



# CONTOUR

Department of Civil Engineering

Volume: 1, Jan 2026



*Where innovation meets infrastructure*



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## **Vision of the Department**

To produce professionally competent, socially sensitive, motivated and dedicated Civil Engineers capable of working in a multicultural global environment.

## **Mission of the Department**

Educating the students who are, would be "leaders of tomorrow" in academia, government, industry and entrepreneurial pursuit, through learner-centric teaching methodology of theory and practical's and develop the ability to solve problems related to Civil Engineering, individually and in teams.

To develop knowledge of fundamental principles and innovative technologies through research within core areas of Civil Engineering and in collaboration with other disciplines that is distinguished by its impact on academic, industry and society.

To create in students deep awareness of ethical responsibilities to face the professional and from local, national and international level challenges.



## Message from Advisor's Desk

It is a matter of great pleasure to learn that the Department of Civil Engineering, Ajay Kumar Garg Engineering College, Ghaziabad is publishing its departmental magazine CONTOUR – Igniting Ideas and Innovation for the year 2025. Such initiatives provide an excellent forum to highlight scholarly progress, inventive thinking and the diverse achievements of the department.



Civil Engineering remains central to contemporary technological advancement, contributing significantly to areas such as power engineering, renewable energy integration, smart grids, electric mobility, automation and intelligent systems. In this fast-changing scenario, academic departments are expected to go beyond classroom instruction by cultivating innovation, ethical awareness, research curiosity, leadership skills and social consciousness among learners.

I acknowledge the dedicated efforts of the CE faculty in enriching academics, strengthening research activities, fostering industry collaboration and encouraging active participation in co-curricular and extracurricular pursuits including technical forums, competitions, cultural events and sports. These initiatives are instrumental in nurturing well-rounded professionals.

The magazine aptly represents the department's focus on quality, creativity, and comprehensive development. I extend my congratulations to the Head of the Department, faculty, students and contributors and wish the department continued growth and success.

**Best wishes,**

**Prof. Amita Dev**

**Advisor**

**AKGEC, Ghaziabad**

# Message from Director's Desk

The Department of Civil Engineering at AKGEC has steadily progressed in the areas of academic excellence, laboratory enhancement, research and development, industry interaction and student performance. The department's emphasis on outcome-oriented education, experiential learning and the integration of contemporary tools and technologies has played a significant role in strengthening students' technical proficiency and industry preparedness.



I am delighted to learn that the Department of Civil Engineering is bringing out its Departmental Magazine for the year 2025. This publication serves as a vibrant portrayal of the department's academic ethos, technical initiatives, noteworthy accomplishments and the creative contributions of both students and faculty members. The Department of Civil Engineering at AKGEC has steadily progressed in the areas of academic excellence, laboratory enhancement, research and development, industry interaction and student performance. The department's emphasis on outcome-oriented education, experiential learning and the integration of contemporary tools and technologies has played a significant role in strengthening students' technical proficiency and industry preparedness.

Beyond documenting departmental activities, the magazine provides a valuable platform for students to develop skills in technical communication, innovation, cocurricular activities and collaborative work—competencies that are vital for their professional growth. I commend the dedicated efforts of the Head of the Department, faculty coordinators, editorial team, and students who have contributed to this publication.

I convey my best wishes to the Department of Civil Engineering for sustained progress and distinction, and I trust that this magazine will inspire the academic community to reach new heights in the years to come.

**With best regards,  
Dr. Hemant Ahuja  
Director  
AKGEC, Ghaziabad**

# Message from Head of the Department

It gives me immense pleasure to extend my heartfelt greetings to the readers of the Departmental Magazine 2025 of the Civil Engineering Department, Ajay Kumar Garg Engineering College, Ghaziabad.



The Department of Civil Engineering has always been committed to academic excellence, innovation, and holistic development of students. In today's rapidly evolving technological landscape, Civil Engineering

plays a pivotal role in shaping sustainable energy solutions, smart systems, automation, and advanced communication technologies. Our department continuously strives to keep pace with these advancements through a balanced blend of strong theoretical foundations, practical exposure, industry interaction, and research-oriented learning.

This magazine is a reflection of the creativity, technical acumen, and intellectual curiosity of our students and faculty members. It provides a platform for showcasing innovative ideas, technical articles, project insights, research contributions, and co-curricular achievements. I appreciate the sincere efforts of the editorial team, contributors, and faculty coordinators for bringing out this magazine with dedication and enthusiasm.

I encourage our students to remain inquisitive, innovative, and socially responsible professionals. Let this magazine inspire you to explore new horizons, think critically, and contribute meaningfully to the field of engineering and to society at large.

I wish the departmental magazine great success and extend my best wishes to all students and faculty members for their future endeavours.

**Warm regards,**

**Dr. Rakesh Srivastava**

**Professor and Head of Department**

**Civil Engineering**

**AKGEC, Ghaziabad**

# Faculties of Our Department

ADMINISTRATIVE BLOCK



Ghaziabad, Uttar Pradesh, India 

3rd Floor, Admin Block Akgec College 27th Km Milestone, Delhi -  
Adhyatmik Nagar, Ghaziabad, Uttar Pradesh 201015, India

Lat 28.677062° Long 77.500555°

05/09/2025 03:12 PM GMT +05:30

# Guest Lecture on Wastewater Treatment

Topic: Advanced Technology in Wastewater Treatment

Speaker: **Mr. Adwitya Sharma**

Date: Friday, 16th May 2025

Time: 10:10 AM – 11:50 AM

Venue: MT 32

Audience: B.Tech 2nd and 3rd Year Civil Engineering Students

A guest lecture on Advanced Technology in Wastewater Treatment was conducted for B.Tech 2nd and 3rd year Civil Engineering students. The session was delivered by **Mr. Adwitya Sharma**, who shared valuable insights into modern wastewater treatment practices and their role in sustainable water management.

