



Civil Spectrum

Session 2023-24



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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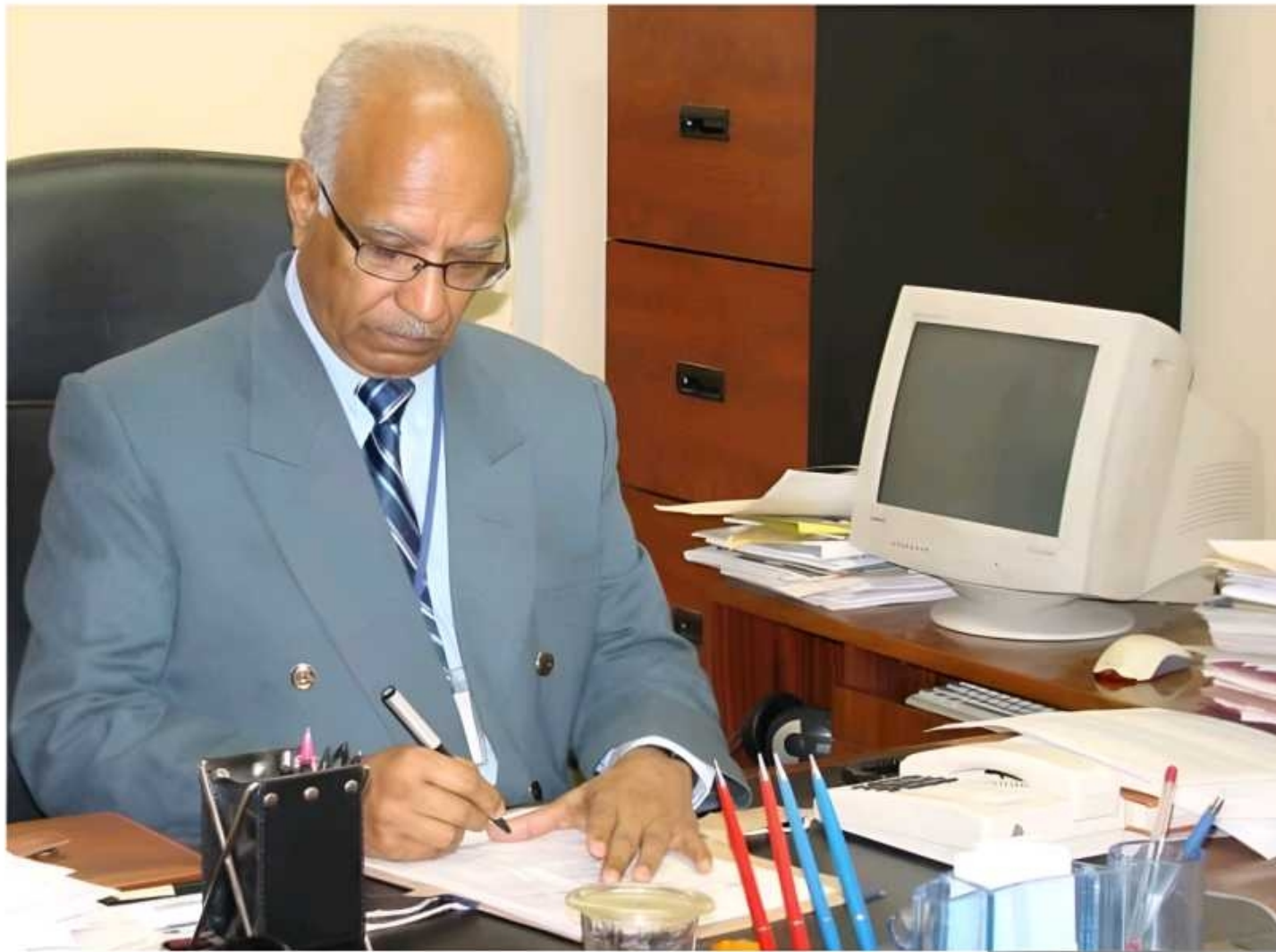


LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Expert Lectures

The Department of Civil Engineering successfully organized an expert lecture titled "Civil Engineering: From Theory to Practice," delivered by Dr. Y.K. Sharma, former Director of Maulana Azad National Institute of Technology (MANIT), Bhopal. The event took place on April 11, 2023, at the LNCT Campus.





