

Newsletter

December 2024



THE NORTHCAP UNIVERSITY

(For Internal Circulation only)

Department of Computer Science and Engineering

End-term Major Project Evaluation

On 23rd December, the Department of Computer Science and Engineering conducted the end-term evaluation of the major projects of its students. In the academic year 2024-2025, the department had a total of 418 final-year students working on 155 projects. These projects were reviewed by 17 industry experts and alumni from diverse fields. The evaluators brought extensive experience from leading multinational corporations such as Deloitte, MAGES Studio, Acetone Pvt Ltd, ZS Associates, Tata Consultancy Services, Siemens Healthineers, Cashify, 3Shore, Cognizant Technology Solutions, Nagarro, Acefone Pvt Ltd, Collegedunia.com, Fidelity International, Siemens Digital Industries Software, and others.

This activity not only enhanced students' self-confidence and practical skills in alignment with real-world project requirements but also provided valuable support for placement opportunities. The event was successfully coordinated by Dr. Poonam Chaudhary, Dr. Yogita Gigras, Dr. Monika Lamba, and Ms. Sneha Kandacharam, under the guidance of Prof. Rita Chhikara (Head, Department of CSE).



Department of Multidisciplinary Engineering

Tinkering Lab 5th Project Competition-cum-Exhibition

On 21st November, the Department of CSE organised the Vth Project-Competition-cum-Exhibition at NCU's Tinkering Lab by faculty coordinators Dr. Vandana Khanna and Dr. Yogita Gigras. This event brought together innovative minds from NCU and Meerut Institute of Engineering & Technology. The event featured a range of projects, including advanced drones for automation, battle-ready robots for robowar arenas, Raksati—safety wearables for women, EaseHer—a menstrual assistance app, a hotel food wastage prevention app, EcoTurn—a system generating energy through turnstile motion at entrance gates and more. The competition showcased creativity, technical excellence, and the real-world impact of technology, efficiently coordinated by Mr. Baldev Singh and the Creators Garage Club team.



Design Day Celebrations 2024 at NCU

The NorthCap University hosted Design Day 2024, where BTech students of the 1st semester showcased prototypes addressing real-world challenges. Using the EDIPT methodology from their Problem Solving and Design Thinking course, students created solutions with empathy, ideation, and testing. Key projects tackled women's inequality, food wastage, campus navigation, and commuting issues. The top three teams were awarded for their efforts: EaseHer (First Prize), NorthCAB App (Second Prize), and HerSahara (Third Prize). Organised by Dr. Vandana Khanna and Dr. Satnam Singh, with evaluation by esteemed judges, the event celebrated creativity, innovation, and the next generation of problem-solvers.



Faculty Activities

- Dr. Aditya Sharma Ghrera visited the SGT University on 19th December as an external examiner for end-term practical examination of MSc (Chemistry) and BSc (Non-Medical) students at the Department of Chemistry, FABS, SGT University.
- From 16th-28th December, Prof. Dr. Rita Chhikara and Dr. Meghna Sharma were invited to deliver expert sessions at the FDP 'Harnessing Generative AI, Machine Learning, and IOT for Technological Breakthroughs,' organised at USIC&T in GGSIP University.
- Ms. Bhavana Sharma was honoured with Academic Excellence Award by BPIT, GGSIPU, Delhi. This recognition highlighted her exceptional achievements, dedication to education, and commitment to fostering knowledge and innovation in her field. Her contributions to the field continue to inspire students and colleagues alike, reflecting the values instilled by BPIT.
- Dr. Srishti delivered a session on 'NLP Toolkit and Large Language Models' at the AICTE-ATAL Sponsored Advanced Faculty Development Programme (FDP) on 'Harnessing Generative AI, Machine Learning, and IoT for Technological Breakthroughs' on 23rd December, organised by University School of Information, Communication & Technology, Guru Gobind Singh Indraprastha University. The session provided an in-depth overview of advanced NLP tools, techniques for deploying large language models, and practical insights into their applications across diverse domains.
- Dr. Srishti served as a reviewer for several esteemed SCI/SCI-E journals published by Springer Nature, including Cluster Computing, Scientific Reports, and Social Network Analysis and Mining.
- On 20th and 21st December, The NorthCap University ACM Chapter was privileged to participate in the Annual ACM India Chapter Summit 2024, held in Bangalore at B.M.S. College of Engineering and R.V. College of Engineering, which brought together ACM Chapters from across the country to encourage collaboration and explore innovative solutions in the ever-evolving field of computing. The students—Madhur (President, NCU

ACM Chapter), Avishka Jindal (Secretary, NCU ACM Chapter)—along with faculty mentor, Dr. Yogita Gigras, presented a poster on 'Pathway to 2030 on SDG Goals' where they showcased NCU's initiatives toward the UN Sustainable Development Goals (SDGs), presenting innovative strategies and ideas aimed at creating a lasting social impact.

