



THE  
NORTHCAP  
UNIVERSITY

Formerly ITM University, Gurugram

# BTECH ROBOTICS AND AI





Ranked as 1st in the  
Engineering category  
by GHRDC Survey 2025.

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# Rankings, Ratings and Quality Benchmarks



Established under Haryana Private University Act No. 25 of 2009 (Third amendment)



- **Recognised by the University Grants Commission**
- **Accorded UGC 12(B) Status**



Recognised by the Bar Council of India, Govt. of India



Accredited by the National Assessment and Accreditation Council (NAAC) as **Grade "A" university**



Member of Association of Indian Universities



Rated as 5-star University by QS Star Rating System 2025



In NIRF, in the Engineering category, NCU is placed in the rank band of 101-150 in 2025



Ranked as 1st in the Engineering category by GHRDC Survey 2025.



School of Management & Liberal Studies was ranked No. 1 in Haryana in GHRDC BBA College Survey, 2024



Ranked as the 2nd Best Law school in Haryana by GHRDC Survey 2025.



Accredited by Accreditation Services for International Schools, Colleges & Universities (ASIC) as a PREMIER INSTITUTION with commendable grades (2nd August 2024 - 1st August 2028)



Member of International Students Exchange Programme



Member of American Society for Quality (India)



Honoured with the prestigious University with Modern Infrastructure (Engineering) by the Services Export Promotion Council (SEPC), a unit of the Ministry of Commerce and Industry, Government of India.



Among Top-30 'Best Performer Universities' in Atal Ranking of Institutions on Innovation & Achievements (ARIIA)



In the Green Institutional Rankings 2025, NCU was placed in the Diamond category under the Sustainable Institution of India (SII) Awards.



NCU received the District Environment Championship Award 2025 for Gurugram, conferred by the National Edu Trust of India.



# About The NorthCap University

Established in 1996, formerly known as ITM University, The NorthCap University is a progressive multidisciplinary university located in the city-centre of Gurugram, Haryana. The university's rich heritage of 30 years, 15,000+ alumni and a robust academic infrastructure enables deep linkages with government, industry and research bodies. The university operates multiple schools and departments in its state-of-the-art urban campus and hosts a diverse student body of engineering, technology, management, liberal arts, law, media & entertainment, business and applied science aspirants.

NCU is recognised by the University Grants Commission (UGC) and accorded 12 (b) status. It is also recognised by the Bar Council of India (BCI). NCU is a Member of the Association of Indian Universities (AIU), a Member of the American Society for Quality (ASQ) and is accredited by Accreditation Services for International Colleges (ASIC), UK, as a 'Premier Institution.' NCU has an overall 5-Star Rating in the prestigious QS Stars Rating System, and ranks among the Top 30 Best Performing Universities as per ARIIA rankings.

NCU is a National Assessment and Accreditation Council (NAAC) Grade 'A' accredited university that serves as a research as well as talent catalyst between students and industry. Guided by eminent academicians and industry leaders, it follows an immersive pedagogy to deliver undergraduate, postgraduate as well as doctoral programmes. With an extensive network of international university partners, NCU offers students the chance to engage in global semester exchanges, twin and dual degree programmes and cutting-edge research collaborations for unparalleled academic and cultural enrichment.

**15,000<sup>+</sup>**  
ALUMNI  
NETWORK

**3500<sup>+</sup>**  
STUDENTS

**250<sup>+</sup>**  
PLACEMENT  
PARTNERS



## **Prof. Prem Vrat**

**Pro-Chancellor,**

**Prof. of Eminence & Chief Mentor**

**The NorthCap University**

# **Message from the Pro - Chancellor**

The NorthCap University is committed to delivering outcome-driven, future-focused education that responds to the evolving demands of global industry and society. The Department of Multidisciplinary Engineering, under the School of Engineering and Technology (SOET), reflects this vision through the BTech programme in Robotics and Artificial Intelligence, designed to nurture engineers who are technically proficient, ethically grounded, innovative, and globally competitive.

The Robotics and Artificial Intelligence programme is developed in close alignment with industry expectations and emerging technological trends, integrating a cutting-edge curriculum with hands-on laboratory experience, interdisciplinary learning, and applied research. Supported by experienced faculty, modern infrastructure, Centres of Excellence, and strong industry collaborations, the programme provides an ecosystem that encourages creativity, critical thinking, innovation, and problem-solving in intelligent automation and advanced robotic systems.

In today's rapidly transforming technological landscape, Robotics and Artificial Intelligence are driving innovation and redefining industries worldwide. At The NorthCap University, students are empowered to adapt, evolve, and contribute meaningfully to technological advancement and sustainable development. Through experiential learning, industry exposure, internships, and project-based learning, the programme prepares students to become future-ready engineers, innovators, and leaders capable of making a global impact.

I warmly welcome aspiring students to the BTech programme in Robotics and Artificial Intelligence offered by the Department of Multidisciplinary Engineering and invite them to embark on a transformative academic journey towards professional excellence, innovation, and leadership.

# Message from the Vice Chancellor



**Prof. Nupur Prakash**  
Vice Chancellor,  
The NorthCap University

Welcome to The NorthCap University, a progressive institution dedicated to academic excellence, innovation, and holistic student development. In today's rapidly evolving technological landscape, Robotics and Artificial Intelligence are revolutionising industries and redefining the future of engineering. Our BTech programme in Robotics and Artificial Intelligence has been carefully designed to prepare students to become competent professionals, innovators, and technology leaders capable of addressing real-world challenges.

The programme offers a strong foundation in engineering principles, combined with specialised knowledge in robotics, artificial intelligence, automation, machine learning, and intelligent systems. The curriculum emphasises experiential learning through modern laboratories, hands-on projects, internships, and industry-integrated learning experiences. Students are encouraged to engage in innovation, research, and interdisciplinary collaboration, enabling them to develop critical thinking, creativity, and problem-solving skills essential for the future workforce. Our highly qualified and experienced faculty members are committed to mentoring students and fostering a culture of academic excellence and innovation. With access to advanced laboratories, modern infrastructure, design and simulation tools, and Centres of Excellence, students gain practical exposure to emerging technologies and real-world applications. The programme also emphasises project-based learning, capstone projects, and industry exposure to ensure that graduates are well-prepared for professional careers and higher studies.

The University promotes a dynamic and inclusive academic environment that encourages leadership, ethical values, teamwork, and lifelong learning. Through continuous interaction with industry, research opportunities, and skill development initiatives, students are empowered to adapt to technological advancements and contribute meaningfully to society.

I warmly welcome aspiring students to the BTech programme in Robotics and Artificial Intelligence at The NorthCap University and invite them to be part of an inspiring academic journey that fosters innovation, excellence, and global readiness.

# From the HOD's Desk




**Prof. Sharda Vashisth**  
Professor, HoD,  
Multidisciplinary Engineering

It gives me immense pleasure to introduce the BTech programme in Robotics and Artificial Intelligence at The NorthCap University. Robotics and AI are revolutionising industries by enabling intelligent automation, autonomous systems, and smart decision-making across sectors such as manufacturing, healthcare, mobility, and smart infrastructure. This programme is designed to equip students with the knowledge, technical skills, and innovative mindset required to excel in these rapidly advancing fields.

The curriculum is carefully designed in alignment with the guidelines of the All India Council for Technical Education (AICTE) and is benchmarked against global academic and industry standards. It also supports national initiatives such as Digital India, Make in India, Startup India, and Skill India, which aim to position India as a global leader in advanced technologies. The programme integrates strong engineering fundamentals with emerging areas including Artificial Intelligence, Machine Learning, Robotics, Computer Vision, Embedded Systems, and Autonomous Systems, supported by hands-on laboratory experience, modern design and simulation tools, and industry-oriented projects.

Our department is supported by a team of highly qualified and dedicated faculty members with expertise in Robotics, Artificial Intelligence, Automation, and related interdisciplinary domains. The faculty are actively engaged in teaching, research, and mentoring, and are committed to providing students with strong academic guidance, practical exposure, and innovation-driven learning. Their experience and mentorship help students develop technical competence, critical thinking, and problem-solving skills required for successful careers in global technology industries.

We are committed to fostering a culture of innovation, research, and excellence, and to preparing students to become skilled engineers, innovators, and future technology leaders. I warmly invite aspiring students to join this programme and become a part of an exciting journey toward shaping the future of Robotics and Artificial Intelligence.