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

The Department of Civil Engineering successfully organized a two-day workshop titled “Software for Civil Engineers,” featuring a panel of esteemed experts including Mr. Shubham Bebele, 3D Modeler at Consultancy Projects; Ms. Asha Bairagi, Structural Engineer; and Mr. Sourav Kumar, Managing Director of OriginX, Bhopal. Held on August 21, 2023, at the LNCT Campus.



Department of Civil, LNCT Group

Organizing a Workshop.

TOPIC

**“Workshop in Softwares
for Civil engineering”**





Shubham Babele
3D MODELLER



Asha bairagi
Structure engineer



Sourav Kumar
Managing director

Coordinators:
Dr **Anil** Kumar Saxena
Dr P K Singhai

HOD:
Dr. **Rajeev** Singh Parihar

Date - 21 August, 2023 | Time - 11.20A.M. | Venue- S-21, LNCTS, New Building



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The workshop was attended by over 100 students, all of whom benefited greatly and significantly enhanced their knowledge in the field.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

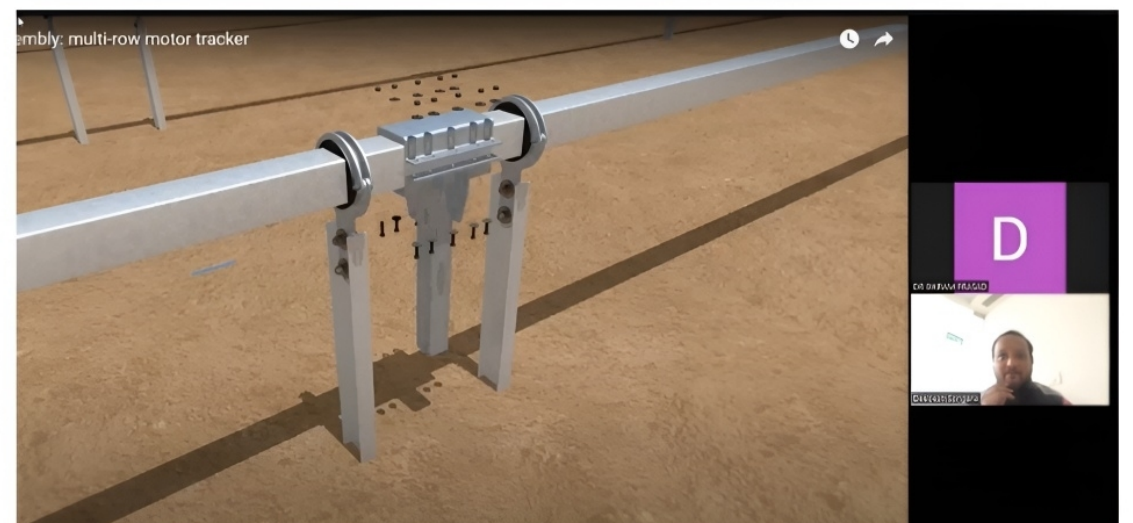
Department of Civil Engineering

5 Days STTP organized by LNCT on Latest Technology and Various trend in Civil Engineering

A 5-Day STTP on “Latest Technology and Various Trends in Civil Engineering” was organized by the Department of Civil Engineering, LNCT Bhopal, from 05/12/2023 to 09/12/2023 in online mode. Er. Deepesh Songara, Lead Structural Engineer & Consultant and Assistant Director, DSON Powers, served as the expert. The programme covered renewable energy and sustainability, important IS codes, structural design and analysis, manual design concepts, and industry software with future opportunities in Civil Engineering.

**Lakshmi Narain College
of Technology, Bhopal**
Department of Civil Engineering
Organizing
5 DAY STTP
Topic:
**“Latest Technology and
Various trend in Civil Engineering”**

EXPERT
Er. Deepesh Songara
Lead Structural Engineer & Consultant.
Assistant Director, DSON POWERS.
HOD: Dr. R. S. Parihar
Coordinator: Dr Bikram Prasad
Co-coordinators: Dr Sandeep Choudhary
Date: 05/12/2023 to 09/12/2023
Venue: S-21 Seminar Hall,
Jagdish Chandra Block
www.LNCT.ac.in
7440777111/222/555





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

The Department of Civil Engineering organised an expert lecture on the topic 'Civil Engineering is the Backbone of Development'. The lecture delivered by Prof. G. Venkatesh Founder director VRD Design LLC Dubai Expert explained that all the development in the universe is related to civil engineering with real examples of Eiffel tower, Taj Mahal, Atal tunnel, Burj Khalifa tower, Atal sea bridge, Chenab Bridge etc.



