

SHIV NADAR

INSTITUTION OF EMINENCE DEEMED TO BE

— UNIVERSITY —

DELHI NCR



DEPARTMENT OF **LIFE SCIENCES**

2025-26



Why Shiv Nadar University?

Shiv Nadar University, Delhi-NCR, is a multidisciplinary research university founded in 2011 by Mr. Shiv Nadar, a leading philanthropist and a pioneer of India's technological revolution. The university comprises four Schools offering undergraduate, postgraduate, and doctoral degrees across Engineering, Natural Sciences, Humanities and Social Sciences, and Management & Entrepreneurship.

SNU is the youngest university recognised as an Institution of Eminence by the Government of India—a distinction awarded to institutions that "strive to become top 100 institutions in the world over time." In the Government's National Institutional Ranking Framework (NIRF), SNU has held its place as the youngest institution in the top 100 Overall category for the past five years. Most recently, SNU was named University of the Year 2024 in the Emerging Category (under 15 years) at the 10th FICCI Higher Education Excellence Awards.

These recognitions underscore the university's commitment to excellence in teaching, research, innovation, scholarship, and service to make meaningful social contributions.

ANALYTICAL THINKING, CREATIVITY, PROBLEM-SOLVING:

Didactic instruction is complemented by research projects, internships, entrepreneurial opportunities, and more, providing our curriculum with a strong balance of theoretical knowledge and practical application.

PHYSICAL AND EMOTIONAL WELL-BEING:

SNU is a vibrant community with numerous extracurricular activities on our beautiful 286-acre green campus that promotes everyone's holistic well-being.

ACADEMIC EXCELLENCE:

Our faculty hail from leading institutions in India and worldwide and their expertise is highly sought by academic journals, grant agencies, and policymakers.

JOBS, HIGHER STUDIES OR START-UPS:

Students are prepared for a world of opportunities, with alumni successfully placed in competitive postgraduate programs worldwide and leading biotechnology companies, among other fields. The only limits to our students' success are their interests and imagination.



Awards and Rankings



Recognized as an Institution of Eminence

1 of the only 4 private universities in the country to be designated as an Institution of Eminence by the Government of India



National Institutional Ranking Framework (NIRF)

Youngest university to be ranked among the top 100 of NIRF, 7 years in a row.



QS Asia Ranking 2024

41 in India; amongst top 36% in Asia.



#1 India's best young university

Careers 360, 2023 ranking of private universities



#7 Top Universities in India

Careers 360, 2024 ranking of private and public universities

nature index

#20 Chemistry
#26 All Sciences

Nature Index India 2024 ranking of Indian academic institutions



Times Higher Education Impact Rankings

Global Top 200; India Top 5

SDG 6 and SDG 2: Times Higher Impact Ranking 2023, 2024



#3 Top private university in India

#5 Top private university for employability

Indian Institutional Ranking Framework 2024



Awarded University of the year 2024 (Emerging category under 15 years)

10th FICCI Higher Education Excellence Awards 2024

Why Study Life Sciences at Shiv Nadar University?

The Department of Life Sciences at Shiv Nadar University is committed to advancing education and research in biology and biotechnology. Through the B.Sc. (Research) Biotechnology program, undergraduate students are introduced to both the foundational concepts and the latest advancements in biology. This comprehensive curriculum equips them with the skills and knowledge to excel in academia, research, and industry.

A hallmark of the program is its dynamic and continuously evolving approach, designed to offer an enriching educational experience. One of its key strengths lies in engaging undergraduate students as active contributors to research groups early in their academic journey. This seamless integration of research and coursework fosters a collaborative and immersive learning environment. By developing critical analytical and practical skills from the outset, the program prepares students for advanced studies and successful professional careers.

Highlights

Established in 2012, the Department of Life Sciences is recognized as one of the country's leading institutions for excellence in higher education and research.

Ranked 21st in India by the Nature Index India 2023.

Provides Ph.D. programs in Life Sciences and Bioinformatics, supported by financial assistance through university stipends.

Utilizes a wide range of model organisms, including bacteria, viruses, Arabidopsis, rodent models and insects along with various cell culture systems. The Department is equipped with advanced facilities for genomics, proteomics, computational analysis, and imaging.

Offers a B.Sc. (Research) program in Biotechnology, a 3+1-year undergraduate program aligned with the National Education Policy, with the final year dedicated to research projects.

Comprises a highly accomplished faculty of 19 regular members, one senior scientist, and three faculty fellows, renowned for their expertise in research and teaching.

Features state-of-the-art teaching and research laboratories.