- From 16th to 21st December, Dr. Anu Tonk attended the ATAL Faculty Development Programme on 'Crystal Growth, Semiconductor Processing and Manufacturing Technologies' organised by ISM Dhanbad. This FDP, centered on the thrust area of semiconductors, provided in-depth insights into advanced techniques for crystal growth, semiconductor fabrication, and modern manufacturing technologies.
- Dr. Madhuri D. Kharat participated in Faculty Development Programme cum Capacity Building Programme on 'Design Thinking and Innovation' held from 9th to 13th December at The NorthCap University, Gurugram.
- Dr. Unanza Gulzar chaired a technical session on 'Organizational Culture and Ethical Leadership' at the International Conference on Behavioural Science and HR Summit, LEAD-2024 organised by IILM university, Gurugram, held on 6th to 7th December, 2024.
- Dr. Priyanka Banerji successfully completed the AICTE Training And Learning (ATAL) Academy Faculty Development Programme on 'Artificial Intelligence and its Applications in Business Management' at the Asian School of Business from 16th to 21st December. The programme provided comprehensive insights into leveraging AI technologies within business management and enhanced proficiency in adopting innovative teaching and research methodologies.
- Dr. Parul Khanna successfully completed the AICTE Training And Learning (ATAL) Academy Faculty Development Programme on 'Artificial Intelligence and its Applications in Business Management' at the Asian School of Business from 16th to 21st December. The programme provided comprehensive insights into leveraging AI technologies within business management and enhanced proficiency in adopting innovative teaching and research methodologies.
- On 1st December, Ms. Himani Ahlawat and Dr. Tavleen participated in the International (Online) Workshop on 'How to Publish in Scopus Indexed Journals?' organised by the Appa Education and Research Foundation and International Institute of Justice and Police Sciences (IJPS), Bengaluru, Karnataka, India.

Center of Professional Attachment and Alumni Engagement (CPAA)

CII Big Data & Analytics Conclave

Mr. Vikas Narula (Director, CPAA) had the privilege of representing The NorthCap University at the prestigious CII Big Data & Analytics Conclave, hosted at Shangri-La Eros, New Delhi. This dynamic forum brought together industry stalwarts, thought leaders, and data experts to discuss the transformative power of big data and analytics in today's rapidly evolving landscape. The sessions provided a deep dive into emerging trends, innovative approaches to data-driven decision-making, and strategies to harness analytics for driving organisational and societal innovation.

Engaging with experts and gaining actionable insights, Mr. Narula shared that such forums are invaluable for understanding how data and analytics can shape the future. The discussions not only emphasised the critical role of data in strategic decision-making but also highlighted the importance of preparing future-ready professionals equipped with analytical expertise.

NCU remains committed to leveraging these learnings to enrich our academic ecosystem, drive innovation, and align with the evolving needs of the industry. Stay connected for more updates as we integrate these insights into our ongoing initiatives!



CII's 9th Smart Manufacturing Summit 2024

Mr. Vikas Narula (Director, CPAA) proudly represented The NorthCap University at the 9th Smart Manufacturing Summit 2024, organised by CII at the India Habitat Centre, New Delhi.

This year's summit, themed 'Shaping the Future of Manufacturing with Digital Powered Innovation,' brought together industry leaders, innovators, and policymakers for insightful discussions and hands-on workshops. Key topics included Industry 4.0, IoT, AI, robotics, and sustainable manufacturing, offering a comprehensive view of the evolving manufacturing landscape.

Highlights included compelling case studies on digital transformation and emerging trends like digital twins and predictive maintenance. The discussions underscored the critical role of data-driven and green technologies in driving efficiency, sustainability, and competitiveness in the manufacturing sector.

With actionable strategies for embracing innovation and ensuring sustainable growth, the summit offered valuable takeaways that align with The NorthCap University's commitment to fostering future-ready professionals and contributing to industry-academia collaboration. Stay tuned as we integrate these insights into our academic and industry-focused initiatives!