The lecture focused on recent advancements in treatment technologies such as Membrane Bioreactors (MBR), Moving Bed Biofilm Reactors (MBBR), and Advanced Oxidation Processes (AOPs). These technologies have significantly improved the efficiency of removing contaminants, including emerging pollutants and microplastics, from wastewater. The speaker also highlighted the importance of automation and real-time monitoring systems, which enhance operational control and reduce overall costs.

Furthermore, Mr. Sharma discussed innovative approaches like resource recovery, including biogas generation and nutrient recycling, which contribute to sustainability. He emphasized the growing need for industries and municipalities to adopt zero liquid discharge systems to minimize environmental impact.

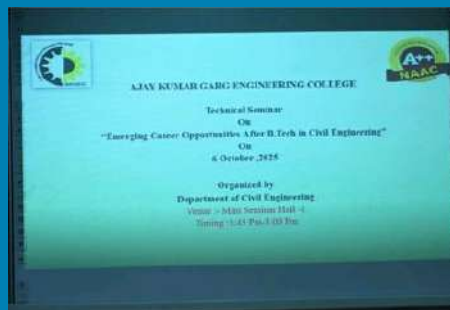
The lecture was informative and engaging, providing students with practical knowledge of current industry trends and technologies in wastewater treatment. It concluded with an interactive session where students actively participated and clarified their queries.



## Expert Lecture on “Career Opportunities”

A Career Guidance Seminar was conducted on 6th October 2025 second, third, and final-year engineering students. The session was delivered by **Mr. Arjun Chhabra** motivational speaker, ACE Academy known for organizing skill development programs, career guidance sessions, and motivational seminars for engineering students across the country.

The speakers explained the salient features of competitive examinations, such as eligibility criteria, examination patterns, and preparation strategies. The session also covered emerging technologies and offered guidance on career planning and skill development required to succeed in the competitive world. Students actively participated in the session and clarified their doubts regarding career paths and exam preparation. The seminar proved to be informative and beneficial, helping students gain practical insights and better understanding of available career opportunities.



# Technical Seminar on CRIP

The Department of Civil Engineering, Ajay Kumar Garg Engineering College, Ghaziabad, organized a Technical Seminar on 8th October 2025, aimed at providing valuable insights into the latest developments and career opportunities in the Construction, Real Estate, Infrastructure, and Project Management (CRIP) sectors.

The session covered key topics including Advances in Construction & Project Management, Career Opportunities in CRIP, and the Benefits of BIM Software. Esteemed speakers **Dr. Shiv Sai Trivedi**, Assistant Professor & Programme Head (APM, QSCM), NICMAR Delhi-NCR, and **Mr. Rahul Kumar**, Business Manager, NICMAR Delhi-NCR, shared their expertise to help students gain practical insights and career guidance, enabling them to transition from technical proficiency to managerial excellence in the construction and infrastructure domain. Their interactions focused on real-world challenges, project management practices, leadership skills, and professional ethics, preparing students to take on responsible roles in the Civil Engineering and infrastructure industry



# Intra Departmental Presentation Competition



The Civil Engineering Department organized an Intra-Departmental Presentation Competition for B.Tech 3rd-year students on the theme “Responsible Consumption and Production” on 4th November 2025 in MT-34.

A total of five teams—AK Team, Saksham, Eco Enablers, Babu Bhai Builders, and Geogenetics—participated in the competition. Each team presented ideas focusing on sustainable resource utilization, waste reduction, and environmentally responsible engineering practices. The presentations were evaluated based on eight criteria: Content Accuracy, Understanding of the Topic, Relevance to Sustainable Development Goals, Creativity and Originality, Practical Examples and Solutions, Use of Visuals and PPT Design, Communication and Delivery, and Time Management.

S.No	TEAM NAME	TEAM MEMBERS	PRESENTATION TITLE	PLACE AND DATE OF COMPETITION
1	AK Team	Kishan	Responsible consumption and Production	<b>Date: 4th November 2025, Timings: 02:20 - 4:10 PM Venue: MT-34 (First floor)</b>
		Asmi		
2	Saksham	Yashasvi		
		Harsh Raj		
3	Eco Enablers	Sachin		
		Sushant		
4	Babu bhai builders	Shivani		
		Priyanka		
5	Geogenetics	Bharat veer tomer		
		Shivam Yadav		

# Structural Engineering Meets Mobile Innovation

Our latest engineering tool, we've bridged the gap between complex structural calculations and a seamless mobile experience. Here is the technical blueprint of the Beam Analysis Mobile Application.



## The Three-Tier Blueprint

To ensure the app is as sturdy as the beams it analyzes, we utilized a high-performance Three-Tier Architecture:

- The Interface (Frontend): A sleek, reactive mobile UI built with React Native & Expo.
- The Brain (Backend): A lightning-fast FastAPI server powered by Python.
- The Archive (Database): MongoDB, a flexible NoSQL vault for complex engineering data.

## Backend: The Numerical Engine

Structural analysis requires extreme precision. We chose Python—the gold standard for scientific computing—to handle the heavy lifting.