Research encompasses diverse areas, including:

- Disease biology and drug discovery Tissue engineering and regeneration
- Ageing and metabolism
- Infectious diseases and immunity Neurobiology and cognitive sciences
- Food security and climate change

Hosts two specialized research centers:

- The Centre for Integrative and Translational Research (CITRes) – a 30,000 sq. ft. national facility dedicated to the study of animal models of disease and preclinical research.
- The Centre of Excellence in Epigenetics – a collaborative platform for cutting-edge epigenetic research.



Curriculum

The Department of Life Sciences curriculum meets national and international standards, adhering to the guidelines set by the National Education Policy and the National Credit Framework of the Government of India.

PROGRAMS OFFERED

Undergraduate

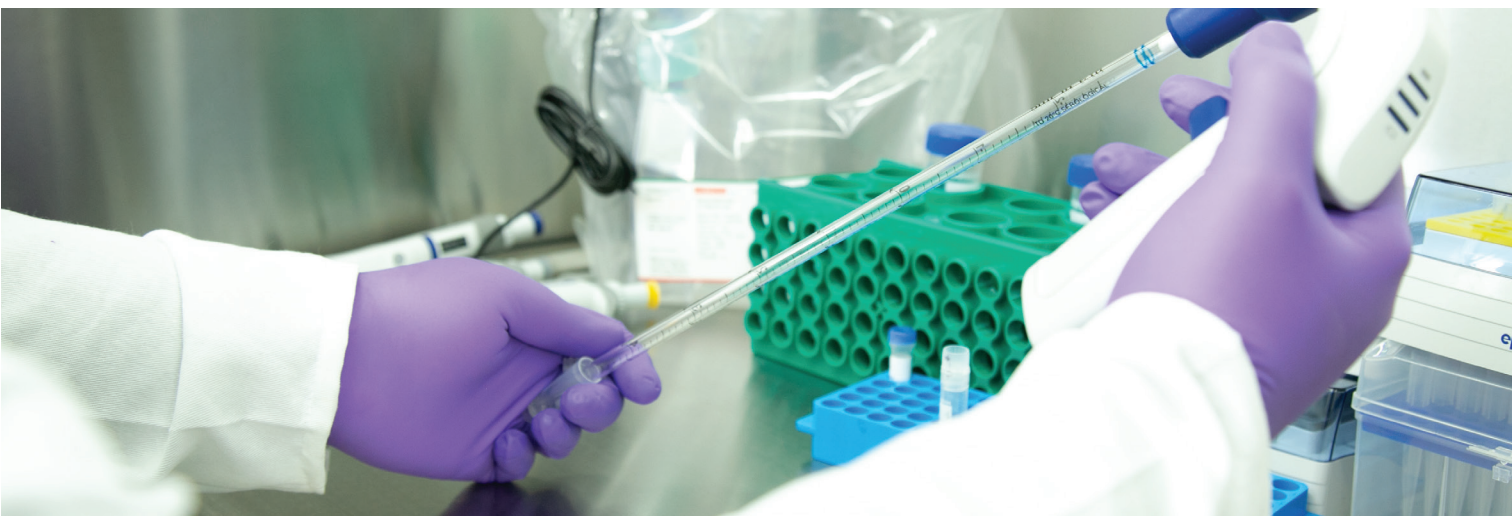
- Bachelor of Science (Research) in Biotechnology
- Foundation in Biotechnology (16 credits)
- Minor in Biotechnology (24 credits)

Doctoral

- Ph.D. in Life Sciences
- Ph.D. in Bioinformatics

COURSES OFFERED

LEVEL	COURSES
BASIC	Cell Biology, Molecular Biology, Genetics, Microbiology, Immunology, Ecology, Environmental Sciences, Animal physiology, Plant physiology, Developmental Biology, Biochemistry, Biostatistics
TECHNICAL	Genomics, Proteomics, Biophysics, Bio-Analytical Techniques, Bioinformatics, Recombinant DNA Technology, Animal Biotechnology, Plant Biotechnology, Industrial Biotechnology, Patent laws and Bioethics
ADVANCED	Epigenetics, Medical Microbiology, Host-Pathogen Interactions, Cell Signaling, Cancer Biology, Systems Biology, Drug Discovery, Neuroscience, and Cognition



B.Sc. (Research) Biotechnology

The B.Sc. (Research) Biotechnology program is a research-oriented course designed to provide students with valuable academic experience. It is aligned with the New Education Policy 2020. As part of their final year, students are required to undertake a research project lasting six months to one year in their chosen field. During this time, they gain hands-on experience in formulating hypotheses, designing and conducting experiments, analyzing data, and writing scientific reports.