# School of Engineering & Technology

A forerunner among engineering schools in the Delhi-NCR, the School of Engineering and Technology (SOET) at The NorthCap University is firmly established as a centre of engineering excellence, research, and innovation, combining a rich legacy of pedagogy with the adoption of best global practices. As the largest and oldest academic unit of the university, SOET comprises two core departments—the Department of Computer Science & Engineering (CSE) and the Department of Multidisciplinary Engineering (MDE)—and offers comprehensive undergraduate, postgraduate, and doctoral programmes designed to equip students with the skills, knowledge, and ethical grounding necessary for the modern engineering landscape. Every programme emphasises critical thinking, innovation, problem-solving, and leadership, while promoting intellectual maturity, professional competence, and ethical responsibility.

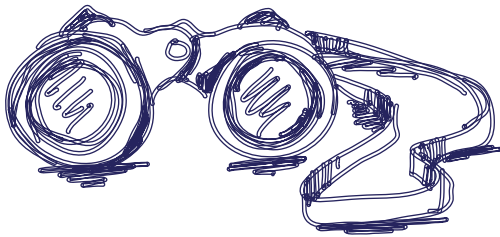
SOET's future-ready, choice-based curriculum integrates theoretical foundations with hands-on practical training, leveraging state-of-the-art laboratories, smart classrooms, digital resources, and collaborative learning environments to foster academic flexibility alongside traditional learning methods. The school emphasises experiential education through industry internships, research projects, live case studies, academic collaborations, and co-curricular initiatives, ensuring that students gain real-world exposure and develop skills aligned with emerging global engineering trends.

The school's dedicated and dynamic faculty actively mentor students, creating a robust mentor-mentee culture that provides guidance, counselling, and personalised support for academic and professional growth. SOET maintains strong engagement with industry partners, alumni networks, and international universities, offering student and faculty exchange programmes, research collaboration opportunities, and exposure to cutting-edge global practices.

Focused on holistic development, SOET nurtures communication, teamwork, leadership, and cultural awareness through co-curricular and extra-curricular activities, skill-based courses, and value education. By fostering a culture of innovation, research, and lifelong learning, SOET prepares its graduates to become globally competent, socially responsible, and technologically proficient engineers capable of addressing complex challenges, driving sustainable development, and contributing meaningfully to society.

# Department of Multidisciplinary Engineering

Department of Multidisciplinary Engineering yields unique insights in terms of ideation, innovation, and creativity and is among the best Private Engg Department in Delhi/NCR offering PhD, MTech and BTech programmes of all core engineering domains such as Civil Engineering, Electrical, Electronics and Communication Engineering, and Mechanical Engineering. The Department is strongly committed to support and guide its students through success. The department offers a rich variety of activities both at the department and university level for its students to find opportunities and give back to the community.

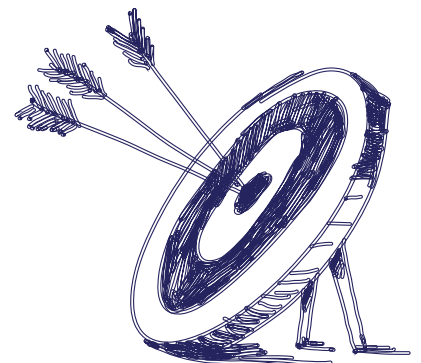


## Vision

To be known in the area of Engineering in various multidisciplinary avenues with an unending quest for learning innovations, academic excellence, entrepreneurship and socially relevant quality research outcomes of internationally recognised standards; emerge as a preferred destination for students, faculty, employers and collaborators.

## Mission

- To impart quality education in multiple disciplines of engineering to develop skilled professionals for careers in industry, academia, and public sector organisations.
- To provide technical knowledge, guidance, and leadership in upcoming challenges faced by industries and society.
- To collaborate with external stakeholders to generate and disseminate knowledge.
- To continuously upgrade the quality of academic resources and infrastructure to impart state-of-the-art knowledge, hands-on experience, and experiential learning to students.
- To nurture a research environment in the avenue of multidisciplinary engineering and carry out socially relevant research.
- To encourage socially relevant and industry-oriented projects and develop entrepreneurial skills through interdisciplinary curricular flexibility in the core engineering programmes in line with NEP 2020 and other government and national policies.





## **BTech**

# **Robotics & Artificial Intelligence**

The BTech Robotics & Artificial Intelligence programme at the School of Engineering & Technology (SOET), The NorthCap University, is designed to develop engineers with strong interdisciplinary competence in robotics, artificial intelligence, and automation, aligned with current and emerging industry requirements.

The programme offers a robust foundation in engineering mathematics, programming, electronics, mechanics, and control systems, followed by advanced courses in robotics, artificial intelligence, machine learning, computer vision, embedded systems, autonomous systems, and industrial automation.

A key strength of the programme is its emphasis on industry-driven, industry-ready programme electives, which enable students to gain exposure to contemporary tools, platforms, and applications relevant to real-world industrial and research environments. These electives are periodically updated in consultation with industry experts to ensure curriculum relevance and employability.

The curriculum integrates hands-on laboratories, project-based learning, internships, industry interaction, and a capstone project, ensuring graduates acquire both theoretical depth and practical proficiency.

Graduates are well-prepared for careers in robotics engineering, AI development, automation, autonomous systems, smart manufacturing, and allied technology domains, as well as for higher studies and entrepreneurship.

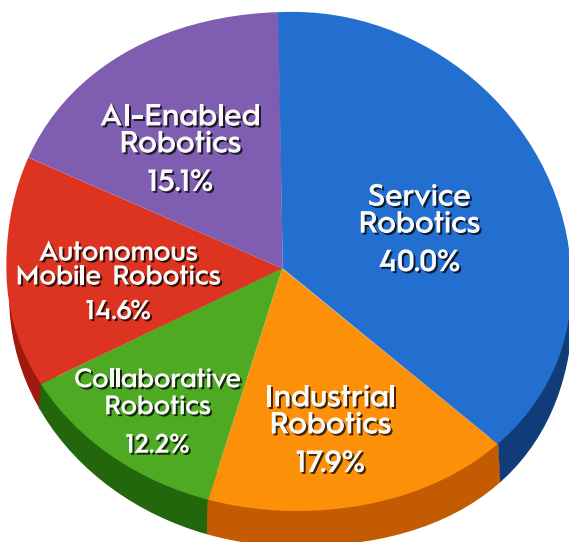
# Global Market Trends

Robotics and Artificial Intelligence (AI) are transforming industries and shaping the future of work. The global robotics market is projected to reach over \$205 billion by 2030, with service robotics and AI-enabled systems making up the largest shares, followed by industrial robotics, autonomous mobile robots, and collaborative robots. In India, the market is expected to reach around \$6.2 billion by 2030, with industrial robotics dominating more than half of the market, and consumer robotics accounting for the remaining share. Optional segments such as collaborative robots, warehouse/logistics robots, and AI-powered systems represent emerging areas of growth. This trend is creating significant demand for skilled professionals capable of designing, developing, and deploying intelligent robotic and AI systems across sectors, from smart manufacturing and logistics to intelligent consumer systems and autonomous platforms.

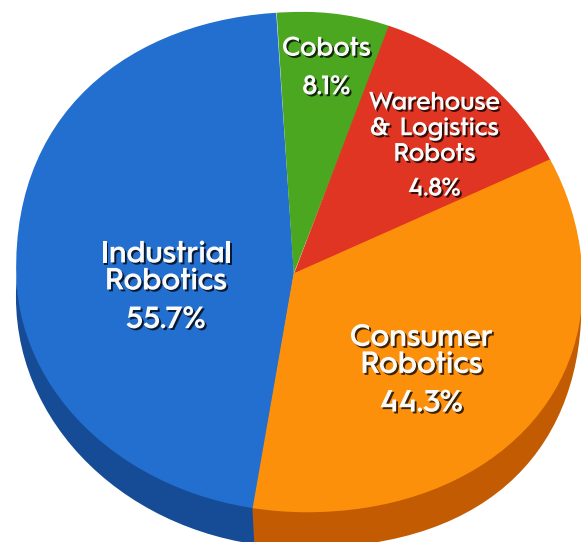
## Several key factors are driving this growth in demand:

- Increasing adoption of robotics in manufacturing, automotive, and smart factories.
- Rising use of AI in business analytics, automation, healthcare, and intelligent decision-making.
- Advancements in self-driving vehicles, drones, and intelligent robotic platforms.
- Organisations adopting AI and automation to improve efficiency and competitiveness.
- Strong support for innovation through Industry 4.0, Make in India, and global technology investments.
- Growing global demand for Robotics and AI engineers across industries.

**Global Robotics Market 2030**  
Total: \$205.5 Billion USD



**India Robotics Market 2030**  
Total: \$6.192 Billion USD



Sources:

- GlobalData. (2025, October 30). Global robotics market to reach \$205.5 billion by 2030, forecasts GlobalData.
- Grand View Research. India consumer robotics market size & outlook, 2025–2030.