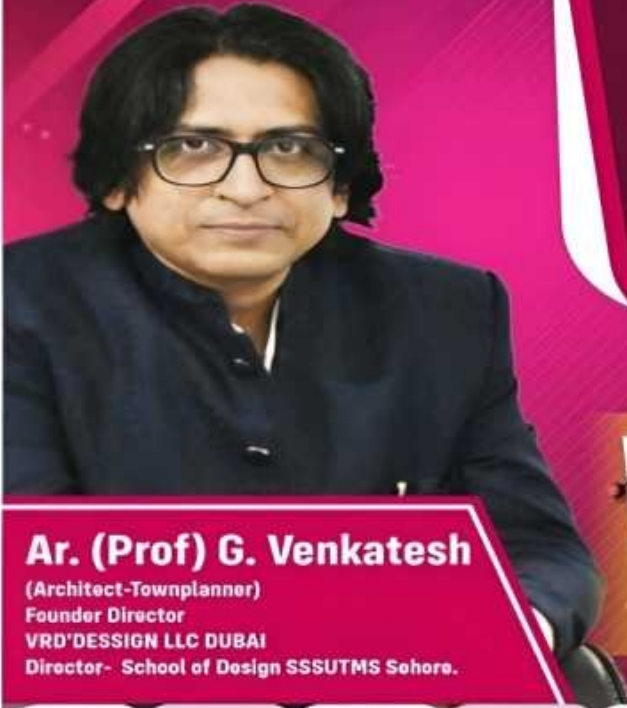


Department of Civil

organizing

Expert Lecture

Topic: "Civil Engineering is the Backbone of Development"



Ar. (Prof) G. Venkatesh
(Architect-Townplanner)
Founder Director
VRD DESIGN LLC DUBAI
Director- School of Design SSSUTMS Sehore.

Coordinators:
Dr. Anil Kumar Saxena
Dr. Pali Sahu

HOD:
Dr. Rajeev Singh Parihar

Date: 3 April, 2024 | **Time:** 11.30A.M.
Venue: Vikram Sarabhai Seminar Hall, LNCT Bhopal



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Department of Civil Engineering

Students Achievement

Mr. Shivam Singh, a fourth-semester Civil Engineering student, participated in the online quiz competition jointly organized by the Quest Nature Club on the occasion of National Science Day.



Mr. Shivam Singh, a fourth-semester Civil Engineering student, successfully completed the 6 month Architectural design diploma course from Design Solution an ISO certified institute.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Ajay Singh Kushwaha, Scholar No. 0103CE201008, is a promising student in the final year of Civil Engineering. He has secured placements with two multinational companies Cognizant and TCS. We extend our best wishes to him for a successful and prosperous future.



Offer: Computer Consultancy
Ref: TCS/CT20244389041/Mumbai
Date: 16/07/2024

Mr. Ajay Singh Kushwah
273Kalpana Nagar Near Piplani Petrol Pump,
Sonagiri,
Bhopal-462022,
Madhya Pradesh.
Tel# 91-8602659450

Dear Ajay Singh Kushwah,

Sub: Letter of Offer

Thank you for exploring career opportunities with TATA Consultancy Services Limited (TCSL). You have successfully completed our initial selection process and we are pleased to make you an offer.

This offer is based on your profile and performance in the selection process. You have been selected for the position of **Assistant System Engineer-Trainee** in Grade Y. You will be assigned a role in the **Infrastructure Services (IS)** Unit, which is subject to change as per the business requirements of TCSL.

Your gross salary including all benefits will be **₹3,36,877/-** per annum, as per the terms and conditions set out herein.

Kindly confirm your acceptance of this offer online through the option 'Accept Offer letter'. If not accepted within 7 Days, it will be construed that you are not interested in this employment and this offer will be automatically withdrawn.

After you accept this offer, you will be given a joining letter indicating the details of your joining date and initial place of posting. The Joining letter will be issued to you only upon successful completion of your academic course, you meeting the TCS eligibility criteria & you completing the mandatory pre-joining learning curriculum named TCS Xplore/ TCS Initial Learning Program (ILP); detailed under Terms & Conditions. You will also be issued a letter of appointment at the time of your joining after completing joining formalities as per company policy. Your offer is subject to a positive background check.