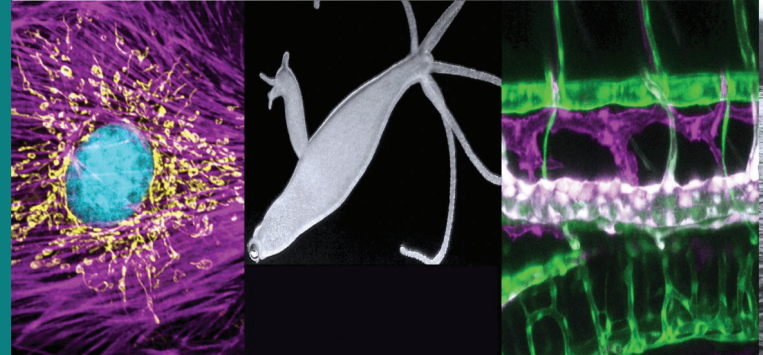
The program equips students to pursue doctoral degrees upon successfully completing 160 credits. Furthermore, students may opt to conduct a semester of research at another university or within an industry, provided they meet the program's core credit requirements.

Opportunities for Undergraduate Research (OUR)

The "Opportunities for Undergraduate Research" (OUR) program is a flagship initiative at Shiv Nadar University, fostering a research-oriented atmosphere for undergraduate students by allowing them to participate in research labs.

Through the OUR program, undergraduate students in their second and third years engage in research projects, gaining practical experience while conducting independent research under faculty guidance. The emphasis is on cultivating technical and analytical skills that enhance their understanding of biotechnology, which they develop during their academic pursuits.

This program aims to help students build a foundational understanding of how research questions are formulated and investigated while developing analytical skills that prepare them for advanced studies and careers in biotechnology.



Outcomes

- Expertise in utilising biological principles and biotechnology to tackle challenging biological issues.
- Proficient in designing and executing experiments, analysing data, and deriving logical conclusions.
- Capable of leveraging biotechnology knowledge to develop solutions for public health and welfare.
- Fully prepared to pursue diverse positions within the Biopharmaceutical and Biotechnology sectors, medical laboratories, medical transcription, funding organisations, and the Intellectual Property Rights (IPR) field.
- Well-prepared to seek advanced degrees (M.Sc., M.Tech, and Ph.D. programs) both in India and abroad.



Doctoral Program

The Department of Life Sciences offers an exceptional Ph.D. program aimed at cultivating independent researchers in a discovery-driven intellectual environment. Graduate scholars receive comprehensive training that includes academic publishing, research methodologies, and teaching skills through Teaching Assistantships, which prepare them for leadership roles in academia and research-oriented organisations. Additionally, Ph.D. candidates mentor undergraduate students involved in research (OUR) and thesis projects, enriching their mentoring experience. Currently, the Department offers Ph.D. programs in Life Sciences and Bioinformatics.

The Ph.D. programs in Life Sciences and Bioinformatics at Shiv Nadar University are designed to advance knowledge through rigorous training and innovative research. These programs emphasise interdisciplinary research, addressing critical areas such as Cancer Biology, Cell Signaling, Epigenetics, Neuroscience, Genomics, and Immunology. The research scope extends to Molecular Biology, Regeneration Biology, Translational Biology, Virology, Bioinformatics, Plant Biology, Bacterial Morphogenesis, and Biofilms, fostering a rich, collaborative environment for scientific discovery. Students employ state-of-the-art facilities to engage in collaborative initiatives that combine experimental and computational approaches.

Our programs provide students with the ability to investigate fundamental biological questions, thereby contributing to impactful research in fields such as Protein Folding and Stress Response, Chromatin remodelling factors and nuclear receptor signalling, Protein Structure Biology, Ecology & Evolutionary Biology, Noncoding RNA & gene regulation, Developmental Biology, Regeneration Biology, Vascular development, Lymphatic transdifferentiation, Animal Behavior, Disease genomics, Computational biology, Biophysics, Lipid Signaling, Metabolism and Drug discovery. This is made possible by the support of experienced faculty and global collaborations.



Student Support and Opportunities

Ph.D. scholars in the Department of Life Sciences receive comprehensive assistantships, including stipends, tuition waivers, and opportunities to present their research at national and international conferences. SNU's commitment to fostering innovation and translating research into real-world solutions creates an ideal environment for emerging bioinformatics and life sciences scholars.

FACULTY OVERVIEW

- Faculty members hold Ph.D. degrees and have undergone postdoctoral training at top research universities worldwide.
- Faculty research programs have led to numerous publications in high-impact journals.
- Faculty members are recipients of multiple awards and grants for their contributions.



