SHIV NADAR

INSTITUTION OF EMINENCE DEEMED TO BE UNIVERSITY

DELHI NCR

DEPARTMENT OF CIVIL ENGINEERING

Why Shiv Nadar University?

Shiv Nadar University is a multidisciplinary research university established in 2011 by Mr. Shiv Nadar, one of Asia's foremost philanthropists and a pioneer of the technological revolution in India. The four Schools at the university offer undergraduate, postgraduate, and doctoral degrees in Engineering, Natural Sciences, Humanities and Social Sciences, and Management an Entrepreneurship. It is the youngest university recognised as an Institution of Eminence by the Government of India, a distinct category of higher education institutions that "strive to become the top hundred Institutions in the world over time". In the Government's National Institutional Ranking Framework (NIRF), the university has been the youngest institution in the 'Top 100' Overall list for the last five years.

ANALYTICAL THINKING, CREATIVITY, PROBLEM-SOLVING:
with research programs, internships, entrepreneurial opportunities, and more, our curriculum teaches key skills

PHYSICAL AND EMOTIONAL WELL-BEING:
a vibrant campus life on our 286-acre green campus is designed just for that

ACADEMIC EXCELLENCE:
our faculty come from top institutions in India and the world

JOBS, HIGHER STUDIES OR START-UPS:
we prepare our students for a variety of aspirations

Why Study Civil Engineering at Shiv Nadar University?

The Department of Civil Engineering is a department for the 21st century where the intellectual vigor of the students is nurtured by offering academic freedom through creative, cutting-edge, and industry-oriented curricula. With innovative and engaging teaching methods assisted by state-of-the-art facilities, the department endeavors to mold the students into excellent professional engineers by training them in different aspects of civil engineering through modern, technological, analytical and computational courses.

As proposed in National Education Policy 2020, “mathematics and mathematical thinking will be very important for India’s future and India’s leadership role in the numerous upcoming fields and professions”. The Department of Civil Engineering recognizes that and is working tirelessly on the principle of “think globally, act locally” to shape future-ready leaders who will meet the challenges arising in our interconnected world. Keeping in mind the importance of industrial interaction and networking, the department organizes various expert talks, workshops, and industrial training/visits for its students throughout the academic year. Meritorious students are offered generous scholarships, financial assistance, tuition fee waiver, internships, and other opportunities to help deserving students achieve the finest education.

As a testimony of academic rigor and excellence, the Department of Civil Engineering has received the prestigious “Fund for Improvement of S&T Infrastructure (FIST) – 2022” grant from the Department of Science and Technology, Government of India.

Curriculum

The Department of Civil Engineering at Shiv Nadar Institution of Eminence has a dynamic curriculum revised regularly to incorporate recent industry and research developments. Great emphasis is given to objective-based learning and hands-on training with a core motive to develop and improve students' skillsets. Currently, the department successfully runs the B. Tech. and Ph.D. programs.

In August 2022, the Civil Engineering Department revamped its UG curriculum and integrated modern technological topics such as Remote Sensing, Machine Learning, Sensors, and Risk Analysis. The department strongly encourages the UG students to complete one specialization in "Sustainable Infrastructure Systems," "Water, Environment and Climate," and "Urban Networks Systems" as a part of their B. Tech. degree.

B. Tech. (Civil Engineering)	• Annual intake through SNUSAT or JEE-mains score. • All semester courses are designed to allow students to explore and enhance core competencies. • Offers specializations in "Sustainable Infrastructure Systems," "Water, Environment and Climate," and "Urban Networks Systems". • UG students are also encouraged to earn a minor degree in the areas of their interest along with a B. Tech.
Ph.D. (Civil Engineering)	• Ph.D. students can apply twice in an academic year (Spring and Monsoon semesters). • Applicants must have a minimum 7 CGPA for application and are selected based on their performance in the Shiv Nadar IoE Ph.D. entrance examination. • All successful full-time Ph.D. students are offered a tuition fee waiver and a generous monthly stipend to cover their living expenses. • The Ph.D. program is generally for 5 years, and students must stay on campus.

State-of-the-art Laboratories

The Department of Civil Engineering has developed several state-of-the-art laboratories with sophisticated instruments. Domain expert faculty members head each laboratory with a supportive and efficient laboratory technical staff. The department has a high teacher-to-student ratio, enabling the faculty members to mentor each student toward achieving excellence in learning.