TCS Confidential
TCS/CT20244389041

TATA CONSULTANCY SERVICES

Tata Consultancy Services Limited
Vandana Park, Opp. Vidya HED Trp. Center, Subhash Nagar, Pokhron Road No.2, Thane (West) 400 601 India
Tel: 91 22 6779 2000/2222 Fax: 91 22 6779 2199 Website: www.tcs.com
Registered Office: Nehru Building, 9th Floor, Naraina Point, Mumbai-400 021
TCS Careers Servicecenter: 1800 209 3111 Email: career@tcs.com

Akanksha Oraon (0103CE201010), a student in the Eighth semester (Batch 2020-24) of Civil Engineering, has been selected for an internship with the Ministry of External Affairs, Government of India, scheduled for March 2024. This internship is highly prestigious and involves a rigorous selection process, with only 30 candidates chosen from a pool of 12,000 to 14,000 applicants nationwide.





Faculty Achievement

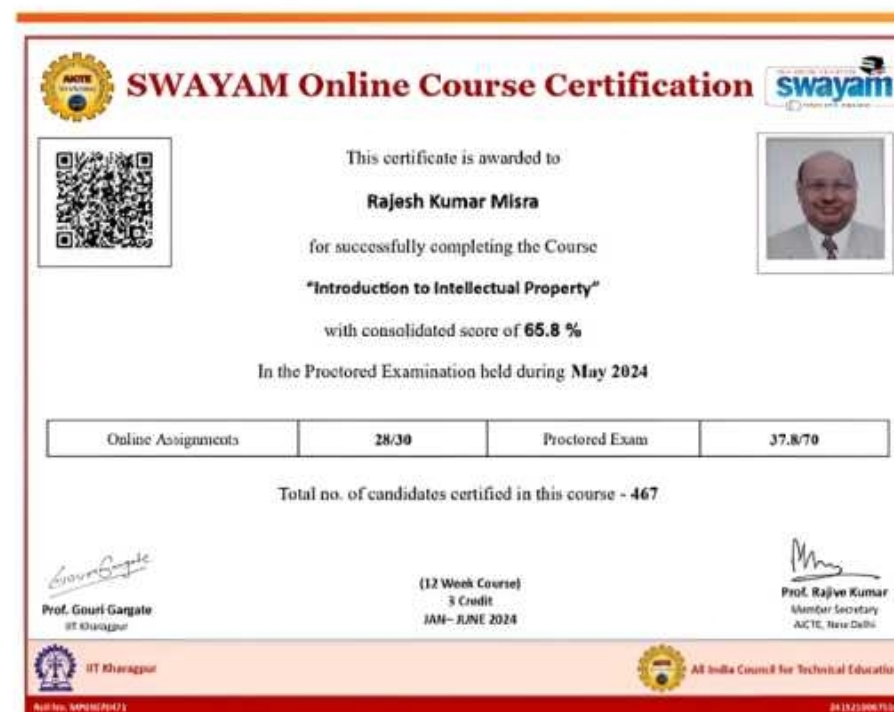
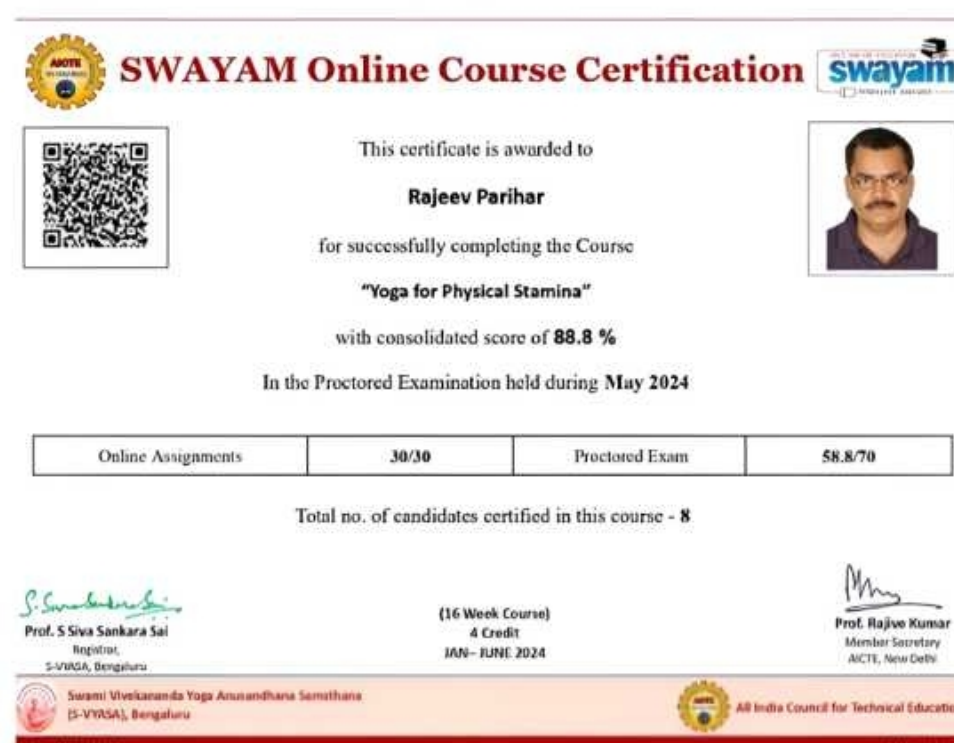
List Of Faculty NPTEL Course Completion