ArmorCode Placement Drive at The NorthCap University

The NorthCap University recently hosted a successful placement drive by ArmorCode, a leading name in application security and cybersecurity solutions. The drive witnessed enthusiastic participation from final-year students, eager to showcase their skills and secure coveted roles in the tech industry.

The rigorous selection process included online assessments, technical

interviews, and HR discussions, providing students with an invaluable opportunity to demonstrate their knowledge, problem-solving abilities, and adaptability. The recruiters commended the participants for their technical expertise, communication skills, and readiness for industry challenges.

At The NorthCap University, we remain committed to facilitating such industry connections that bridge the gap between academics and real-world opportunities, ensuring our students are future-ready and equipped to excel in their careers. Congratulations to all selected candidates, and we look forward to many more success stories!

CyberCube Services Placement Drive at The NorthCap University

The NorthCap University recently hosted a successful placement drive by CyberCube Services, a globally recognised leader in cyber risk analytics and insurance solutions. The drive witnessed enthusiastic participation from final-year students, eager to showcase their skills and secure promising roles in the tech industry.

The comprehensive selection process involved online assessments, technical interviews, and HR discussions, offering students a platform to demonstrate their technical acumen, problem-solving skills, and industry readiness. The recruiters praised the candidates for their strong foundation in technology, analytical abilities, and professional demeanor.

At The NorthCap University, we are dedicated to creating robust industry partnerships that provide our students with opportunities to transition seamlessly from academics to the professional world. Congratulations to all the successful candidates, and we look forward to celebrating more achievements in the future!

International Relations Office

NCU hosts William & Mary University, USA!

Dr. Rajiv Kholi, the John N. Dalton Memorial Professor of Business at William & Mary University, USA, visited The NorthCap University on 11th December at the NCU School of Business. The meeting focused on exploring the latest advancements in Business and Management education, discussing opportunities for research collaborations, and examining how the collaboration between NCU and William & Mary University can enhance the educational experience and outcomes for students. Senior leadership team of NCU attended this meeting including Prof. Sharda Vashisth, (Head, MDE and Dy. Dean, International Affairs), Prof. G. Chandrsekhar, (Dean, School of Business), Dr. Deergha Sharma (Officiating Head, School of Management & Liberal Studies), and Dr. Pooja Sabherwal (Coordinator, International Affairs).



From the Psychologist's Desk...

The Power of Emotional Intelligence in Mental Health

In our fast-paced world, sleep often takes a backseat to academics, work, and social commitments. "I'll sleep when I'm done with this," we say, pushing bedtime later and later. But as a psychologist and mental health advocate, I cannot stress enough that sleep is not a luxury, it is a necessity. Neglecting it has far-reaching consequences on both our physical and mental well-being.

Sleep is the foundation on which our overall health rests. It plays a vital role in cognitive functioning, emotional regulation, and even physical recovery. When we sleep, our brain gets to work, consolidating memories, processing emotions, and clearing out toxins that accumulate during the day. It's like hitting the 'reset' button for your mind and body.

The Link Between Sleep and Mental Health

The connection between sleep and mental health is undeniable. Poor sleep is both a symptom and a cause of mental health challenges like anxiety, depression, and stress. For example:

Anxiety: Lack of sleep amplifies feelings of worry and makes it harder to cope with stressors.

Depression: Disrupted sleep patterns are a hallmark of depression, often creating a vicious cycle of sleeplessness and emotional turmoil.

Stress: Insufficient sleep increases the production of stress hormones, making it harder to relax and think clearly.

Many of us view sleep as a passive activity; something we do only when all other tasks are complete. But this mindset can be harmful. The culture of "burning the midnight oil" and glorifying overwork has normalised sleep deprivation, especially among students and professionals. However, it's crucial to understand that sacrificing sleep to achieve short-term goals can lead to long-term consequences.

Tips for Better Sleep

Improving your sleep hygiene can make a world of difference. Here are some simple steps to prioritise rest:

1. **Set a Sleep Schedule:** Go to bed and wake up at the same time every day, even on weekends.
2. **Create a Relaxing Bedtime Routine:** Engage in calming activities like reading or meditation before bed.
3. **Limit Screen Time:** Avoid using phones or laptops at least an hour before sleeping, as blue light disrupts melatonin production.
4. **Watch Your Diet:** Avoid heavy meals, caffeine, and alcohol close to bedtime.
5. **Make Your Bedroom Sleep-Friendly:** Keep your room dark, quiet, and cool.