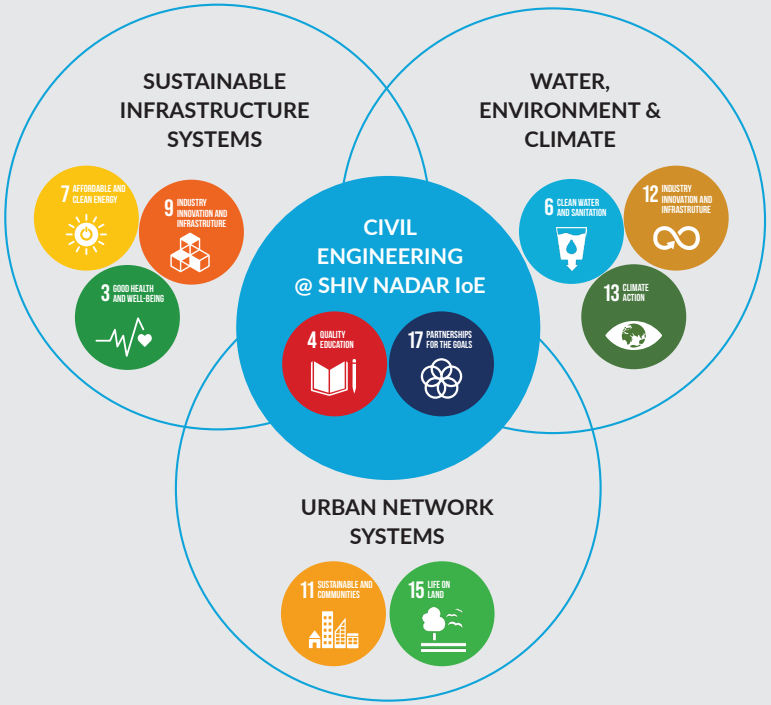
UG Laboratories	• Concrete Technology Laboratory • Experimental Soil Mechanics Laboratory • Fluid Mechanics Laboratory • Strength of Materials Laboratory • Tansportation Engineering Laboratory
UG and PG-Research Laboratories	• Civil Engineering Software Laboratory • Environmental Engineering Laboratory • Geoinformatcs Laboratory • Hydraulic Engineering Laboratory
PG-Research Laboratories	• Advanced Materials and Building Energy Laboratory • Theoretical Geomechanics Laboratory • Air Quality Laboratory • Disaster Management Laboratory • Air Quality Sampling Laboratory • Water Management Field Laboratory

Civil Engineering Specializations

The United Nations accepted 17 Sustainable Development Goals (SDG)" as the "shared blueprint for peace and prosperity" in 2015. As a part of which, sustainable development of built and natural environments along with economic well-being of people are concomitant cardinal goals for modern society.

The Department of Civil Engineering at Shiv Nadar IoE realizes that it is our basic responsibility to provide learning opportunities to our students in various aspects of sustainable Civil engineering practices which should be duly supported by modern tools and technologies e.g. sensor technology, risk analysis, machine learning, IoT, etc. In order to provide multidisciplinary UG education to our students, the current UG course curriculum is being redesigned to offer the following three broad specializations:

1. Sustainable Infrastructure Systems
2. Water, Environment and Climate
3. Urban Network Systems



Department of Civil Engineering Faculty

The Department has highly skilled faculty members with diverse backgrounds covering modern tools and sustainability aspects, who have expanded the scope of teaching and research beyond traditional civil engineering. All the faculty members have received their Ph.D. from IITs and reputed foreign universities. Several department faculty members have received research grants from the Government of India and allied agencies to conduct research in contemporary civil engineering domains.

Department of Civil Engineering Faculty

DR. GYAN VIKASH
Associate Professor and Head, PhD IIT Kanpur
Specialization: Geotechnical Engineering, Computational geomechanics, Constitutive modelling of geomaterials, Physics based - data driven modelling in geomechanics.

DR. ATRI NATH
Assistant Professor, PhD IIT Kharagpur
Specialization: Structural Engg, Computational mechanics, Steel structures, fatigue and fracture, Material modelling

DR. GHANSHYAM PAL
Associate Professor, Ph.D., University of Mississippi, USA
Specialization: Structural Engineering, Building physics and sustainability, Novel cementitious composites, Multiscale numerical modelling.

DR. GOPAL DAS SINGHAL
Associate Professor and Associate Head, PhD IIT Roorkee
Specialization: Water Resources Engineering, Hydraulic structures, River hydraulics, Smart agricultural water management.

DR. ELLORA PADHI
Assistant Professor, PhD IIT Kharagpur
Specialization: Water Resources Engineering, Turbulence in open channel flow, Sediment transport phenomena, River meandering.

DR. GURMAIL BENIPAL
Professor, PhD IIT Delhi
Specialization: Structural Engineering, Constitutive modelling and structural theory, Damage elasto-plasticity and Thermo-chemo-visco-elasticity of concrete.