- NumPy Integration: The "secret sauce" for our calculations. NumPy handles discretization and vector math, ensuring every kilonewton and meter is accounted for.
- Bulletproof Validation: Using Pydantic, the app prevents "impossible" data (like negative beam lengths) before they ever hit the calculation engine.

## Data Flow: From Input to Insight

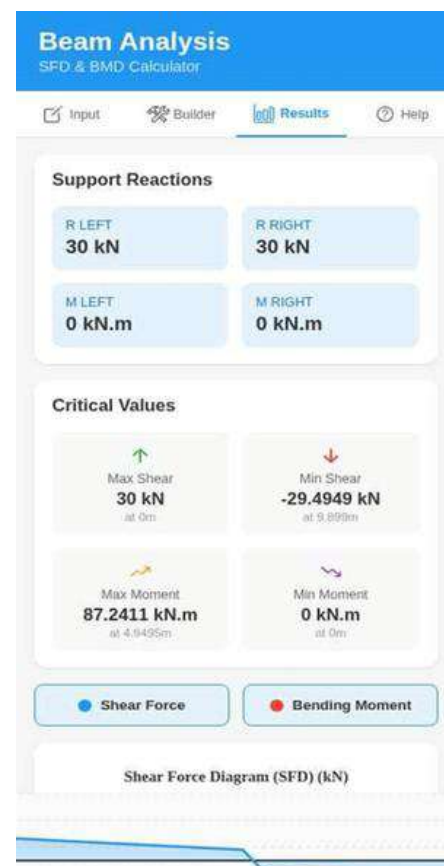
- Input: The user defines loads and supports on their phone.
- Process: Data is sent via a RESTful API to our Python backend.
- Store & Show: Results are saved to the MongoDB cloud and beamed back to the user's screen in a beautiful, readable format.

## Why It Matters

By combining modern web frameworks with scientific computing libraries, we've created a tool that is: Accessible, Accurate, Future-Ready

"Building this app wasn't just about code; it was about translating the language of structural steel into the language of mobile innovation."

**SACHIN YADAV**  
3<sup>rd</sup> YEAR STUDENT



# Faculty Development Programme

## CLEAN & GREEN TECHNOLOGIES



The Department of Civil Engineering organized a five-day ICT-based Faculty Development Programme (FDP) on "Clean and Green Technologies" from 27th to 31st January 2025 in collaboration with NITTTR Chandigarh. The programme aimed to enhance faculty knowledge on sustainable and environmentally friendly technologies.

The programme was inaugurated by Dr. Sanjay Sharma, Course Coordinator, who welcomed the resource person Dr. S. C. Jain, Former Dean of Punjab University, along with coordinators from four remote centres including AKGEC, Ghaziabad.



# Faculty Development Programme

## CLEAN & GREEN TECHNOLOGIES



The sessions covered key topics including **green technologies, clean energy sources, green building practices, sustainable concrete, zero-impact manufacturing, smart water management, carbon credits, high-performance glass, and AI & IoT for sustainable development.**

The FDP provided valuable insights into sustainable engineering practices and promoted the adoption of clean and green technologies in civil engineering.

### Resource Persons:

- Dr. S. C. Jain, Former Dean of Punjab University.
- Dr. Poonam Syal ,Professor ,NITTTR Chandigarh
- Mr.MoneyKhanna,ProjectEngineer,PEDA
- Dr Abraham,Retd.C.E.,CPWD,Delhi
- Dr. Sanjay Sharma,Professor, Civil Engineering,NITTTR Chandigarh
- Dr Ashok Sharma, Cleantech International Foundation,Delhi
- Dr Sanjay Goel,Director,Ludhiana Smart City
- Dr Dharmendra GillCE,Water& Sewage Board,Mandi
- Dr Shailesh Pathak Art -N-Glass Inc.
- Dr. HIMMI GUPTA,Assistant Professor, Civil Engineering,Ph.D.Engg& Tech M.E. Structural Engg B.E. Civil Engg, NITTTR Chandigarh

# Students Activities and Events

## SPARDHA'25 BY TEAM NIRMAAN

SPARDHA'25 was a grand fun & engaging event hosted by the Team Nirmaan at Ajay Kumar Garg Engineering College (AKGEC).

The event aimed to challenge the creativity and teamwork of the students in a 2 days' event where fun met learning through creative, intellectual, and engaging activities.

The event was a blend of “**Treasure Hunt**” and “**Archi Quest**”.

### ROUND - 1

#### Treasure Hunt

**Date:** 27 March 2026 (Friday)

**Venue:** Civil Lawn.

### ROUND-2

#### Archi Quest

**Date:** 28 2026 (saturday)

**Venue:** Surveying & Environment  
Lab

AJAY KUMAR GARG ENGINEERING COLLEGE

TEAM NIRMAAN presents

# SPARDHA'25

ROUND 1	ROUND 2
TREASURE HUNT	ARCHI-QUEST

EVENT DATES  
22<sup>nd</sup> & 23<sup>rd</sup> MAY

1<sup>st</sup> ₹1500  
2<sup>nd</sup> ₹1000  
3<sup>rd</sup> ₹750

SOCIETY HEAD  
SHREY MALIK  
SARISH HANIF MIR

CO-HEADS  
VISHESH PANDEY  
TANNU BHARTI

# Students Activities and Events

## SAPARDA'25

BY  
TEAM NIRMAAN

### OBJECTIVE

- To evaluate and enhance students' problem-solving abilities and creative thinking by engaging them in challenging, thought-provoking activities that require innovation, analytical reasoning, and out-of-the-box approaches.
- To cultivate a strong spirit of teamwork and collaboration by encouraging participants to work cohesively in groups, effectively delegate responsibilities, leverage individual strengths, and maintain clear and efficient communication throughout the event.
- To develop effective time management skills among participants by placing them in a competitive, time-bound environment where they must prioritize tasks, make quick yet informed decisions, and strategically utilize available time to successfully achieve the final objective.