As exams, deadlines, and life's challenges approach, remember that getting enough sleep will not only enhance your performance but also protect your mental and physical health.

Sleep is not a waste of time; it is an investment in your well-being.

Ms. Priyanka Bhalla
Psychologist
The NorthCap University

Research, Development & Industry Liaison (RDIL)

Journal Publications

- Purwaka, Anak Agung Putu Susastriawan*, Hadi Saputra, Taufiq Hidayat, Bambang Wahyu Sidharta, Suparni Setyowati Rahayu and Akanksha Mathur (2024) 'Techno-Feasibility Assessment on Utilization of Rice Husk and Wood Scrap as Energy Sources of the Rotary Drier While Drying BSF Maggot', *Journal of Engineering and Applied Technology*, Vol. 5, No. 22, pp. 65-71, MDE2024J0046.
- Anu Arora*, Suresh Dakkumalla, Sharda Vashisth and Amitava Sengupta (2024) 'Methodology for Precisely Determining Ionosphere Travelling Disturbances Using NavIC', *MAPAN-Journal of Metrology Society of India*, Doi: <https://link.springer.com/article/10.1007/s12647-024-00785-8>, MDE2024J0047.
- Deepika Latka, Mona Aggarwal* and Swaran Ahuja (2024) 'UAV-Assisted Dual-Hop RF Communication: Performance Analysis of Outage Probability and Altitude Optimization for Multi-User Systems', *Physical Communication*, Doi: <https://doi.org/10.1016/j.phycom.2024.102546>, MDE2024J0048.
- Aman Garg*, Li Li*, Weiguang Zheng, Mohamed-Ouejdi Belarbi and Roshan Raman (2024) 'Free Vibration Behaviour of Bio-Inspired Helicoidal Laminated Composite Panels of Revolution Under Thermal Conditions: Multi-Output Machine Learning Approach', *Engineering Analysis with Boundary Elements*, Vol. 169, pp. 1-34, Doi: <https://doi.org/10.1016/j.enganabound.2024.106024>, MDE2024J0049.
- Aman Garg*, Mohamed-Ouejdi Belarbi, Li Li, HD Chalak, Abdelouahed Tounsi and AM Zenkour (2024) 'Comparative Study on the Buckling Analysis of Exponential, Power and Sigmoidal Sandwich FGM Plates Under Hygro-Thermal Conditions', *Advances in Materials Research*, Vol. 13, No. 66, pp. 431-462, MDE2024J0050.
- Aman Garg*, Mohamed-Ouejdi Belarbi, Li Li and Abdelouahed Tounsi (2024) 'On Application of Machine Learning Techniques for Predicting the Bending and Buckling Behavior of FGM Nanobeams', *Advances in Nano Research*, Vol. 17, No. 55, pp. 445-454, MDE2024J0051.
- Aman Garg*, Neeraj Kumar Shukla, Li Li*, Shilpi Birla and Weiguang Zheng (2024) 'Machine Learning Assisted Buckling Analysis of Cantilever Bio-Inspired Helicoidal Laminated Composite Cylindrical Shells With Cutouts', *Mechanics Based Design of Structures and Machines*, Doi: <https://doi.org/10.1080/15397734.2024.2434928>, MDE2024J0052.
- Deepika latka, Mona Aggarwal* and Swaran Ahuja (2024) 'Outage Probability Analysis and Altitude Optimization of UAV Enabled Triple Hop Mixed RF-FSO based Wireless Communication System', *Photonics*, Vol. 11, No. 1212, pp. 1-18, MDE2024J0053.
- Deepika Latka, Mona Aggarwal* and Swaran Ahuja (2024) 'Performance Analysis of UAV-Enabled Dual-Hop Mixed RF-FSO Communication Systems with User Scheduling', *Journal of Optical Communications*, Doi: <https://doi.org/10.1515/joc-2024-0254>, MDE2024J0054.

- Sudharshini Vasani*, Akshat Aditya Rao, Samant Shant Priya and Nimit Gupta (2024) 'Paid, Owned and Earned Media Research: A Mixed Review, Reflections and Agendas for Future Research', *FIB Business Review*, Doi: <https://doi.org/10.1177/23197145241283866>, MOC2024J0024.
- Neha Jain* and Anushri Rawat (2024) 'Predicting Counterproductive Work Behaviors: Examining the Role of Spiritual Intelligence and Personality Traits in Public and Private Sector Organizations', *Journal of Applied Business and Economics*, Vol. 26, No. 66, pp. 90-100, PSY2024J0003.