DR. HITESH UPRETI
Assistant Professor, PhD IIT Roorkee
Specialization: Water Resources Engineering, Remote sensing in agriculture and water resources, Smart agricultural water management, Irrigation hydrology.

DR. JAGABANDHU DIXIT
Associate Professor, PhD IIT Bombay
Specialization: Earthquake Engineering and Structural Dynamics, Natural hazards and disaster risk reduction, Disaster mitigation and emergency management.management, Irrigation hydrology.

DR. MANOJ KUMAR SINGH
Assistant Professor, PhD IIT Delhi
Specialization: Structural Engg, Adaptive thermal comfort, Occupant's behavior and built energy interaction, Building energy simulation, High-performance building envelopes

DR. SAILESH NARAYAN BEHERA
Associate Professor, PhD IIT Kanpur
Specialization: Environmental Engineering, Air quality monitoring and aerosol modelling, Policy evaluation of pollution control, Pollution scenarios with water-air-soil interactions.

DR. SHALINI RANKAVAT
Assistant Professor, PhD IIT Delhi
Specialization: Transportation Engineering, Transport planning and policy, Traffic safety, Public transport and NMV planning.

DR. SUMEDHA MOHARANA
Assistant Professor, PhD IIT Delhi
Specialization: Structural Engineering, Piezoelectric impedance based structural health monitoring, Smart materials, Building science.

DR. SUSANT KUMAR PADHI
Assistant Professor, PhD IIT Guwahati
Specialization: Environmental Engineering, Biological & Physico-chemical processes, Membrane technology for wastewater treatment, Solid waste management.

OUR Program

The **Opportunities for Undergraduate Research (OUR)** program at Shiv Nadar Institution of Eminence aims to give students hands-on experience in conducting research and doing independent work under faculty supervision. By participating in the OUR program, students are encouraged to satisfy their natural inquisitiveness and grow their expertise in research methodology. As a result, students have earned plaudits in the field of research from their early years in undergraduate studies. Some of the recent OUR projects include the following:

- Crop monitoring in the agricultural fields using satellite remote sensing techniques
- Modelling of crop yield using the AquaCrop model and data collected in agricultural fields
- Analysis of Crop Water Stress Index (CWSI) and its modelling using soft computing techniques
- A finite element modelling approach to determine the shape and pattern of recycled interlock pavement
- Estimation of development length in a smooth and rough narrow channel
- Study to understand the thermal performance of a non-air-conditioned hostel room of Shiv Nadar IoE
- Numerical analysis of flow in a narrow open channel with various flow depth
- Mapping and assessment of surface water resources in GB Nagar district using remote sensing
- A value of information approach for urban resilience and sustainability: a case study on Parvati Valley
- Modelling of effective thermal properties of Phase Change Materials (PCM) – Cement mortar composites

Pathway to Progress

Our undergraduate and postgraduate degrees have enabled our students to enter a wide range of successful careers. Civil engineering professionals can find employment in both public (CPWD, NHAI, BRO, MES, Railway, Ministry of Water Resources, BIS, DRDO, CPCB, etc.) and Public Sector Undertakings (GAIL, HAL, NTPC, NPCIL, etc.) Students can join government jobs and PSUs through the GATE (Graduate Aptitude Test in Engineering) and UPSC (ESE) exams.

In Civil Engineering. entrepreneurial students can start their careers as building planners, consulting engineers, quality assurance engineers, etc. in an organization and develop their own start-up after acquiring sufficient experience.

Many of our students have gone on to pursue M.S. and Ph.D. degrees in global universities upon completing their B. Tech. By acquiring degrees from prestigious institutions in India and abroad, our students are assuredly on the pathway to progress.

Student Outcomes

Over the years, the Civil Engineering Department has attracted a talented cohort of undergraduate and graduate students. Many of our graduated students got admission and fellowships for doing Masters and Ph.D. in well-reputed universities around the globe, such as Stanford University, the University of Texas A & M, TU Delft, University of Leeds, University of Waterloo, University Stuttgart, Arizona State University, etc. Many of our bachelor students also got job offers from industrial giants such as the Shapoorji Pallonji Group, Larson and Turbo, Tata projects, Saint-Gobain, RMS (Risk Management Solutions), RITES Ltd, etc.

Admissions Eligibility

Bachelor of Technology

Program	Selection Criteria	Class 12th Eligibility
Civil Engineering	Route 1 - JEE Mains 2024/ 2023	Aggregate of Physics, Chemistry and Maths must be >=65%
	Route 2 - SNUSAT Score + APT	
	Route 3 - CUET 2024 Score + Interview	
	Route 4 - Valid College Board SAT Score + Interview	
	Route 5 - Valid ACT Score + Interview	

Scan Here For More Details:

Contact Details

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