### Highlights of the Event

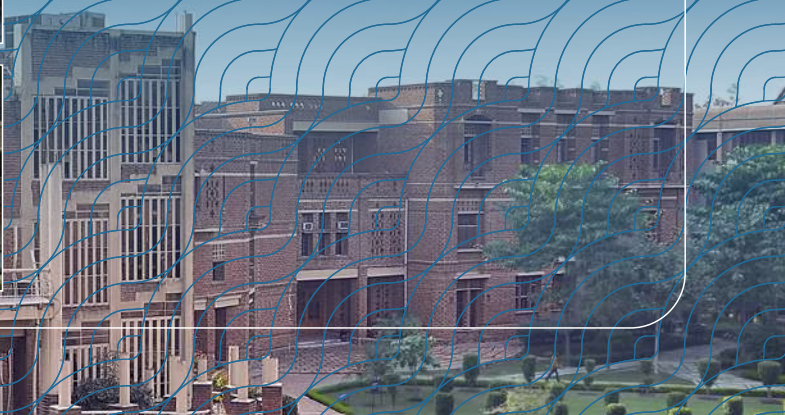
- Total Number of Events: 2 diverse competitions.
- Types of Events: Treasure hunt & 3 floors Building making with pop sticks.
- Participation: Students from all departments enthusiastically participated, showcasing their talent.



# Students Activities and Events

## SAPARDA'25

BY  
TEAM NIRMAAN



## STUDENT FORUM OF INDIAN CONCRETE INSTITUTE

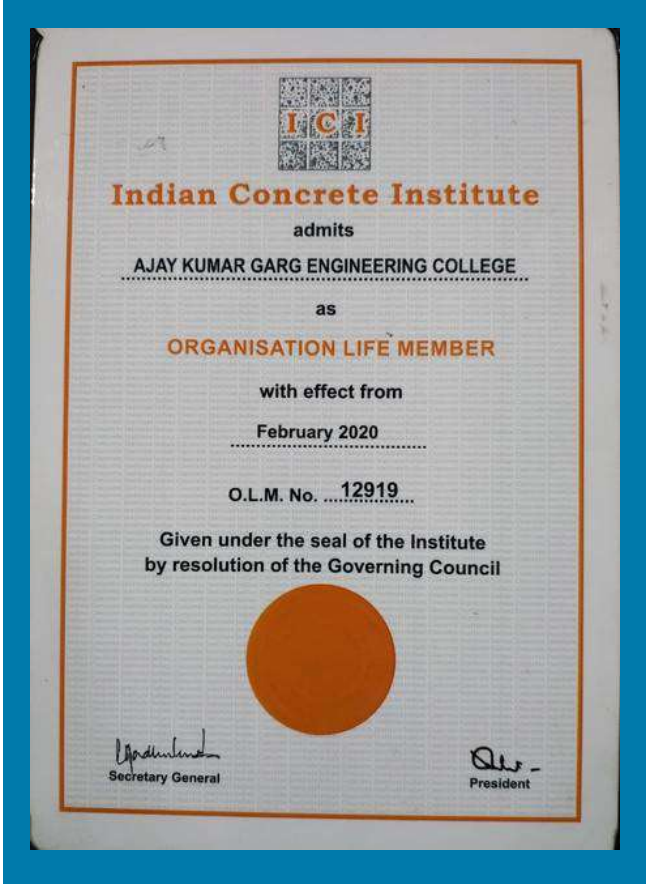


The Indian Concrete Institute (ICI) Student Chapter organized an orientation and membership drive to promote awareness about professional opportunities in the field of concrete technology. The session highlighted the benefits of ICI membership, including concessional delegate fees for ICI events, access to the latest developments in the concrete industry, concessional rates for publications.

Students were also informed about support for conducting training programmes, workshops, conferences, site visits, and guest lectures by industry professionals. Additional benefits such as access to ICI archives, reference library, monthly “ICI-Update” e-bulletin, participation in ICI FEST, and waiver of entrance fee for Life Membership after graduation were also discussed.

During the event, the Executive Committee was announced, assigning management responsibilities to a team of ten members. Further, 27 students were facilitated for becoming members of ICI, and a total of 20 students registered as current active members of the ICI Student Chapter. The event successfully encouraged student participation and strengthened technical engagement within the department.

