoelastic dampers, friction dampers, and base isolators, strategically positioned throughout the building. A network of sensors—including accelerometers, strain gauges, and displacement transducers—continuously monitors vibrations, stresses, and displacements. The AI control unit processes this data using predictive analytics and machine learning algorithms to determine the optimal adaptive response, commanding energy-dissipating components to activate in real-time according to the seismic load. The system incorporates a centralized communication and monitoring module that allows remote oversight, predictive maintenance, and post-earthquake structural assessment. Multiple adaptive components can be coordinated for large-scale or multi-story buildings, ensuring global stability while optimizing energy dissipation. This invention offers a scalable, intelligent, and efficient solution for earthquake-resistant construction, significantly reducing structural damage, repair costs, and risk to occupants compared to conventional static designs. No. of Figs: 14 No. of Claims: 7	



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Faculty led five Students conduct Jal Jeevan Mission Field Audit in Varanasi, Uttar Pradesh

Mr. Vikash Kumar Singh, Assistant Professor, Department of Civil Engineering, LNCT Bhopal, successfully led a Jal Jeevan Mission (JJM) Field Audit in Harahua Block, Varanasi, after approval from the District Development Manager (DDM). Accompanied by five Civil Engineering students—Himanshu Shekhar, Manglam Kumar, Sanskar Jain, Rashi Namdeo, and Vedika Tumbhare, the team conducted a field audit in Bhatauli and Velvariya Gram Panchayats. The audit included assessment of water supply infrastructure, pipeline networks, storage facilities, household tap connections, and water quality. The activity was carried out with the support of Mr. Anish Kumar Singh (Executive Engineer), SWSM officials, and Mr. S. Rajalingam (District Coordinator), providing students with valuable hands-on experience in rural water supply management.





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Faculty Member Invited as Resource Person at MANIT, Bhopal

It was a privilege for Dr. Bikram Prasad, Head, Department of Civil Engineering, LNCT Bhopal, to serve as a Resource Person in the Short-Term Training Programme (STTP) organized at MANIT, Bhopal. He delivered an expert session on: "Application of Remote Sensing and GIS – A Case Study on Upper Lake, Bhopal". The session focused on the practical applications of Remote Sensing and Geographic Information Systems (GIS) in environmental monitoring, water resource management, and sustainable urban planning, using the iconic Upper Lake, Bhopal as a real-world case study.





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Faculty Member Invited as Resource Person at GLA University

Dr. Rajeev Singh Parihar, faculty member of the Department of Civil Engineering, LNCT Bhopal, was invited as the Resource Person for a Guest Lecture on “The ESG Pillars Covering Environmental, Social and Governance Aspects” at the Department of Civil Engineering, GLA University, Mathura, on 19 January 2026. The session provided valuable insights into ESG principles and their growing significance in sustainable infrastructure and engineering practices.

Department of Civil Engineering
GLA University Mathura
organizes



Guest Lecture

The ESG pillars covering Environmental, Social and Governance Aspects

Monday
19th January, 2026
02:00 AM - 4:00 PM
R- 121, Conference Hall
AB-VIII





Resource Person:
Dr. Rajeev Singh Parihar,
LNCT Bhopal

ESG



Convenor
Dr. Deepak Kumar Tiwari
Assistant Professor, DOCE





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Faculty Member Invited as Expert at Dam Safety Awareness Program

Prof. Rashmi Sakalle, Department of Civil Engineering, LNCT Bhopal, was invited as an Expert Speaker at the Community Awareness Program on Dam Safety, organized at Hataikheda Dam, Bhopal, on 28 March 2026. She shared her valuable insights on dam safety, community awareness, and sustainable water resource management, highlighting the department's commitment to technical excellence and societal outreach.