Book Chapters

- Ravisankar*, Ibraheem Kasim Ibraheem, Shrinwantu Raha, T. Sakthi, J. Ashok and Anu Tonk (2024) 'Bibliometric Analysis of AI Research in Sustainable Smart Cities' in *Sustainable Development Goals: Technologies and Opportunities*, Chapter 11, pp. 189-208, CRC Press, ISBN- 978-10-0346-825-7, MDE2024BC0010.
- Akanksha Mathur* (2024) 'Fire Hazardous Commodities and Conditions' in *Fire Safety in Facilities*, Chapter 2, pp. 14-28, Indira Gandhi National Open University, ISBN- 978-93-6106-703-7, MDE2024BC0008.
- Akanksha Mathur* (2024) 'Fire Risk Assessment' in *Fire Safety in Facilities*, Chapter 4, pp. 45-59, Indira Gandhi National Open University, ISBN- 978-93-6106-703-7, MDE2024BC0009.

Conference Proceedings and Presentations

- Sudharshini Vasani* and Nimit Gupta (2022) 'Use of Paid, Owned, and Earned Media (POEM) Marketing Communication to Promote Sustainable Development Solutions', *International Conference on Business Management and Sustainable Development Goals Responding To the New Normal*, pp. 160, MOC2024P0003.
- Sudharshini Vasani and Nimit Gupta (2022) 'Role of Paid, Owned, and Earned Media in Digital Marketing', *IBS Conference on Marketing and Business Strategy: Marketing 5.0 Opportunities and Challenges*, IBS Hyderabad, MOC2024C0002.
- Meenakshi Bisla (2024) 'Artificial Intelligence and Business Model Innovation: A review and Future Research Agenda', *FORE International Management Conference (FIMC)*, FORE School of Management, New Delhi, MOC2024C0003.
- Ashmit Sangwan and Neha Jain (2024) 'Comprehensive Analysis of Factors Motivating In App purchases in Genshin Impact: A Case study', *Catheris '24*, Jesus and Mary College, Delhi University, PSY2024C0005.

Note: * for corresponding author

Outreach Activities of Prof. Nupur Prakash, Hon'ble Vice Chancellor, The NorthCap University, Gurugram, Haryana



Prof. Nupur Prakash
Vice Chancellor

- On 11th December, Prof. Nupur Prakash attended the World Education & Business Conclave & Awards 2024 as a panelist. The event was attended by eminent Vice Chancellors and Education leaders of the country.

The following panel discussions were held around higher education track:

- The Future of Hybrid Learning: Balancing Online and In-Person Education
- Developing Future Leaders: Skills Beyond Technology
- Smart Campuses: Integrating IoT and Big Data for Enhanced Student Experiences
- International MOOCs: Expanding Access to Quality Education Worldwide



- Prof. Nupur Prakash attended Women Leadership Programme, themed 'Women Leaders: Shaping Academic Excellence for VIKSIT Bharat @2047,' held on 13th December at IIT Delhi. Prof. Jagdish Kumar (Chairman, UGC) moderated the event and Shri Dharmendra Pradhan Ji (Hon'ble Minister of Education, Govt. of India) inaugurated the programme as the Chief Guest. The programme brought together women leaders in higher education to exchange insights, foster collaboration, and inspire the next generation of academic pioneers. It served as a platform for enriching discussions, sharing experiences, and contributing to the vision of a progressive and inclusive academic future for our nation
- Prof. Nupur Prakash met Mr. Sushil Pal (Joint Secretary, Ministry of Electronics and IT, Govt. of India) at Electronics Niketan, CGO Complex on 19th December, along with Dr. Sharda (Head, MDE) to discuss industry partnership and government collaboration for the successful launch of BTech (Electronics Engineering) programme in Semiconductor Design & Technology



- Prof. Nupur Prakash met with Mr. Sushil Pal (Joint Secretary, Ministry of Electronics and IT, Govt. of India) at Electronics Niketan, CGO Complex on 19th December, along with Dr. Sharda, (Head, MDE) to discuss industry partnership and government collaboration for the successful launch of B.Tech (Electronics Engineering) programme in Semiconductor Design & Technology.