# INDIAN CONCRETE INSTITUTE



# Convocation Ceremony



**RANK 1**  
**KARTIK MITTAL**

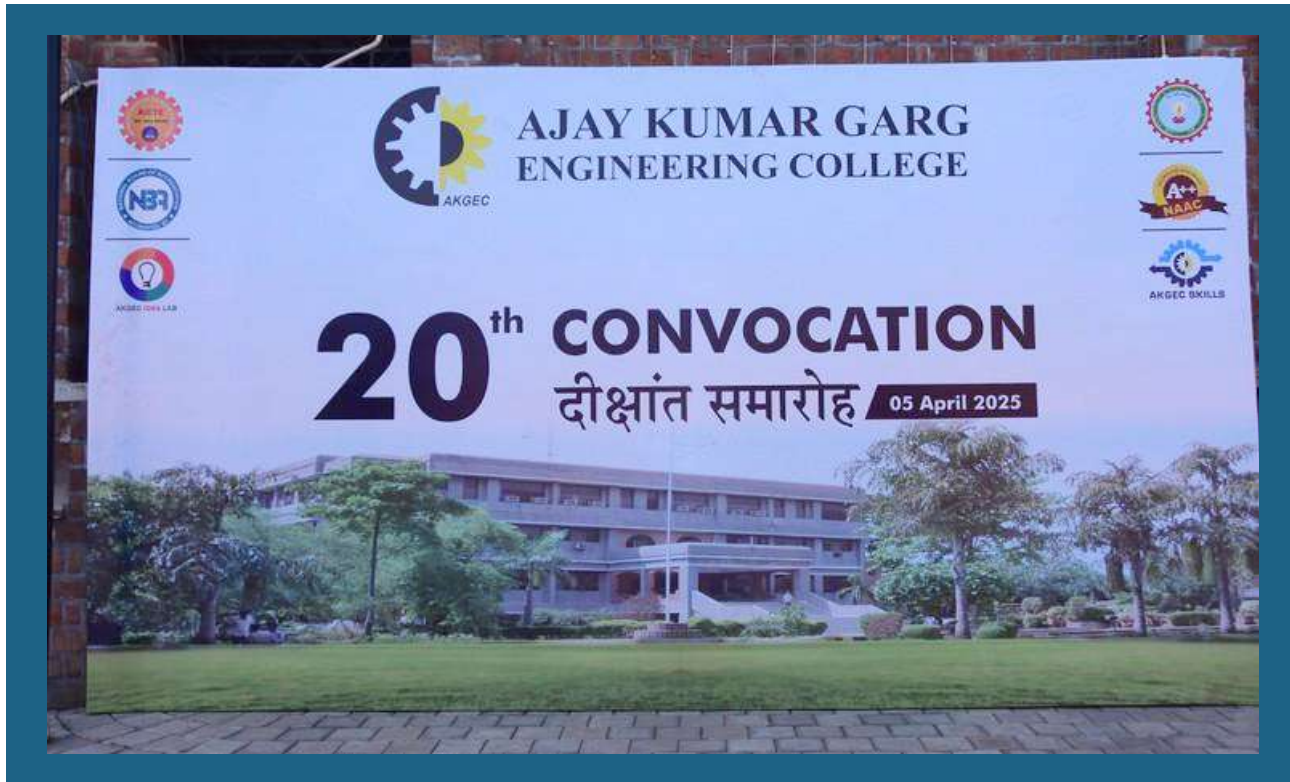


**RANK 2**  
**VIKAS CHAUDHARY**

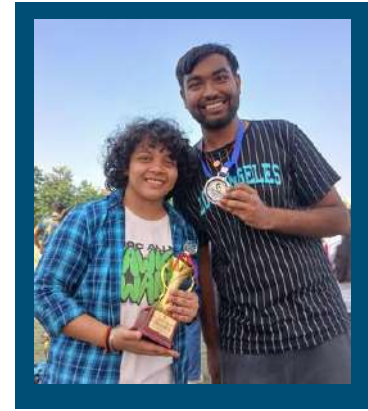
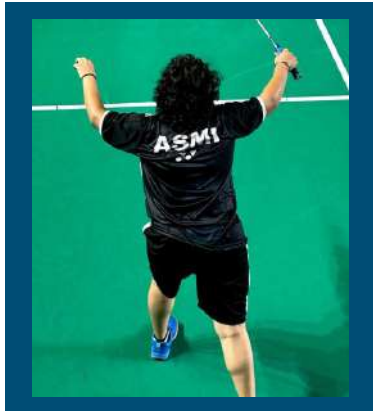
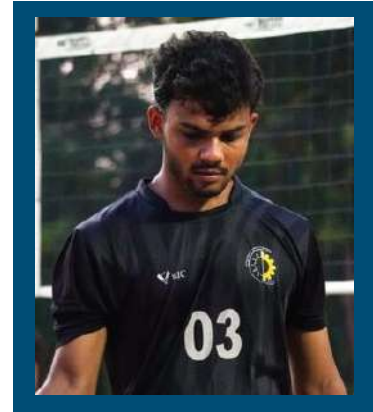


**RANK 3**  
**SHEKHAR SRIVASTAVA**

# Convocation Ceremony



# SPORTS



Sports play a significant role in fostering physical fitness, discipline, and teamwork among students. This year, Saksham, the college's annual sports event, witnessed enthusiastic participation and commendable performances. The Civil Engineering Department demonstrated exceptional talent and sportsmanship, achieving notable success across various competitions.

Students also participated in a prestigious event Udghosh'25 at Indian Institute of Technology Kanpur, gaining valuable exposure. At Rann 2025, hosted by KIET Group of Institutions, they secured top positions.

Notably, **Asmi Sharma, Ashutosh Kumar and Shivam Yadav** proudly represented the department, contributing to its success. Their achievements reflect dedication, teamwork, and perseverance, bringing pride to the institution.

# National Cadet Corps

The National Cadet Corps (NCC) is a prestigious youth organization in India that aims to develop discipline, leadership, and a sense of patriotism among students. It provides opportunities for cadets to participate in various training activities, including drills, camps, and social service initiatives, thereby fostering confidence, teamwork, and leadership qualities. NCC also motivates students to serve the nation and prepares them for future challenges in both civilian and defense careers.