# Key

# Programme Modules

Programme Electives			
PE1	Business Intelligence & Data Visualisation	AI Strategy and Technology Management	Physical AI on Robotics
PE2	Supply Chain Automation and Robotics Logistics	Computational Linguistic and Natural Language processing	Autonomous Robotics and Telecherics
PE3	Industrial Automation and Operations Management	Applied AI & Expert System	Robot Dynamics and Control
PE4	Robotics Project Planning and Systems Integration	Deep Learning	Mobile and Micro-Robotics
PE5	Optimisation Techniques for Robotics and AI	Reinforced Learning	Advanced Mechatronics
PE gets updated depending upon the emerging technologies.			

Apart from the core programme modules, the curriculum also offers enriching experiential learning opportunities, including:

- **Capstone Project:** A major final-year project where students design and develop innovative Robotics & AI solutions to address real-world challenges.
- **Six-Month Industry Internship:** A full-semester professional internship in the 8<sup>th</sup> semester, providing hands-on industry experience and career readiness.
- **Experiential Learning Focus:** Strong emphasis on practical training, innovation, and industry engagement throughout the programme.



# Why Choose NCU's BTech Robotics and AI?

## Distinguished Faculty from IITs, NITs & Premier Institutions

Learn from highly qualified faculty members with strong academic credentials, research expertise, and industry collaborations.

## Industry-Aligned & Future-Ready Curriculum

Programmes designed in consultation with leading industry partners to ensure students gain cutting-edge technical skills, hands-on exposure, and practical problem-solving abilities.

## Gurugram (NCR) Advantage

SOET's strategic location in Gurugram provides unmatched access to leading tech companies, R&D centres, startups, and Fortune 500 organisations - offering plentiful internship and placement opportunities.

## State-of-the-Art Engineering & Research Laboratories

Advanced labs in Artificial Intelligence, Robotics, IoT, Cloud Computing, Semiconductor Engineering, Embedded Systems, Communication Engineering and Automation support experiential learning, innovation, and multidisciplinary research.

## Global Exposure & International Collaboration

MOUs with top international universities enable summer schools, student exchange, joint research, and global certification programmes.

## Strong Placement Outcomes

Access to a robust network of 200+ recruiters, including MNCs and high-growth startups, with students consistently securing top packages and diverse engineering roles.

## Innovation-Driven Campus Ecosystem

SOET promotes a culture of creativity and entrepreneurship through innovation labs, hackathons, ideation workshops, and industry-backed projects.



# Industrial Collaborations

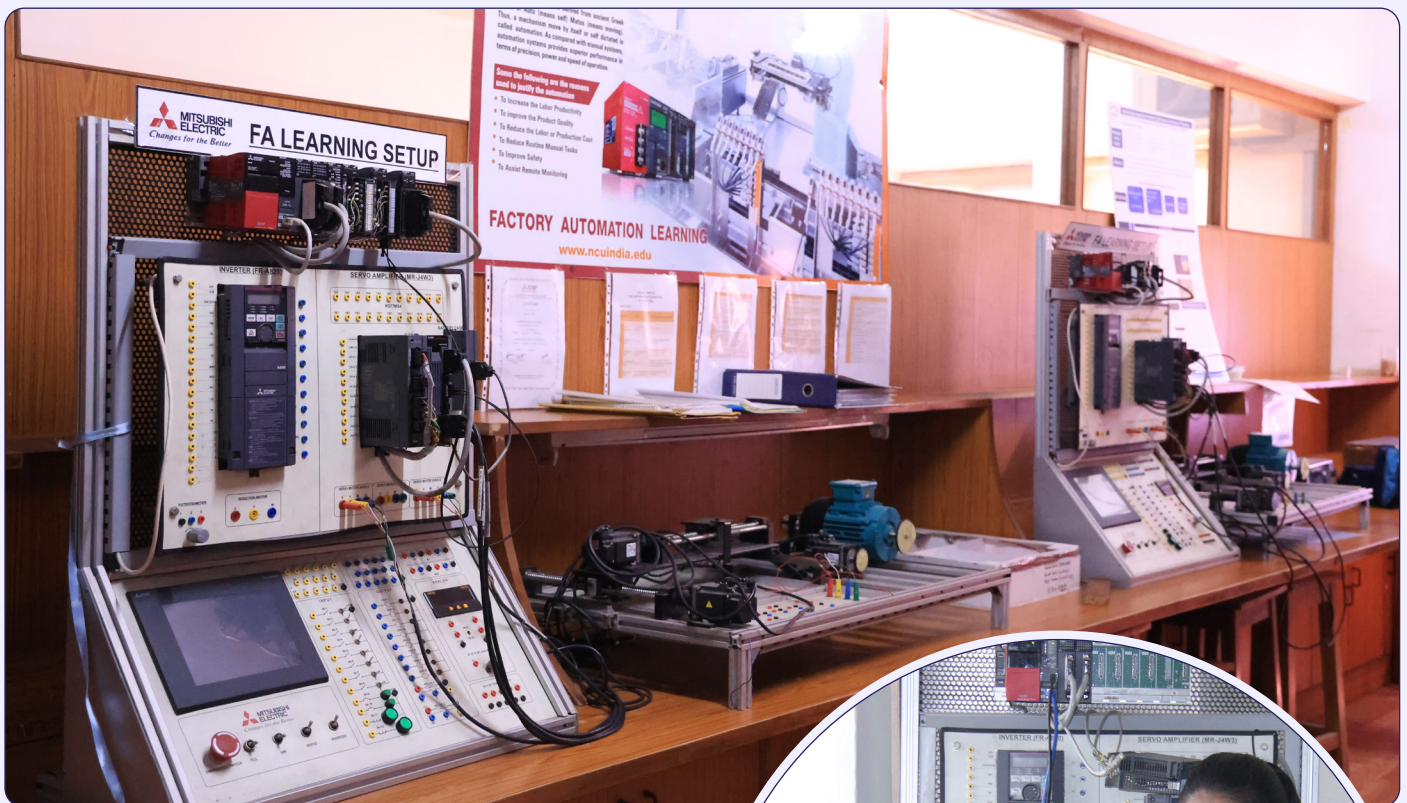
## MOU with Mitsubishi Electric India Private Limited



A strategic partnership that has strengthened our industry-academia collaboration in Industrial Automation, Robotics, and Advanced Manufacturing.

### Key Highlights:

- Access to advanced industrial automation technologies and systems.
- Practical exposure through modern laboratory setups and training modules.
- Learning aligned with industrial standards, tools, and practices.
- Industry-ready skills for future careers in automation and robotics.



# Global Industry Collaboration

## MOU with CGC, Denmark

A strategic international collaboration enabling students to gain global exposure, innovation insights, and industry-oriented learning experiences.

### Key Highlights:

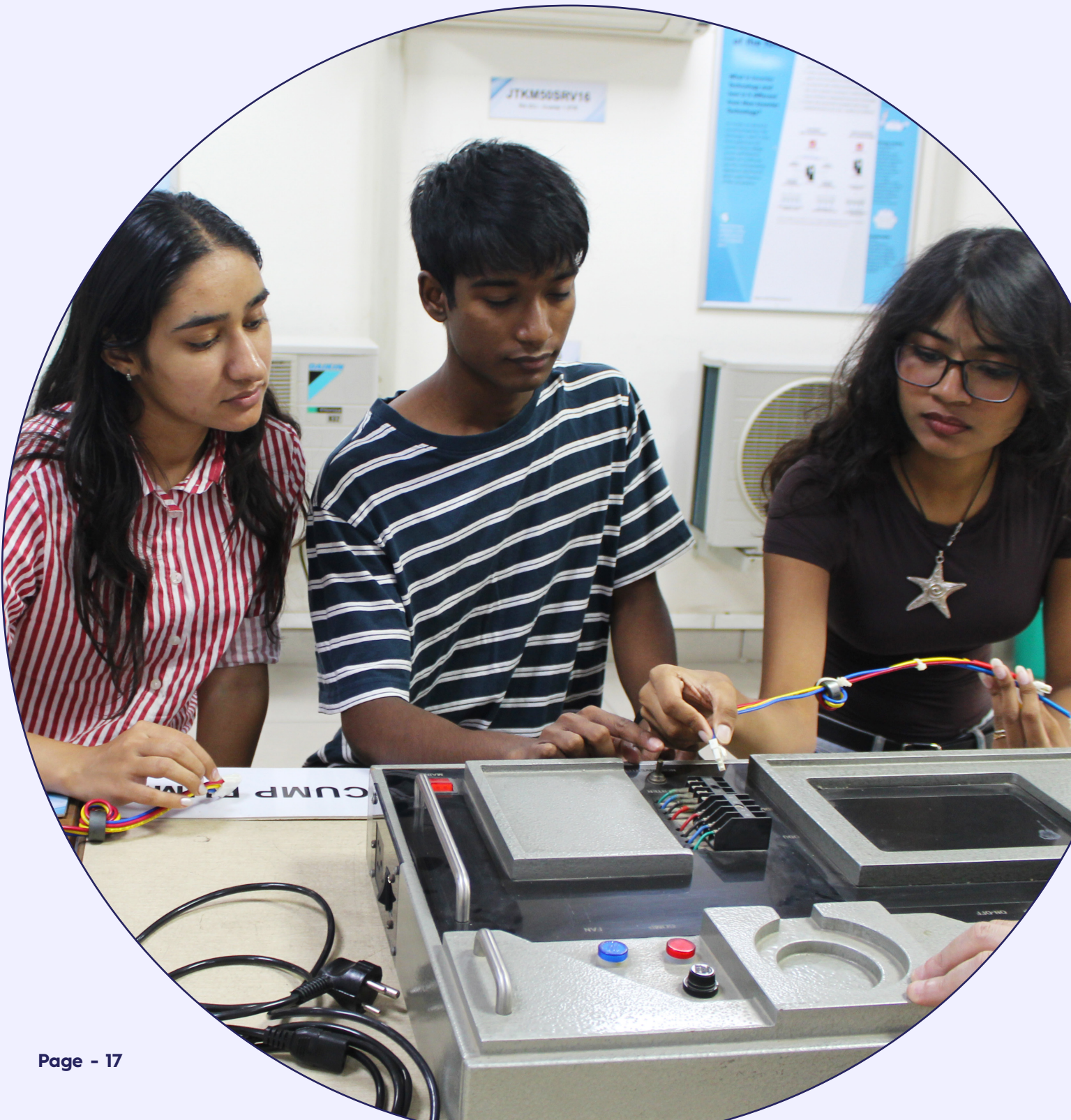
- Exposure to international industry and consulting environments.
- Learning modern approaches to innovation strategy and technology-driven business models.
- Development of creative thinking and innovation skills relevant to robotics and emerging technologies.
- Understanding global workflows, industry practices, and cross-cultural collaboration.