S.NO.	Faculty Name	Duration	Certifying Organization	Course	%
1	Dr. Rajeev Parihar	Four Weeks	IIT KANPUR	Cognition, transformation and lives	78
2	Dr. Rajeev Parihar	Four Weeks	IIT KHARAGPUR	Great experiments in psychology	67
3	Dr. Rajeev Parihar	Four Weeks	IIT KANPUR	Psychology of everyday	62
4	Dr. Rajeev Parihar	Eight Weeks	IIT BOMBAY	Yoga and positive psychology for managing career and life	88
5	Dr. Rajeev Parihar	Twelve Weeks	IIT KHARAGPUR	Psychology of emotion: theory and applications	87
6	Dr. Rajeev Parihar	Eight Weeks	NITTTR CHENNAI	Quality assurance through NAAC accreditation process	92
7	Dr. Rajeev Parihar	Sixteen Weeks	AICTE SWAYAM	Yoga for anger management	82.2
8	Dr. Rajeev Parihar	Sixteen Weeks	AICTE SWAYAM	Yoga for concentration	83.2
9	Dr. Rajeev Parihar	Sixteen Weeks	AICTE SWAYAM	Yoga for ego management	87.4
10	Dr. Rajeev Parihar	Sixteen Weeks	AICTE SWAYAM	Yoga for eye sight improvement	83.2
11	Dr. Rajeev Parihar	Sixteen Weeks	AICTE SWAYAM	Yoga for iq development	90.2
12	Dr. Rajeev Parihar	Sixteen Weeks	AICTE SWAYAM	Yoga for physical stamina	88.8
13	Dr. Rajeev Parihar	Sixteen Weeks	AICTE SWAYAM	Yoga for voice culture	70.6
14	Prof. A.K.Jha	Four Weeks	NPTEL	Hindi ki pramukh kahaniya	75
15	Prof. A.K.Jha	Eight Weeks	NPTEL	Introduction to civil engineering profession	79
16	Prof. A.K.Jha	Twelve Weeks	NPTEL	Introduction to Intellectual Property	68
17	Prof. Rajesh kumar misra	Twelve Weeks	NPTEL	Introduction to Intellectual Property	66
18	Prof. Rajesh kumar misra	Twelve Weeks	NPTEL	Solid waste management	70
19	Vikash kumar singh	Twelve Weeks	NPTEL	"Introduction to Intellectual Property"	57.2



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering





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Department of Civil Engineering

Dr Bikram Prasad Chaired Technical Session in the International Water Conference for Sustainable Development Goals (IWCSDG-2024) at MANIT, Bhopal





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

Articles

Earthquake-Resistant Structures: A Vital Role of Civil Engineering

Earthquakes are among the most destructive natural disasters, causing heavy damage to buildings and loss of life. Civil engineering plays an important role in reducing these risks through the design of earthquake-resistant structures. These structures are specially built to withstand seismic forces and protect people during earthquakes.

Civil engineers use advanced techniques and materials to make buildings stronger and safer. Flexible foundations, reinforced concrete, steel frames, and shock-absorbing systems help structures resist sudden ground movements. Proper planning and quality construction are essential to ensure safety in earthquake-prone areas.

Modern technology has greatly improved earthquake engineering. Computer simulations and structural analysis software allow engineers to predict how buildings will behave during earthquakes. This helps in designing structures that can absorb energy and remain stable during disasters.