At Ajay Kumar Garg Engineering College, NCC plays a significant role in shaping responsible, disciplined, and dedicated students. Among its active members, **Manya Rai**, a second-year student, and **Prince**, a fourth-year student, are proud representatives of NCC in the college, contributing actively to its activities and initiatives



# Academic Performance



**VAISHNAVI MISHRA**  
Final Year Topper



**AMRATANSH SINGH**  
Third Year Topper



**HIMANSHU SINGH**  
Third Year Topper



**KISHAN SRIVASTAVA**  
Second Year Topper

# Placements

Apart from maintaining a strong record of academic excellence, the institution has consistently emphasized the holistic development of its students. This is achieved through a well-structured ecosystem that integrates academics with co-curricular and extracurricular initiatives such as technical clubs, research and innovation activities, internships, industry interactions, soft skills training, leadership programs, and community engagement. This comprehensive approach equips students with domain knowledge while enhancing critical thinking, problem-solving abilities, communication skills, teamwork, adaptability, and professional ethics.

As a result, campus placements have shown steady growth over the years in both quality and quantity. There has been a notable rise in the number of students placed, along with increased participation from reputed organizations across IT, core engineering, consulting, and emerging technology sectors. The diversity of job roles and competitive salary packages further reflect the institution's strong industry relevance and academic rigor.

For the B.Tech graduating batch of 2025, a total of 34 students were successfully placed, achieving an impressive placement rate of 87.20%. The highest package offered was ₹12 LPA, with students securing roles in software development, data analytics, core engineering, and management positions. These outcomes demonstrate the confidence of leading organizations in the competence and professionalism of the students.

Students who did not participate in campus placements also pursued meaningful career paths, including higher studies at reputed institutions, entrepreneurship, and preparation for competitive examinations. This diversity in career choices highlights the institution's commitment to nurturing well-rounded individuals prepared for varied professional journeys.

Overall, the institution's holistic and student-centric approach continues to foster academic excellence, professional success, and lifelong learning.

## Top placements from our department



SARISH HANSIF MIR  
12LPA



VISHESH PANDEY  
7.5LPA



AYUSH OJHA  
6.5LPA



TANU BHARTI  
5LPA



GEHNA AGARWAL  
5.5LPA



OM VERMA  
5.5LPA



## Top placements from our department

### Placement between 4LPA-5LPA

ADITYA CHAUDHARY  
ISHPREET SINGH  
GARVIT AGRAWAL OM

### Placement between 3LPA-4LPA

PULKIT ROHILA PRATEEK  
SHARMA ABHAY SHARMA  
JOY YADAV HARSH SINGH

### Placement between 4LPA-5LPA

ADITYA CHAUDHARY  
ISHPREET SINGH  
GARVIT AGRAWAL OM

NITESH KUMAR  
ADITYA KRISHNA DUBEY  
AKSHIT KUMAR  
HARSHIT KUMAR  
PRATHAM SINGH 25



ARJUN SINGH  
5.5LPA



SHREY MALIK  
5 LPA



ADITYA SAXENA  
5 LPA

# Our Major recruiters



# Proud Graduates

I built a strong technical foundation at AKGEC, which guided my career path. After securing a campus placement in 2021, I chose to pursue higher studies and achieved AIR 642 in GATE 2022, joining IIT Kharagpur for MTech in Structural Engineering. I improved to AIR 306 in GATE 2023, earning offers from top PSUs like IOCL, NMDC, NPCIL, and THDC. I joined THDC India Limited as an Assistant Manager in the Design Department. Currently based in Rishikesh, I have 2.5 years of experience in structural and hydraulic design for hydro and pumped storage projects.



**NAZIM KHAN**  
(2017-2021)



**AKSHAT AGARWAL**  
(2019-2023)

A Civil Engineering graduate currently serving as Deputy Manager (Projects) with the Ministry of Road Transport and Highways, contributing to major National Highway developments in Assam. Actively involved in landmark infrastructure projects including the Dhubri– Phulbari Bridge and the Gohpur–Numaligarh Underwater Tunnel, demonstrating commitment to nation-building through sustainable infrastructure development.

A Civil Engineering graduate who secured the Bronze position in the branch, currently working as a Graduate Engineer Trainee (GET) at DLF Downtown Phase 2. With a strong academic foundation and growing industry exposure, the journey reflects dedication, continuous learning, and a commitment to excellence in the field of civil engineering.



**MUSKAN SINGH**  
(2021-2025)

# Proud Graduates

A Civil Engineering graduate from Ajay Kumar Garg Engineering College, whose journey to success was marked by perseverance and resilience through ten SSB attempts. Balancing academics, work, and preparation with limited resources, the determination culminated in securing AIR 26 and selection for the Technical Entry Course at Officers Training Academy, Gaya—reflecting unwavering commitment, discipline, and self-belief.



**SURYANSH SRIVASTAVA**  
(2019-2023)



**KARTIK MITTAL**  
(2021-2024)

Kartik Mittal completed B.Tech in 2024 and pursued M.Tech in Transportation Engineering from Indian Institute of Technology Delhi. Currently working as an Executive Engineer at Power Grid Corporation of India Limited, overseeing site operations, quality control, and foundation design for large-scale substation projects.