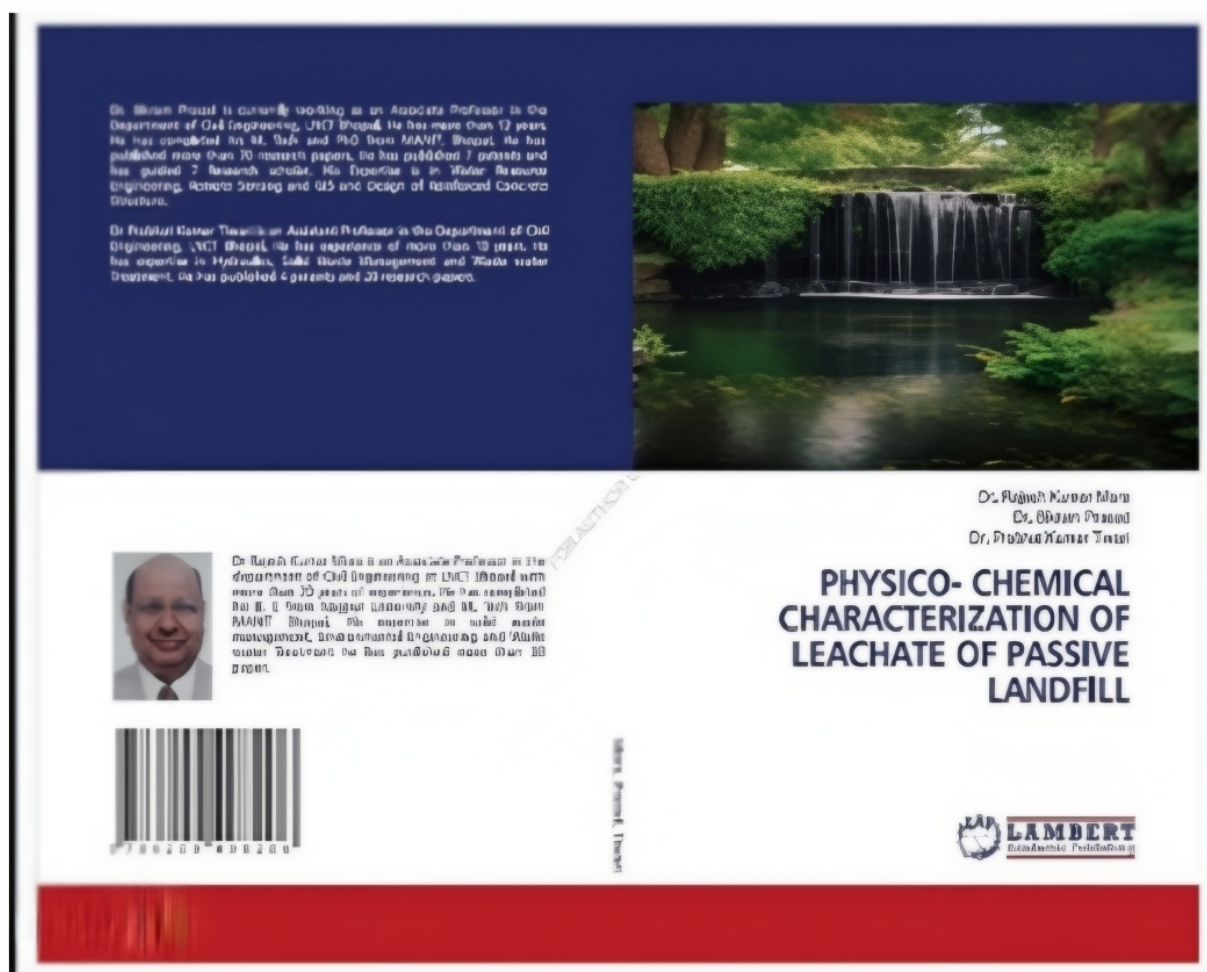


LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Faculty Members Publish Book with International Publisher

Faculty members of the Department of Civil Engineering, LNCT Bhopal, Dr. Rajesh Kumar Misra, Dr. Bikram Prasad, and Dr. Prabhat Kumar Tiwari have added another milestone to the department's research achievements by publishing two books with renowned international publishers. Their books, "Physico-Chemical Characterization of Leachate of Passive Landfill" (Lambert Academic Publishing) and "Wastewater Treatment by Unconventional Adsorbent" (Scholars' Press), focus on sustainable environmental engineering and wastewater treatment.





Faculty members of the Department of Civil Engineering, LNCT Bhopal have achieved a significant milestone in research by publishing three research papers in prestigious SCI/SCIE-indexed international journals. Dr. Abhishek Soni published an SCIE (Q3) paper in National Academy Science Letters on sustainable ultra-high-performance concrete, Dr. Shubha Agarwal published an SCIE (Q2) paper in Applied Optics on advanced graphene wearable nano-antenna technology, and Dr. Ashish Kumar Chouksey published an SCI (Q1) paper in the Journal of Vibration Engineering & Technologies (Springer Nature) on traffic-induced vibration analysis. These outstanding achievements reflect the department's strong commitment to research excellence, innovation, and the advancement of knowledge in Civil Engineering .