## MoU with Daikin Airconditioning India Private Limited

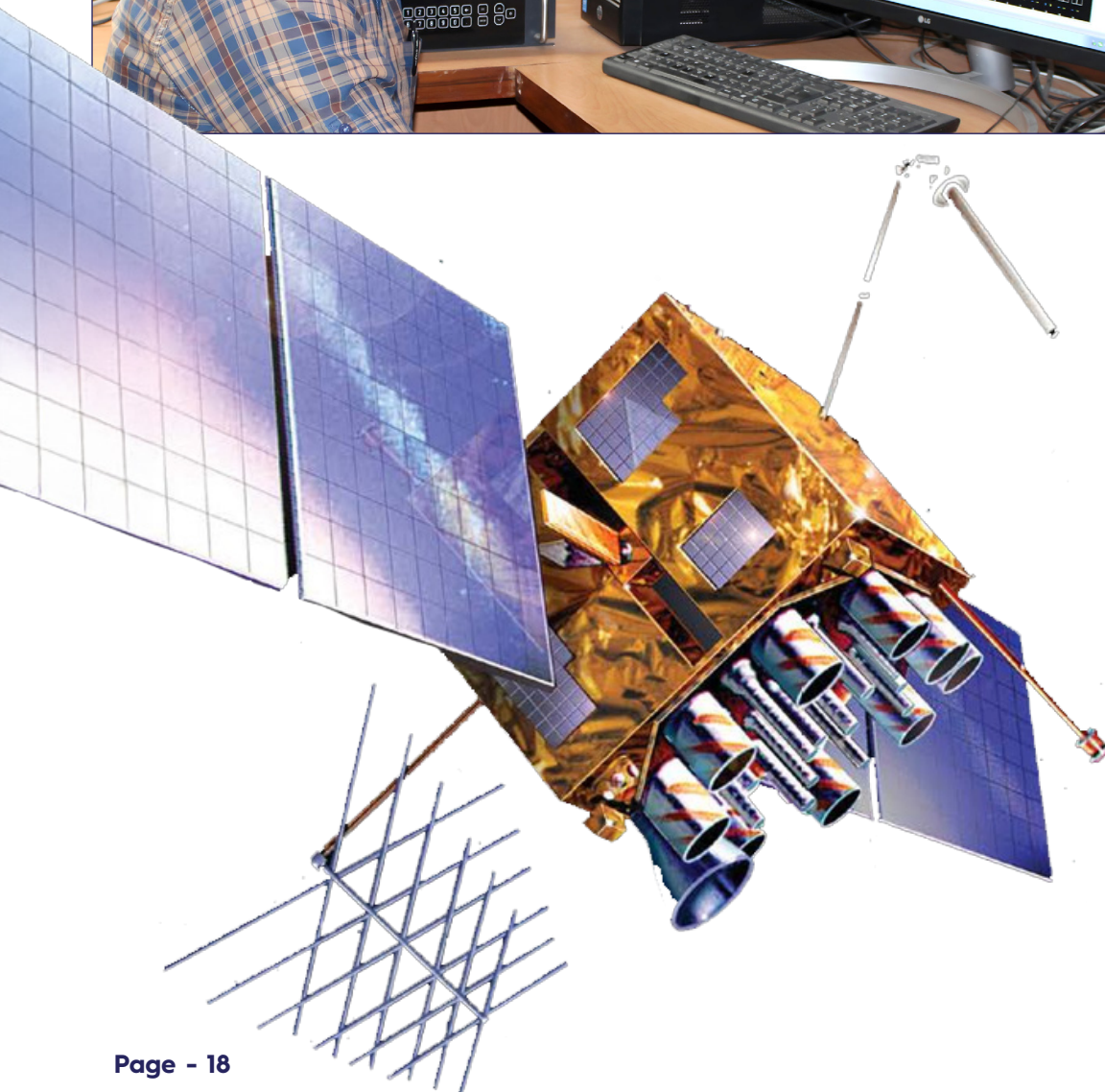
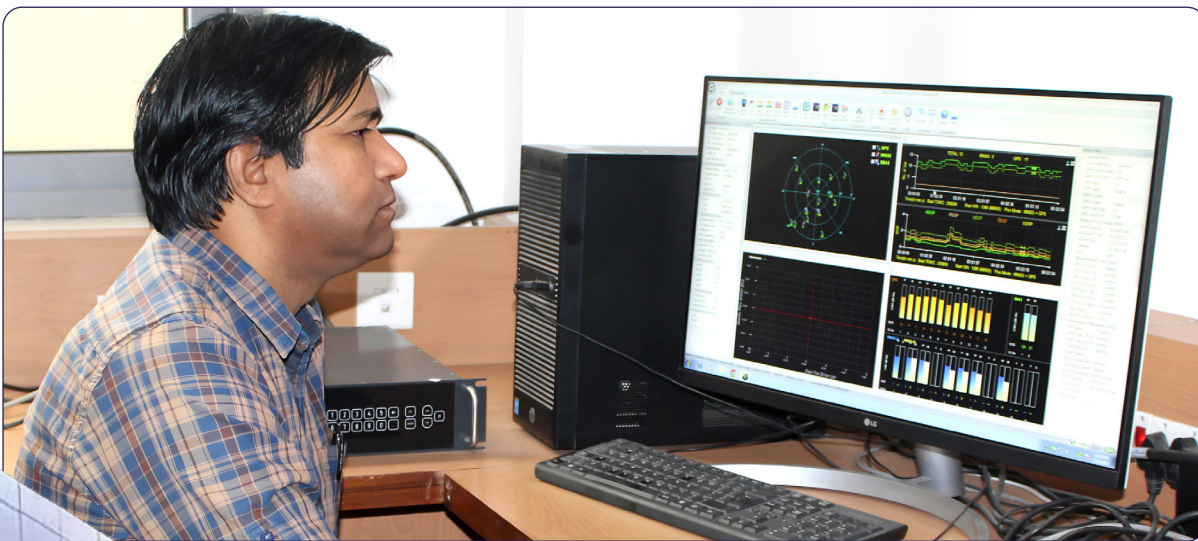


A strategic partnership with Daikin Airconditioning India Private Limited, a global leader in HVAC technologies, aimed at strengthening industry-oriented learning and practical exposure for students of the BTech Robotics & Artificial Intelligence programme. The collaboration supports hands-on learning, industry interaction, and exposure to smart systems, automation technologies, and energy-efficient engineering solutions, enhancing students' industry readiness.