Sarish Hanif Mir, an alumna of Ajay Kumar Garg Engineering College, hails from Jammu and Kashmir and exemplifies resilience and purpose-driven growth. During her college years, she served as Head of Nirmaan Society, developing leadership and teamwork skills. Currently working as Program Manager at Nayepankh Foundation, she is actively engaged in education, community development, and women empowerment initiatives, striving to create meaningful social impact.



**SARISH HANIF MIR**  
(2021-2025)

# Faculty & Staff Achievement and Awards

## Clean Desk Award 2025

Under the vision of Swachh Bharat Abhiyaan: Ek Kadam Swachhta Ki Aur, the college celebrated the Clean Desk Award 2025 to promote cleanliness, organization, and a healthy working environment. This year, the Environmental Engineering Lab was recognized as the Best Lab of the department for maintaining high standards of cleanliness.

The Clean Desk Award 2025 was presented to **Ms. Anchal Negi**, Assistant Prof **Ms. Seema Shishodia**, and **Mr. Pramod Kumar**, Lab Assistant-Environmental Engineering Lab, in recognition of their consistent efforts in maintaining a clean, organized, and efficient workplace. Their dedication reflected the institute's commitment to hygiene, discipline, and sustainable work practices, aligning with the broader goals of the Swachh Bharat Abhiyaan.



## Faculty Research Seminar



The Faculty Research Seminar in the Department of Civil Engineering at AKGEC serves as an important platform to promote research engagement, knowledge sharing, and interdisciplinary collaboration among faculty members. The seminar provides an opportunity for faculty to present their ongoing research, published work, funded projects, and innovative ideas in areas such as Structural Engineering, Geotechnical Engineering, Environmental Engineering, Transportation Engineering, Water Resources, and Sustainable Construction Practices. These seminars encourage constructive discussions, peer feedback, and collaborative problem-solving, helping faculty refine their research methodologies and identify potential funding opportunities. The initiative also promotes the integration of advanced tools such as GIS, remote sensing, artificial intelligence, and data analytics in civil engineering research.

<b>FACULTY NAME</b>	<b>TOPIC</b>	<b>DATE</b>
Ms. Anchal Negi	Landslide Distribution and Damages during 2013	Saturday, 22nd February 2025
Mr. Prashant Agarwal	Use of recycled materials in Highway construction	Friday, 25th July 2025
Ms. Anubha Gupta	Reuse of Plastic Waste as Construction Material for Sustainable	Wednesday 18th June 2025

## Faculty UHV Seminar



The Faculty Human Values Seminar were organized to promote ethical awareness, professional responsibility, and value-based education among faculty members. The seminar serves as a platform to reflect on the importance of human values in teaching, research, and professional practices, ensuring that education goes beyond technical knowledge to include character building and social responsibility.

Faculty members engage in discussions, case studies, and interactive sessions that highlight the importance of incorporating human values into classroom teaching, student mentorship, and academic decision-making. These sessions encourage faculty to create a supportive learning environment that nurtures both intellectual and personal growth of students.

FACULTY NAME	UHV TOPIC	DATE
Ms. Nikita Jaiswal	Understanding Harmony in Nature, Material, Plant, Animal & Human Order	Friday, 21st February 2025
Ms. Anubha Gupta	Harmony in Nature	Friday, 25th July 2025
Ms Kshama Shukla	Ethical Dilemmas in the Age of Artificial Intelligence	Tuesday, 25th November 2025
Mr. Atri Tyagi	The Role of Human Values in Professional Development	Friday, 25th April 2025

# Research and Development

## Papers Published by Faculty

**1. Anubha Gupta,, Kshama Shukla** “Retrofitting of Earthquake damaged R.C.C Structure using various Retrofitting techniques.”International Journal of Scientific Research in Engineering and Management (IJSREM):Volume: 09 Issue: 07 | July -2025

**2. Nikita Jaiswal,**”Addressing Urban Flooding in Delhi NCR”AKGEC INTERNATIONAL JOURNAL OF TECHNOLOGY, Vol. 15, No. 1 ,January-June 2025

**3. Nikita Jaiswal ,**”A Literature Review on the Applications of Machine Learning in Irrigation Engineering” AKGEC International Journal of Technology, Vol. 16, No. 1, January-June 2025

**4. Anubha Gupta** “ Experimental study of Plastic bricks made from wastes plastics “Goya Journal Issn No – 0017-2715.

**5. Anchal Negi, Atri Tyagi, Prashant Agarwal, Priyank Srivastava,**” A Comparative Study on the properties of Concrete with lathe scrap as a partial replacement” International Research Journal of Modernization in Engineering Technology and Science Volume:07/Issue:07/July-2025

# Research and Development

## Papers Published by Students

1. **Ankit Sharma, Anshul Bharadwaj, Divymudra, Shubham Singh, Tushar Singh, Avantika Saini, Ms. Nikita Jaiswal, Dr. Pradeep Jain** “DESIGN AND FABRICATION OF CIVIL 3D PRINTER “ IJSREM 2582-3930.

2. **Shrey Malik, Arjun Singh, Harsh Singh, Pratham Singh and Harshit Kumar, Mr. Vikram Singh, Ms. Anubha Gupta,** Dimensional Analysis of 3D Printed Structural Members Using PC-ABS with the Stratasys F370 Printer “International Research Journal of Modernization in Engineering Technology and Science :Volume:07/Issue:05/May-2025 using Advanced Jaya algorithm in construction project scheduling” accepted in Asian Journal of Civil Engineering, 2025.