LNCT GROUP OF COLLEGES BHOPAL
WORKING TOWARDS BEING THE BEST

Congratulations!

I am delighted to share that
Dr. Ashish Kumar Chouksey
Assistant Professor
Department of Civil Engineering
at LNCT, Bhopal
has achieved a significant research milestone
with the publication of an

SCI-INDEXED RESEARCH ARTICLE

In the prestigious
JOURNAL OF VIBRATION ENGINEERING & TECHNOLOGIES

RESEARCH TITLE
"Standardizing Traffic-Induced Vibrations
Using Reference Emission Levels and Car Equivalence"

JOURNAL HIGHLIGHTS
Indexed in **SCI**
Impact Factor **2.4**
This achievement is a testament to your dedication, research excellence and valuable contribution to the academic community.
"Working you may your success ahead!"

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LNCT GROUP OF COLLEGES BHOPAL
WORKING TOWARDS BEING THE BEST

Congratulations!

PROUDLY CONGRATULATES
Dr. Abhishek Soni
Assistant Professor
Department of Civil Engineering
Lakshmi Narain College of Technology, Bhopal (LNCT)

on publishing a
RESEARCH ARTICLE
in
National Academy Science Letters

Indexed in
Science Citation Index (SCI)
Impact Factor: **2.1**

TITLE OF THE PAPER
Performance of GGBFS-Blended UHPC with Corn Cob Ash as Sand Replacement

ABOUT THE RESEARCH
This study investigates the mechanical and durability performance of Ultra-High Performance Concrete (UHPC) incorporating Ground Granulated Blast Furnace Slag (GGBFS) and Corn Cob Ash (CCA) as a partial replacement of sand.
The findings demonstrate the potential of agricultural waste in producing sustainable, high-performance construction materials.

KEY HIGHLIGHTS
Enhances compressive strength & durability
Waste utilization by-product (GGBFS) & agricultural waste (CCA)
Promotes sustainability in civil construction
Bio-friendly & cost-effective approach for high-strength concrete

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WORKING TOWARDS BEING THE BEST

Congratulations!

DR. SHUBHA AGARWAL
on the Publication of Her Research Paper in a
Science Citation Index (SCI) Journal

High-performance graphene wearable THz nano-antenna using a metasurface reflector: dual-band, dual-port, and low-SAR operation

AUTHORS
Ashu Verma • Monika Kapoor • Rakesh Agrawal
Shubha Agarwal • Pt. Zahid Akbar • Sanyal Trupti Anil

JOURNAL DETAILS
Applied Optics
An Optics Publishing Group Journal
Indexed in Science Citation Index (SCI)
Volume: 65
Issue: 9
Year: 2023
Publisher: Optica Publishing Group
ISSN: 1550-126X

GRAPHENE WEARABLE THE NANO-ANTENNA WITH METASURFACE REFLECTOR
Optics Group
Metasurface Reflector
Dual-band Dual-port
Dual-port Dual-band
Low SAR Polarization

applied optics
OPTICA PUBLISHING GROUP
Applied Optics
VOLUME 65 NUMBER 9

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Working you continued success and many more remarkable achievements!



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Faculty Member Conferred Prestigious FIE Honor

Dr. Rajeev Singh Parihar, Professor, Department of Civil Engineering, LNCT Bhopal, has been conferred the prestigious Fellow Member (FIE) status by The Institution of Engineers (India) [IEI], the highest professional grade awarded by the Institution. This distinguished recognition acknowledges his outstanding contributions to engineering education, research, professional leadership, and academic excellence. The achievement reflects the Department of Civil Engineering's continued commitment to excellence in teaching, research, and professional development.



Alumni Inspire the Next Generation



Articles

The Backbone of Modern Society

Civil engineering is often called the backbone of modern civilization—and rightly so. From the roads we travel on to the buildings we live and work in, civil engineers shape the physical world around us. Without their expertise, urban development and infrastructure growth would be impossible.

One of the most fascinating aspects of civil engineering is its diversity. It includes structural engineering, transportation, environmental engineering, geotechnical engineering, and water resource management. Each field plays a crucial role in improving the quality of life.

In today's era, sustainability has become a major focus. Engineers are now designing eco-friendly buildings, using recycled materials, and implementing energy-efficient systems. Green construction is no longer an option—it is a necessity.