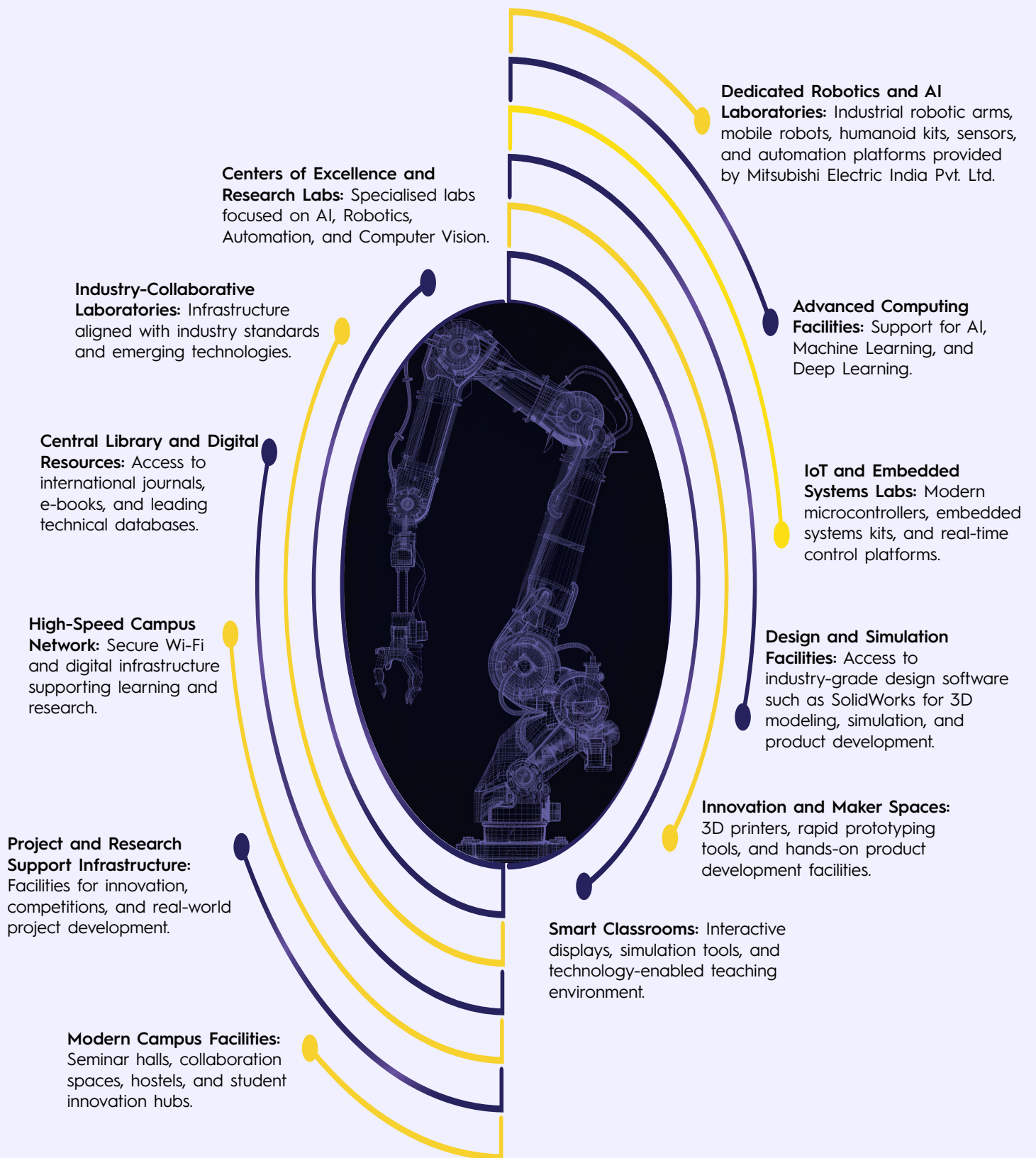


## MOU with Indian Space Research Organisation (ISRO)

This strategic collaboration with ISRO for NAVIC (India's indigenous satellite navigation system developed by ISRO) supports learning and innovation in navigation technologies and autonomous systems. The partnership enables students to explore applications of satellite-based positioning and navigation in autonomous vehicles, robotics, and intelligent transportation systems, providing valuable exposure to real-world engineering applications.



# Infrastructure Overview



# State-of-the-Art Laboratories & Innovation Facilities

The programme is supported by advanced laboratories and innovation spaces that enable students to gain hands-on experience in robotics, artificial intelligence, digital manufacturing, and emerging technologies.

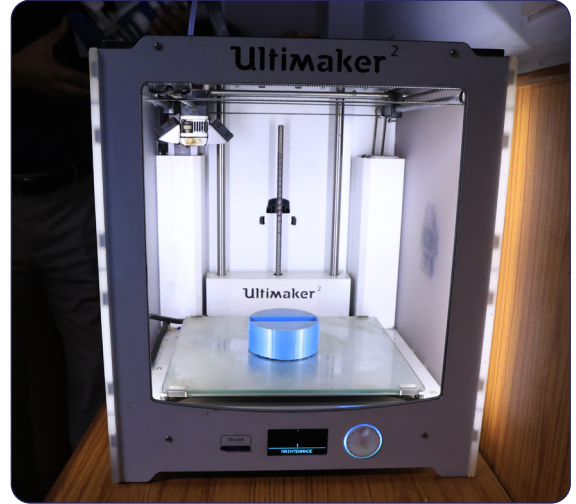
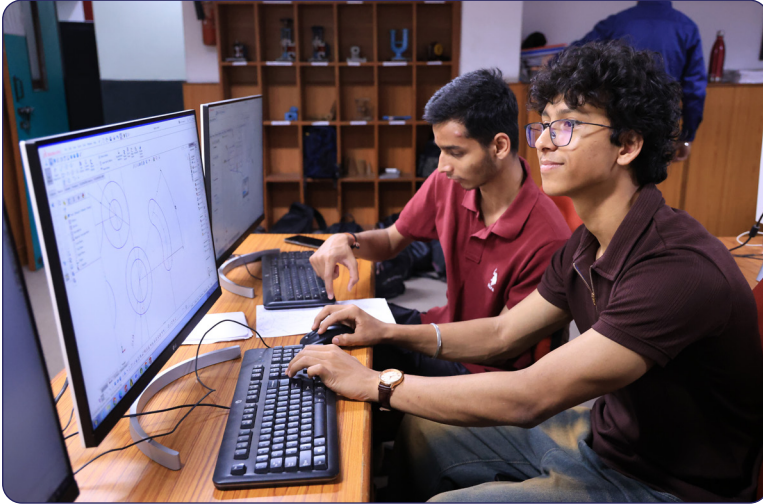
## Robotics Laboratory

The Robotics & AI Laboratory offers hands-on learning with advanced platforms such as the Omni Bundle robot and Qube SERVO experimental setup for real-time control system understanding. It is equipped with modern data acquisition systems for monitoring and analysis of engineering processes. PLC-based experimental setups provide practical exposure to industrial automation and control. The lab enables students to work on robotics, AI tools, and smart manufacturing applications.



## 3D Printing & Digital Manufacturing Facility

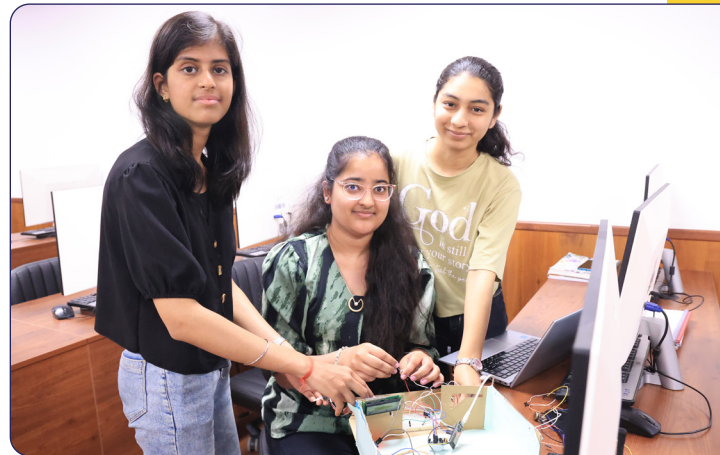
3D Printing & Digital Manufacturing Facility enables rapid prototyping and additive manufacturing for developing functional engineering models. It is equipped with advanced 3D printers and digital fabrication tools to transform design concepts into physical prototypes. Students gain hands-on experience in product development, material selection, and design optimisation. The facility supports innovation through iterative testing and validation of designs. It prepares learners for modern manufacturing practices aligned with Industry 4.0/5.0



## Data Communication Laboratory

Data Communication Laboratory provides hands-on learning in networking, IoT systems, and communication technologies for intelligent robotic applications. It includes practical exposure to Robot Operating System (ROS), simulation tools like Gazebo, and Cadence for electronic system design and analysis. The lab is equipped with modern networking tools and protocols to understand real-time data exchange and system connectivity. Students work on IoT-enabled projects, enhancing skills in smart and connected environments. It prepares learners to design and manage communication frameworks for advanced robotic and automation systems.