# Research Publications

This review paper examines the integration of the Internet of Things (IoT) in drip irrigation systems, focusing on automation, real-time monitoring, and data-driven optimization for sustainable agriculture. IoT-enabled irrigation, combined with artificial intelligence (AI) and 5G technologies, enhances water conservation, crop productivity, and environmental resilience. These systems use predictive analytics and sensor-based monitoring to optimize irrigation scheduling and resource use, especially in the context of climate change and growing food security concerns.



Case studies, including Microsoft's AI-driven project in Andhra Pradesh, report up to a 30% increase in crop yield and 70% water savings. Machine learning models such as KNN, SVM, ANN, and Random Forest have achieved over 98% accuracy in irrigation decision-making, with some studies reporting up to 99.8% precision and significant water savings.

The review analyzed 56 peer-reviewed studies from 2015 to 2024, emphasizing recent advancements in AI/ML integration. Despite these benefits, challenges such as high initial costs, limited connectivity, cybersecurity risks, and technical complexity restrict widespread adoption. Future directions include Industry 5.0 innovations like AgroBots, human-machine collaboration, and energy-efficient smart irrigation systems, though scalability and adaptability remain key challenges.

**Ms. Nikita Jaiswal**  
**Assitant Professor**  
**AKGEC**

# Patents

## Published by Faculty

Faculty Name	Title of patents / Design	Patents / Design publication No./ Patents granted No.	Patents / Design publication Date / Patents granted Date (DD/MM/YY).
MS. NIKITA JAISWAL	AUTOMATED REBAR TYING APPARATUS FOR REINFORCEMENT INSTALLATION	202411083032	15/11/2024
MS. ANUBHA GUPTA	MULTI-AXIS SOIL COMPACTION APPARATUS FOR GROUND STABILIZATION	202411083250	15/11/2024
MS. KSHAMA SHUKLA	SYSTEM FOR PRECISION CONCRETE POURING IN COMPLEX STRUCTURE	202411083263	15/11/2024
MS. NIKITA JAISWAL/ MS. KSHAMA SHUKLA	BIOREMEDIATION DEVICE FOR METAL RECOVERY	428727/001	29/08/2024

# Certificate of Appreciation

The NPTEL Discipline Star award is a recognition by IIT Madras for learners who demonstrate deep expertise and consistency by completing over 50 weeks of courses within a single specific discipline (e.g., Computer Science, Mechanical Engineering).

**Ms ANCHAL NEGI** was awarded as the NPTEL discipline star



# Faculty Achievement: International Certification Milestone



We are thrilled to announce that **Kshama Shukla**, a faculty member at **Ajay Kumar Garg Engineering College, Ghaziabad, U.P.**, has been awarded a prestigious **Certificate of Completion**.

This recognition follows the successful completion of the IUCEE International Educator Certification Program during the Fall 2025 session.

## About the Program

The certification is a collaborative initiative between:

- **IUCEE** (Indo Universal Collaboration for Engineering Education) Foundation
- **IGIP** (International Society for Engineering Education), Austria

Official Validation

The certificate (**Serial No: 26C1P0301**) was issued and endorsed by the program's leadership:

- **Dr. Krishna Vedula, Executive Director, IUCEE Foundation**
- **Dr. Veena Kumar, Executive Director, IUCEE International Educator Certification Program**

This achievement highlights our institution's commitment to international standards of engineering education and the continuous professional development of our educators.

# Board of Studies Meeting Civil/Environmental Engineering, AKTU



An online meeting of the Board of Studies (BoS) for B.Tech. Civil/Environmental Engineering, Dr. A.P.J. Abdul Kalam Technical University (AKTU), Lucknow, was successfully conducted on 12 July 2025 at 10:00 AM. The meeting focused on finalization of the syllabus for B.Tech. IV Year (7th Semester) Civil Engineering students for the academic session 2025–26.

The meeting was attended by distinguished members including Prof. Rakesh Srivastava, Dr. Virendra Pathak, Dr. Sanjeev Singh, Mr. Saket Rusia, Prof. Devendra Kumar Sharma (Special Invitee), and Prof. S.P. Shukla, Convener of the Board.

During the deliberations, the revised curriculum and academic framework for the upcoming session were discussed and finalized to align with current academic and industry requirements. The meeting concluded with a formal vote of thanks to the Chair by the Convener, Prof. S.P. Shukla.

# MOOC Courses

A Massive Open Online Course (MOOC) is a web-based platform offering flexible, large-scale, interactive courses to anyone with internet access. Designed for diverse learners, they offer expert-taught, structured education, often including video lectures, assignments, and forums. Key features include:

**Massive & Open:** Enrolments are often unlimited (thousands at once) and accessible to anyone, removing barriers of geography or, in some cases, prior qualifications.

**Online Learning:** Courses are delivered digitally, allowing users to learn from anywhere at their own pace.

**Diverse Subjects:** Topics range from tech and business to humanities, provided by top universities and organizations

**Certification:** While course content is often free, certificates of completion often require a fee

Faculty Name	MOOC Online Course
Ms. Anchal Negi, AP	Geotechnical Engineering -I
Ms. Anubha Gupta, AP	Plastic Waste Management
Mr. Priyank Srivastava, AP	Geotechnical Engineering -I
Mr. Prashant Agarwal, AP	Introduction to Civil Engineering
Mr. Atri Tyagi, AP	Introduction to Civil Engineering

# Editorial Team



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