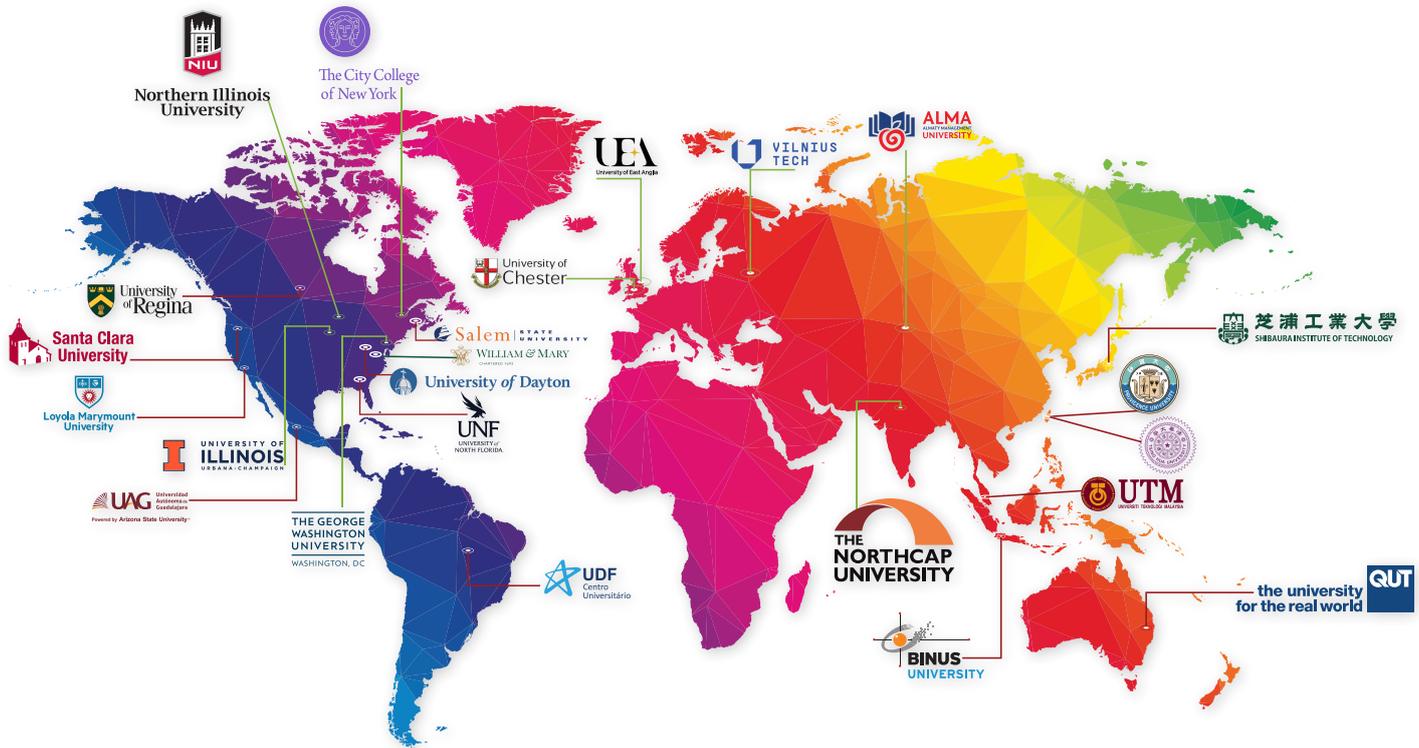
Outreach Activities of Prof. Prem Vrat, Pro-Chancellor, Professor of Eminence and Chief Mentor, The NorthCap University, Gurugram, Haryana



Prof. Prem Vrat
Pro-Chancellor,
Professor of Eminence
& Chief Mentor

- As Chairman, Board of Governors, Prof. Prem Vrat attended the 99th Foundation Day of IIT (ISM) Dhanbad, on 9th December, where Hon'ble Sh. Santosh Kumar Gangwar (Governor of Jharkhand) attended the same as the Chief Guest.
- As Chairman, Board of Governors, Prof. Prem Vrat presided over the 44th Convocation of IIT (ISM) Dhanbad, on 17th December, where Padam Bhushan Dr. Vijay Kumar Saraswat, Member, NITI Aayog attended the same as the Chief Guest.
- On 16th December, Prof. Prem Vrat chaired the meeting of the Finance Committee as well as the Board of Governors of IIT (ISM) Dhanbad.





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