**cadence**<sup>®</sup>



## Design & Innovation Facility

Design & Innovation Facility is a collaborative space for product design, rapid prototyping, and engineering innovation. It is equipped with latest design software such as SolidWorks and ANSYS for advanced modeling, simulation, and analysis.



The facility supports hands-on development through modern tools for fabrication and testing of prototypes. It fosters creativity, interdisciplinary collaboration, and problem-solving. Students gain practical exposure to transform ideas into functional, industry-ready products.

## Material Testing Facility

Material Testing Facility enables advanced evaluation of engineering materials and components for strength, durability, and reliability. It is equipped with instruments such as Universal Testing Machine (UTM) for tensile, compression, and bending tests. The facility also includes modern characterisation tools like SEM for microstructural and failure analysis. Students gain hands-on experience in testing methodologies and material behavior under different loading conditions. It supports research, product validation, and quality assessment for robotics, design, and manufacturing applications.



## Intel® AI Unnati Lab

The Intel® Unnati AI Lab at The NorthCap University is a strategic, future-ready high-performance computing facility to support teaching and research in Artificial Intelligence, Machine Learning, and Generative AI. Built on Intel®'s latest 5th Gen Xeon® Scalable processor architecture, the lab is designed to support compute-intensive AI/ML, Generative AI, and HPC workloads, enabling students and faculty to work on large-scale model training, inference, distributed learning, and applied AI solutions. The proposed multi-node architecture—with dedicated compute nodes and a centralised master server—ensures scalability, reliability, and enterprise-grade performance, closely mirroring industry and research environments.

The integration of the Intel® oneAPI ecosystem, AI Analytics Toolkit, OpenVINO™, and distributed training frameworks positions the lab as a deployment-oriented AI infrastructure, moving beyond experimentation to production-level workflows. This aligns strongly with current industry best practices and evolving AI deployment standards.

As part of the Intel Unnati initiative, the lab also functions as a catalyst for faculty upskilling, student certifications, community outreach, and industry-aligned training programmes, strengthening NCU's role as a regional hub for AI talent development.



# Intellectual Capital



**Prof. Swaran Ahuja**  
Advisor, Academic Affairs



**Prof. Sharda Vashisth**  
Professor, HOD, MDE &  
Dean - International Affairs



**Prof. (Dr.) Manoj Kumar Gopaliya**  
Professor,  
Dean, Academic Affairs



**Prof. Anjali Garg**  
Professor & Director,  
CDOE



**Dr. Vaishali Sahu**  
Associate Head &  
Dy. Director - IQAC



**Dr. Pooja Sabherwal**  
Associate Professor &  
Dy. Dean - International Affairs



**Dr. Vandana Khanna**  
Associate Professor &  
Dy. Dean - PhD Programme



**Dr. Satnam Singh**  
Associate Professor



**Dr. Mona Aggarwal**  
Associate Professor



**Dr. Anmol Bhatia**  
Associate Professor



**Dr. Akanksha Mathur**  
Associate Professor



**Dr. Roshan Raman**  
Associate Professor



**Dr. Anu Tonk**  
Assistant Professor (Sel. Grade)













**Dr. Aman Garg**  
Assistant Professor (Sr. Scale)

# Career Opportunities

## BTech Robotics and Artificial Intelligence

After completing BTech in Robotics and AI from The NorthCap University, graduates gain expertise in robotics, artificial intelligence, automation, and intelligent systems. The programme builds foundations in programming, control systems, data analytics, and smart technologies aligned with Industry 4.0/5.0. Students develop practical skills through laboratories, projects, and real-world problem-solving, enabling them to adapt to emerging domains and excel in engineering and digital roles. Graduates are prepared for innovation-driven industries, research, and global technology organisations.

Industry	Employers	Roles in Demand
Robotics & Automation		Robotics Engineer, Automation Engineer, Control Systems Engineer
Artificial Intelligence & Machine Learning		AI Engineer, Machine Learning Engineer, Deep Learning Engineer
Autonomous Systems & Self-Driving Tech		Autonomous Systems Engineer, Perception Engineer, Robotics Software Engineer
Industrial IoT & Smart Manufacturing		IoT Engineer, Embedded Systems Engineer, Smart Manufacturing Engineer
Healthcare Robotics & AI		Medical Robotics Engineer, AI Healthcare Specialist, Bio-robotics Engineer
Drone Technology & UAV Systems		UAV Engineer, Drone Software Developer, Flight Control Engineer
Research, Innovation Labs, and Higher Studies		Research Scientist, Robotics Researcher, PhD Scholar
Startups & Product Development		Robotics Product Engineer, AI Product Engineer, Innovation Engineer
Defense & Space Robotics		Space Robotics Engineer, Autonomous Navigation Engineer, Defense Systems Engineer
EdTech & Training (AI/Robotics)		AI Trainer, Robotics Instructor, Content Developer

# Global Opportunities

At The NorthCap University (NCU), students are at the heart of its internationalisation vision. With 25+ active collaborations across leading universities worldwide, NCU offers a truly global learning ecosystem in the domains of AI & Robotics.

NCU has built strong academic partnerships with globally recognised institutions such as Queensland University of Technology (Australia), Shibaura Institute of Technology (Japan), Northern Illinois University (USA), National Tsing Hua University (Taiwan), Universiti Teknologi Malaysia (Malaysia), University of East Anglia (UK), University of North Florida (USA), and Providence University (Taiwan).

These collaborations are designed to directly benefit students by opening pathways to:

- Semester exchange and study abroad programmes, allowing students to experience global classrooms and diverse cultures
- Dual degree opportunities, enhancing employability with internationally recognised qualifications
- Short-term immersion programmes and summer schools focused on emerging technologies
- Joint research and innovation projects in areas such as AI, robotics, embedded systems, semiconductors, and smart technologies

Students gain hands-on exposure to advanced laboratories, global industry practices, and interdisciplinary learning environments, enabling them to work on real-world challenges aligned with Industry 4.0 and beyond. These experiences not only strengthen technical expertise but also build critical thinking, cross-cultural communication, and global adaptability.

In addition, NCU students interact with international faculty, participate in global hackathons, and engage in collaborative projects, giving them a competitive edge in careers related to intelligent systems, automation, robotics engineering, and AI-driven technologies.

Through its strong global network, NCU ensures that students are not just learners, but future-ready innovators with a global perspective, equipped to lead in the rapidly evolving world of electronics, AI, and robotics.



The international collaboration of QUT Australia & NCU promotes student exchange, joint research, and innovation in Robotics and Artificial Intelligence, providing students with valuable global academic and industry exposure.

# Glimpses of Industrial Engagement in Robotics & AI

## Novus Hi-Tech, Gurugram



Novus Hi-Tech, Gurugram, provided valuable practical exposure to advanced industrial automation and robotics systems, including industrial robots, AGVs, and autonomous vehicle testing. It featured an insightful company presentation, a guided facility tour, and live demonstrations of cutting-edge technologies. An interactive Q&A session with industry experts offered deeper understanding of real-world applications and industry practices. The experience strengthened industry readiness and bridged the gap between theoretical learning and practical implementation.

## Addverb Technologies, Noida



Senior leadership team engaged with Addverb Technologies, Noida, a leading robotics and automation company known for creating advanced autonomous robots. They explored the collaboration possibilities in the area of Robotics & AI. The engagement provided exposure to cutting-edge automation and robotics technologies and enhancing understanding of real-world applications relevant to the Robotics & AI curriculum. Furthermore, our curriculum was vetted and endorsed by industry experts from Addverb Technologies, ensuring alignment with current industry practices and standards.

## FANUC, Gurugram



FANUC, Gurugram, offers valuable exposure to world-class industrial automation and robotics technologies. The visit included live demonstrations of advanced robotic arms, CNC automation systems, and smart manufacturing solutions used in modern industries. Participants explored real-time applications of robotics in precision engineering and high-speed production environments. The session also featured expert interactions, providing insights into industry practices, programming, and future trends in automation. The experience enhanced understanding of industrial robotics and strengthened practical knowledge aligned with Industry 4.0.

## Sanden Vikas, Faridabad



Sanden Vikas, Faridabad, offers valuable exposure to automation-driven manufacturing systems. The facility showcased the integration of PLC-controlled assembly lines, robotic handling systems, and advanced process automation in HVAC compressor production. Participants observed real-time industrial applications of sensors, actuators, and control systems ensuring precision, efficiency, and quality. The visit also highlighted the role of robotics and intelligent automation in modern manufacturing environments aligned with Industry 4.0/5.0. This experience strengthened understanding of practical implementation of automation, control, and robotics concepts.