For students, civil engineering offers both challenges and opportunities. It requires strong analytical skills, creativity, and practical knowledge. Site visits, internships, and software tools like AutoCAD and STAAD Pro enhance learning and prepare students for real-world problems.

In conclusion, civil engineering is not just about construction—it is about creating a better, safer, and more sustainable future.

By:- Indrajeet Choursiya (4th semester)

Smart Cities and the Future of Civil Engineering

The concept of smart cities is transforming the role of civil engineers across the globe. A smart city uses technology and data to improve infrastructure, transportation, and public services. Civil engineers are at the heart of this transformation.

Modern cities are facing challenges such as traffic congestion, pollution, and population growth. To solve these issues, engineers are integrating intelligent transport systems, smart drainage systems, and sustainable building designs.



For example, smart roads can monitor traffic flow and reduce congestion, while advanced water management systems help prevent flooding. These innovations not only improve efficiency but also enhance safety and environmental protection.

Civil engineering students must adapt to these changes by learning new tools such as GIS (Geographic Information Systems), BIM (Building Information Modeling), and data analysis techniques.

The future belongs to engineers who can combine traditional knowledge with modern technology. Smart cities are not just a trend—they are the future, and civil engineers are the key to making them a reality.

By:- Raj Agrawal (4th semester)

From Classroom to Construction Site

The journey of a civil engineering student from classroom learning to real-world application is both exciting and challenging. While theoretical knowledge forms the foundation, practical exposure is what truly shapes an engineer.

In college, students learn about concepts like stress, strain, structural analysis, and fluid mechanics. However, understanding how these principles apply on a construction site is a different experience altogether.

Internships play a crucial role in bridging this gap. They provide hands-on experience, help students understand construction practices, and teach them how to work in teams. Visiting construction sites also gives insight into safety measures, material usage, and project management.

Another important aspect is communication skills. Civil engineers must coordinate with architects, contractors, and workers. Clear communication ensures that projects are completed efficiently and without errors.

To succeed in this field, students should focus on both technical skills and practical learning. Software knowledge, field experience, and problem-solving abilities are essential.

In the end, civil engineering is not just a profession—it is a responsibility to build structures that stand strong and serve society for generations.

By:- Atharv Dubey (4th semester)



Poetry

“Builders of Tomorrow”

We draw the lines, we shape the land,
With dreams we build, with strength we stand.
From dusty roads to bridges wide,
Our silent work becomes the pride.

In beams and columns, steel and stone,
We give the world a stronger bone.
Through storms and heat, through night and day,
We find a safer, better way.

With every plan, a future grows,
In every brick, a vision shows.
Not just structures, tall and grand,
But hope we build across the land.

So here we stand, both firm and true,
Creating worlds both old and new.
For every path that you may see,
Was once a thought by you and me.

By:- Indrajeet Choursiya (4th semester)

“The Engineer’s Soul”

Beneath the sky of dust and sun,
Where endless labors have begun,
An engineer with silent might,
Turns simple sketches into sight.

A river crossed by iron grace,
A tower touching endless space,
Each project tells a story deep,
Of sleepless nights and promises to keep.

Numbers speak and blueprints guide,
Where logic walks and dreams reside.
Each crack repaired, each road aligned,
Reflects the brilliance of the mind.

Not just a job, but art and role,
Civil engineering shapes the soul.
For in each structure, strong and wise,
Lives a dream that never dies.

By:- Raj Agrawal (4th semester)



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Field Visit

On 24th Nov 2025 Department of Civil Engineering LNCT, Bhopal organized a field visit to Ultratech Redimix Concrete Plant. For the students of 2nd year III Semester. This visit will immensely help the students in understanding theoretical concepts through practical exposure.





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

The Department of Civil Engineering, Lakshmi Narain College of Technology (LNCT), Bhopal organized an educational visit to the Meteorological Centre, Bhopal on 24 April 2026 for the students of the VI Semester Civil Engineering. The visit was organized as part of the Water Resources Engineering (CE-603 A) course to provide students with practical exposure to meteorological observations, weather monitoring, rainfall measurement, and the application of climatic data in water resources planning and civil engineering.





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Geological Site Visit

The Department of Civil Engineering organized a geological site visit to Geology Survey of India , Bhopal on 03 June 2025 for the students of IV Semester Civil Engineering as part of the course Engineering Geology & Remote Sensing (CE-405). The visit was planned to provide students with practical exposure to geological, architectural, structural, and site-related aspects that cannot be fully understood through classroom teaching alone.





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