Earthquake-resistant buildings are important for homes, hospitals, schools, bridges, and offices. Their construction reduces casualties, saves property, and speeds up recovery after disasters. Although these structures may cost more initially, they provide long-term safety and economic benefits.

As cities continue to grow, the demand for safer buildings is increasing. Civil engineers must focus on stronger building codes and innovative designs to protect communities from future earthquakes.

In conclusion, earthquake-resistant structures are a major achievement of civil engineering. They save lives, reduce destruction, and create safer communities, making them essential for a secure and sustainable future.

By:- Nitin Shukla



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Department of Civil Engineering

Smart Cities: The Future of Civil Engineering

Smart cities are transforming the way people live, work, and travel. With rapid population growth and urbanization, civil engineering plays a major role in developing cities that are efficient, sustainable, and technology-driven. A smart city uses modern systems to improve infrastructure, reduce pollution, and provide better services to citizens.

Civil engineers design and build the foundation of smart cities, including roads, bridges, buildings, drainage systems, and transportation networks. They integrate advanced technologies such as sensors, smart traffic lights, and automated waste management systems to make cities more organized and convenient.

One of the key goals of smart cities is sustainability. Engineers focus on green buildings, renewable energy sources, rainwater harvesting, and energy-efficient public transport. These measures help reduce environmental impact and improve the quality of life for residents.

Technology also improves safety and management in smart cities. Real-time monitoring systems can detect traffic congestion, water leaks, or structural damage quickly. This allows faster responses and better maintenance of public facilities.

The future of civil engineering is closely connected to smart city development. As urban areas continue to expand, engineers must create innovative solutions for housing, transportation, and environmental challenges.

In conclusion, smart cities represent a modern vision of urban development. Through the skills of civil engineers, cities can become cleaner, safer, and more efficient places to live, ensuring a better future for coming generations.

By:- Ayush Arora



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Department of Civil Engineering

Poetry

“The Bridge Between”

A bridge is more than steel and span,
It's hope that links both land and man.
It crosses rivers, deep and wide,
Uniting hearts on either side.

Each bolt and beam a promise true,
Of journeys old and journeys new.
A path where distances grow small,
A silent strength that serves us all.

“Foundation”

Before the heights, before the view,
The ground must hold, the base be true.
Unseen below, yet strong and deep,
It guards the dreams we dare to keep.

For every tower that touches sky,
Relies on roots we can't deny.
A lesson clear, both firm and sound,
Great lives are built from solid ground.

“Engineer's Pride”

We measure not just length and width,
But dreams and hopes that travel with.
Each project tells a tale so vast,
Of present strength and future cast.

From roads that stretch to endless miles,
To dams that tame the river's trials.
We build, we solve, we stand with pride,
For progress walks by our side.

By:- Priyanshu Gupta



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Field Visit

On the 14th of June, 2024, a group of Civil Engineering students of IVth Semester visited the Bheembetka Caves near Bhopal. The visit was aimed to help students understand the architectural and structural features of the caves and the engineering practices used to build them.



The visit to the Bheembetka Caves provided valuable insights into the architectural and engineering practices of ancient humans. The students were able to observe the use of locally available materials and the importance of strategic location in the construction of the caves.



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On the 17th of November 2023, a group of Civil Engineering students of VIth Semester visited the Sanchi Stupa in Madhya Pradesh, students explored this ancient structure, which dates back to the 3rd century BCE and was built under Emperor Ashoka.



Students observed how the stupa's design and methods such as precise stone fitting without mortar provided lasting stability and aesthetic appeal. This visit highlighted how ancient techniques, such as using local materials and innovative design, can inspire modern sustainable practices and reinforce the importance of preserving cultural heritage in engineering.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY

Department of Civil Engineering

MODEL COMPETITION

On March 12, 2024, we successfully organized a working model competition as part of the LN Universe Techno-Cultural Event in the Department of Civil Engineering. During this event, students from the Civil Engineering Department presented a total of 16 working models, each demonstrating various concepts.



The event was a great success, and it provided an excellent platform for the students to showcase their skills and creativity. The competition not only encouraged innovation and creativity but also helped students develop their problem-solving abilities and teamwork skills.



Department of Civil Engineering

Lakshmi Narain College Of Technology

Raisen Road, Kalchuri Nagar, Bhopal, 462022



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