## Tinkering Lab - A playground for Robotics & AI innovation



Hands-on Robotics and AI Projects in the Tinkering Lab provide students with opportunities to design, build, and experiment with innovative solutions. The lab encourages experiential learning through real-time projects involving robotics, AI algorithms, and embedded systems. Students work on problem-solving tasks, prototype development, and system integration across interdisciplinary domains. It inculcates creativity, critical thinking, and innovation through a maker-driven environment. The facility empowers learners to transform ideas into functional prototypes aligned with emerging technological trends.

### Student Innovation Showcase

The DEXTO DVI Robot, an in-house innovation developed-Humanoid Robot by students, showcases hands-on learning in Robotics and AI. Designed and built from concept to implementation, the project integrates mechanical design, electronics, control systems, and intelligent algorithms, reflecting students' ability to apply classroom knowledge to real-world robotic solutions.



A 3D-printed prosthetic robotic arm developed by students highlights the application of robotics principles in designing human-assistive systems for social good. The project integrates mechanical design, actuation mechanisms, embedded electronics, and control systems to replicate functional human hand movements.



# Innovation & Entrepreneurship Ecosystem

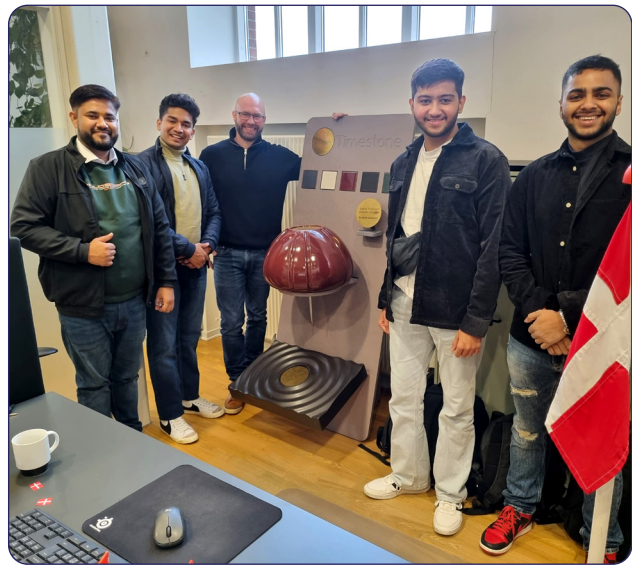


The BTech programme in Robotics and Artificial Intelligence is strongly supported by a dynamic Innovation & Entrepreneurship ecosystem designed to foster technology-driven problem solving and venture creation. Through structured engagement with global innovation partners such as CGC, Denmark, students are exposed to advanced innovation frameworks, design thinking methodologies, and lean startup practices.



The ecosystem integrates domain-specific learning in robotics, automation, computer vision, and machine learning with entrepreneurial competencies such as business model development, product-market fit analysis, and technology commercialisation. Students are encouraged to translate their technical ideas—ranging from intelligent robotic systems and autonomous solutions to AI-based applications—into scalable, real-world products and startups.

Dedicated support mechanisms such as innovation labs, incubation support, mentorship from industry experts, and participation in hackathons and startup challenges further strengthen this ecosystem. The programme also emphasises interdisciplinary collaboration, enabling students to combine robotics and AI with domains such as healthcare, manufacturing, agriculture, and smart infrastructure.



# Alumni Testimonials



## **Sulabh Kumra**

**Robotics & AI Research Engineer,  
Coupang, USA  
BTech 2009-2013**

My journey in robotics began during my BTech at The NorthCap University, where I had the opportunity to work on challenging robotics projects and research initiatives. The programme provided a strong foundation in robotics, artificial intelligence, and intelligent automation, while encouraging hands-on experimentation and interdisciplinary learning. Through advanced laboratories, project-based learning, and mentorship from faculty, I developed the technical and analytical skills required to work on complex robotic systems.

The emphasis on innovation and real-world problem solving during my undergraduate studies helped me build a deep interest in robotic manipulation and AI-driven systems. The exposure to robotics research and practical development during the BTech programme prepared me to pursue advanced work in robotics and contribute to cutting-edge technologies in the field. My experience at NCU played a significant role in shaping my career in robotics and artificial intelligence.



## **Vismit Varshney**

**Country Manager,  
Maruti Suzuki India Limited  
BTech 2011-15**

Working with AI-based technologies in the industry has shown me firsthand how rapidly this field is growing and transforming the way we solve problems. My foundation from The NorthCap University helped me build the technical confidence to take on real-world challenges. For students considering a career in Robotics and AI, I can say with confidence that this domain offers exciting opportunities, meaningful innovation, and a strong demand in today's job market. Pursue it with curiosity, dedication, and a passion for learning.



## **Danish Kapoor**

**Tech Audit, Senior Manager,  
Protiviti India Limited  
BTech 2014–2017**

Being an alumnus of The NorthCap University, I have seen firsthand how multidisciplinary learning and industry exposure prepare students for evolving technology careers. The hands-on approach to emerging technologies, especially in areas like Robotics and AI, equips students with practical skills and confidence to innovate and succeed in real-world environments. I'm proud of my association with the university and its focus on bridging academic excellence with industry relevance.



## **Shivam Nautiyal**

**Solution Delivery  
Associate, Deloitte  
BTech 2014–2018**

During my time at The NorthCap University, I was deeply involved in hands-on robotics projects, which helped me translate theoretical concepts into practical solutions. Working on real-time systems, automation, and interdisciplinary projects strengthened my problem-solving skills and prepared me for industry challenges. The strong emphasis on experiential learning and mentorship at NCU played a crucial role in shaping my professional journey. The BTech in Robotics & AI programme truly equips students with the skills needed for future technologies.

# Leaders on Campus



**Amit Sinha Roy**

VP - Global Head,  
Strategic Alliances,  
Tata Communications



**Aman Nath**

Co-Founder  
& Chairman,  
Neemrana Hotels



**Rocky Mohan**

Brand Custodian,  
Old Monk  
Founder, Chef Pin



**Mussarat Hussain**

Head - HR, Suzuki  
R&D Center India



**Rashmi Mohanty**

CFO,  
SBI Cards



**Dr. Kiranpreett Kaur**

CHRO,  
CPM India



**Alok Lall**

Senior Leader,  
Microsoft India  
& South Asia



**Mahesh Kanchan**

Marketing Director,  
India & Neighbouring  
Countries, Bacardi



**Durr-e-Afshan**

Dy. VP HR,  
HDFC Ergo  
General Insurance



**Shalvi Chitkara**

Senior VP - COO,  
Data & AI, Genpact



**Deepak Dobriyal**

Senior VP,  
Global Talent  
Management,  
Birlasoft



**Pavan Desiraju**

Director - People  
Partner, Sandisk



**Monisha James**

VP HR,  
PNB MetLife



**Himanshu Joshi**

Head, Direct & EDM,  
HDFC Life



**Anupam Shrivastava**

Former Chairman  
& Managing  
Director, BSNL



**Neetu Sidana Thapliyal**

Director & Head, HR  
Forvis Mazars Group



**Kaushik Chakraborty**

Chief People Officer,  
Savills India



**Biswajit Bhattacharya**

Partner & Automotive  
Industry Leader, IBM  
India & South Asia



**Kiran Yadav**

Chief People Officer,  
Canara HSBC  
Life Insurance

# Eminent Visitors at NCU



Late Dr. A.P.J. Abdul Kalam, Former President of India  
at the NCU Campus



Shri. Bandaru Dattatraya,  
Former Governor of Haryana



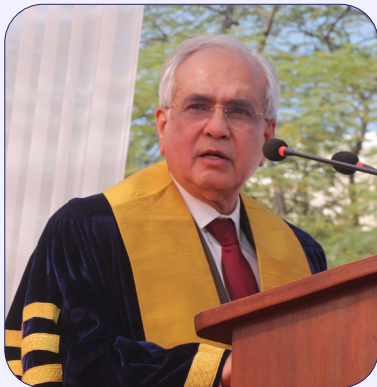
Prof. Kaptan Singh Solanki,  
Former Governor of Haryana



Late Shri. Jagannath Pahadia,  
Former Governor of Haryana



Justice Dipak Misra  
Former Chief Justice of India

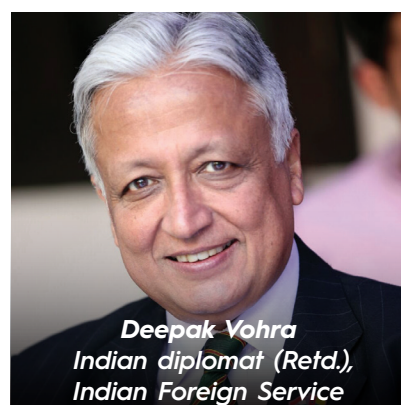
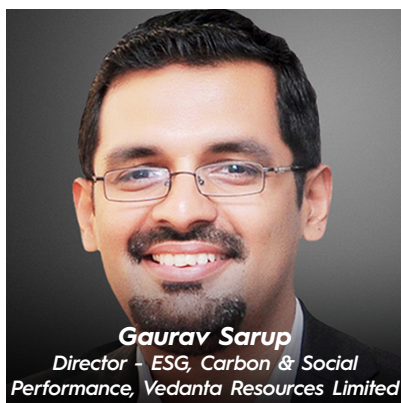
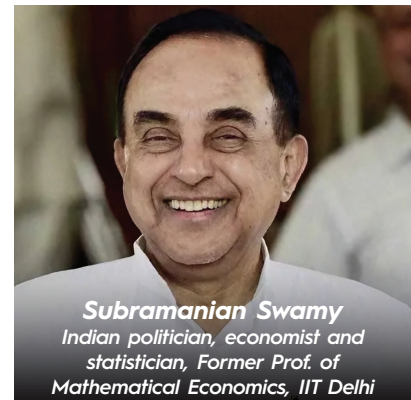


Dr. Rajiv Kumar  
Former Vice-Chairman,  
NITI Aayog



Dr. Praveer Sinha  
CEO & Managing Director,  
The TATA Power Company Ltd.

# Masterclasses at NCU



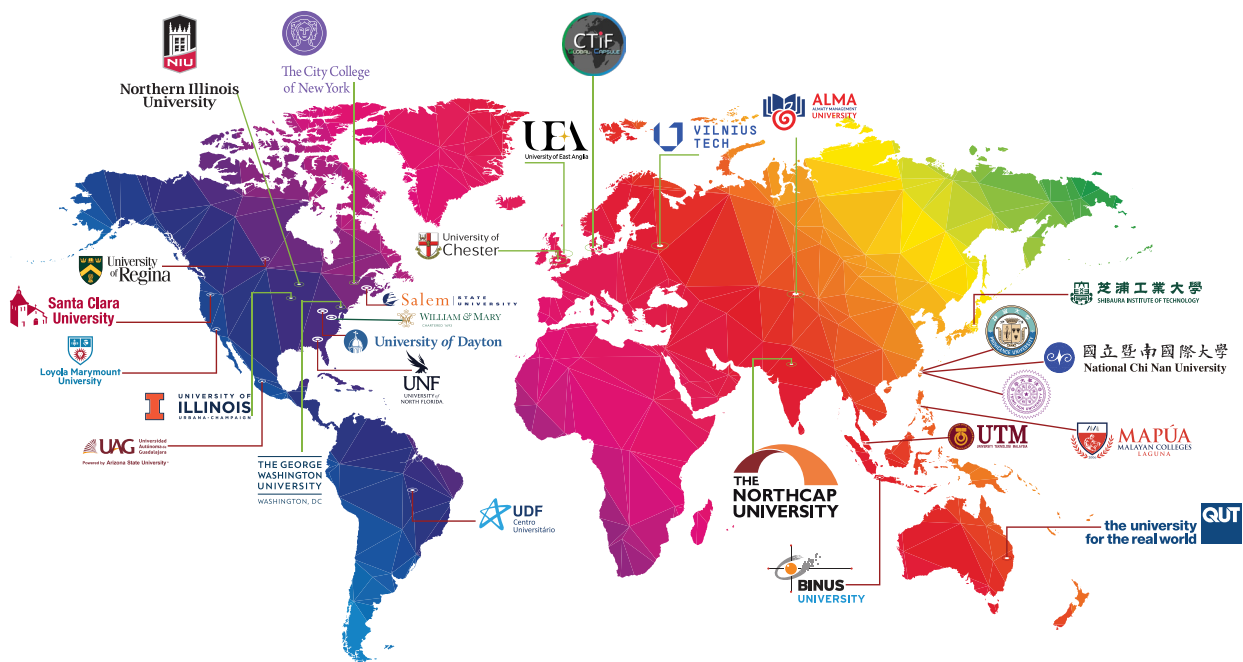
# NCU's International Relations Office (IRO)

## Co-teaching, Immersion, Student & Faculty Mobility and Research

NCU is proud to have partnered with 25+ reputed institutions from across the world based on four pillars embracing India's New Education Policy (NEP) 2020: Digital-First, Innovation, Internationalisation and Organisational Readiness. The university has signed a number of MoUs and has entered into many collaborative partnerships with international universities to promote:

- Exchange of information, experience & culture
- Student exchange programmes
- Short and long-term exchange of faculty members
- Collaborative research
- Summer internship & immersion programmes for students
- Dual degrees

## NCU's Global Education Partners





## Global Immersion at NCU

At The NorthCap University (NCU), global learning is central to the academic experience, with international immersion programmes designed to blend academics, research exposure, and cultural exploration. These initiatives offer students and partner universities a deeper understanding of India's evolving knowledge ecosystem while fostering meaningful global collaborations.

A key initiative is India Odyssey, organised by NCU's International Relations Office. This flagship programme brings international students to India for a curated journey that combines classroom learning with real-world exposure and cultural engagement.

**India Odyssey (2025)** welcomed students from the University of North Florida (UNF), USA. Participants attended expert-led sessions, engaged with researchers, and visited key institutions and industry partners, gaining insights into India's technological, business, and policy landscape. Their experience was enriched by cultural exploration, including historic sites, local markets, cuisine, and traditional art forms.



**India Odyssey 2.0 (2026)** hosted students from Queensland University of Technology (QUT), Australia, for a five-day immersive programme. It featured masterclasses on AI and entrepreneurship, AR/VR experiences, and industrial visits to organisations like Hero MotoCorp and FANUC India. Cultural highlights included visits to Delhi landmarks and the Taj Mahal, along with interactive sessions and a cultural evening.



Programmes like India Odyssey exemplify NCU's commitment to building globally competent learners. By bringing together academic exchange, cultural immersion, and collaborative learning, these initiatives strengthen international partnerships and nurture a deeper appreciation of India's academic, industrial, and cultural landscape.



## A Safe, Inclusive Campus for Everyone

At NCU, we prioritise nurturing female talent and strongly support advancing education opportunities for women.

## Zero Tolerance for Ragging

At NCU, we take immense pride in maintaining a campus that is both safe and inclusive for all students. With a strict zero-tolerance policy towards ragging, we ensure a supportive and respectful environment where every individual is valued. Our commitment to fostering a culture of respect, safety, and camaraderie allows students to thrive academically, socially, and personally, making NCU a place where every voice is heard and every student feels welcome.



## Eligibility

- 10+2 Examination conducted by Central Board of Secondary Education or equivalent examination from a recognised board in any stream.
- Must Qualify JEE Mains/ CUET-UG/ Any other national-level test in the discipline of UG programme.
- In case a student has not appeared in any of the above-mentioned entrance examinations, NCU will conduct its own entrance test in the discipline of UG Programme.

## Programme Fees

Programme	Annual Fee for Indian Students (INR)			Annual Fee for Child/Ward of NRI/International Students (INR)
	TUITION FEE	DEVELOPMENT FEE	TOTAL ANNUAL FEE	ANNUAL FEE
BTech - Robotics & AI	2,62,000	65,500	3,27,500	4,68,000

## Scholarships and Fee Concessions

The NorthCap University is deeply committed to upholding the 'Right to Education' for all students, ensuring that no one faces barriers in their academic journey. We are dedicated to providing merit-based scholarships, fee concessions, and financial support each term, enabling students to pursue their educational goals without difficulty. Our mission is to empower students to achieve their aspirations, equipping them to succeed in today's competitive job market and to become responsible global citizens.

Each year, we celebrate the achievements of our top-performing students and offer fee concessions and financial aid to those from diverse socio-economic backgrounds. NCU takes pride in supporting full fee concessions for female students pursuing STEM education. This year, we awarded Hatch Scholarships worth Rs. 22.15 lakhs to 18 outstanding female students. Students who make it to the Dean's List are also recognised and rewarded with scholarships.



## The Only University in Gurugram's City-centre Offering a Holistic Educational Experience

An incredible campus experience awaits you at The NorthCap University. Make the best use of the opportunity to engage in a holistic campus experience. Discover your talent amidst a vibrant community of academicians and young enthusiasts.

NCU offers you a place to meet people from different backgrounds, join exciting student clubs and societies, engage in various fests, competitions and events and get involved in volunteering, sporting and cultural activities.

Student upskilling is our end goal, and we keep upgrading facilities and technology so our students achieve their education, career, and personal goals, and become active members of the community at large.

Our bustling campus is a testament to NCU's vibrant, welcoming, inclusive and safe campus culture. Come, discover your passion as part of our community of 3,500+ students and 15,000+ alumni.



Formerly ITM University, Gurugram

Sector 23-A, Gurugram - 122017

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