The faculty's research interests span a wide range of disciplines within the life sciences including:

- Molecular biology
- Genetics
- Cell and developmental biology
- Microbiology
- Plant sciences
- Ecology
- Bioinformatics
- Cancer biology
- Evolutionary biology
- Neuroscience
- Aging
- Behavioral Sciences



Faculty Directory & Research Interests



Sanjeev Galande
University Professor and Dean,
School of Natural Sciences,
Ph.D., Indian Institute of Science, India

Chromosome Biology and Epigenetic Regulation.



Colin Jamora
Senior Professor, and Head, Department of Life Sciences, Ph.D., University of California San Diego, USA

Tissue regeneration and repair.



Prasun Kumar Roy
Distinguished Professor, Ph.D., Jadavpur University, India.

Neuroscience, Functional brain imaging, Clinical and computational neurobiology, Normal and impaired cognitive functioning, Degenerative disorders, Systems biology.



Ashish Gupta
Associate Professor, Ph.D., Jawaharlal Nehru University, India

Epigenetics and human diseases, cancer biology, regeneration biology



Ashutosh Singh
Associate Professor, Ph.D., Banasthali University, India

Bioinformatics, Genomics and structure-based drug designing



Richa Priyadarshini
Associate Professor, Ph.D., University of North Dakota, USA

Bacterial Cell Biology, Environmental Microbiology



Koyeli Mapa
Associate Professor, Ph.D., Ludwig Maximilian University, Germany

Protein Folding, Cell and Molecular Stress



Anindita Chakrabarty
Associate Professor, Ph.D., University of Missouri-Columbia, Missouri, USA

Cancer Biology, Cell signaling, Inflammation, Carcinogenesis and Cancer therapeutics



Naga Suresh Veerapu
Associate Professor, Ph.D., All India Institute of Medical Sciences, India

Virology, Virus-Host Interactions, Biology of HEV & HCV



Rohini Garg
Associate Professor, Ph.D., National Institute of Immunology, India

Epigenomics of Abiotic Stress Responses In Plants, Plant epigenomics



Sri Krishna Jayadev M.
Associate Professor, Ph.D., University of Delhi, India

Cancer Biology & cell signaling



Sachin Deshmukh
Associate Professor, Ph.D., National Center for Biological Sciences, Bengaluru

Hippocampus, Spatial Navigation, Entorhinal Cortex, Electrophysiology, Sensory Systems, Behavioural and Systems Neuroscience.



Geetanjali Chawla
Associate Professor, Ph.D., Indian Institute of Science, Bengaluru

Age-related Diseases, RNA Biology, model organism genetics, RNA therapeutics development



Rajan Vyas
Assistant Professor, Ph.D., Panjab University, Chandigarh

Structure-Based Drug designing using Protein X-ray Crystallography

Faculty Directory & Research Interests



Neelesh Naresh Dahanukar
Assistant Professor, Ph.D., University of Pune

Molecular ecology, Molecular phylogeny, biogeography and evolution, Evolutionary game theory and mathematical biology



Puli Chandramouli Reddy
Assistant Professor, Ph.D., University of Pune
Evolutionary Developmental Biology,

Regeneration Biology, Epigenetics and Genomics



Rudra Nayan Das
Assistant Professor, Ph.D., National Center for Biological Sciences, Bengaluru

Regeneration biology, Vascular development, Lymphatic transdifferentiation



Anil Kumar Challa
Senior Scientist, Ph.D., The Ohio State University

Molecular Genetics, Cell & Developmental Biology, Neurobiology



Tanvi Deora
Faculty Fellow, Ph.D., National Centre for Biological Sciences, Bengaluru

Neurobiology and Biomechanics of Insect Pollination, Tactile sensing, Multisensory integration, Flight control, Sensory ecology



Jugal Kishore Das
Ramalingaswami Fellow, Ph.D., Kalinga Institute of Industrial Technology, Bhubaneswar

Immunology, Immunotherapy, Metabolic disorders.



Kamlesh Ganesh Pawar
India Alliance Early Career Fellow
PhD., Freie Universitat, Berlin, Germany

Non-coding RNAs and their function, lung injury and infection

Student Outcomes Work Placements



Scan to Explore:
Student Achievements -
B.Sc. (Research) Biotechnology



Higher Education



Academic Collaborations



Admissions Eligibility

Bachelor of Science

Program	Selection Criteria	Class 12 th Eligibility
B.Sc. (Research) Biotechnology	Route 1: SNUSAT Score+Interview	Aggregate of best 4 academic subjects in the marksheet must be $\geq 65\%$ (must include English & Biology)
	Route 2: NEET Score 2025 or 2024+Interview	
	Route 3: Valid SAT (College Board) Score+Interview	
	Route 4: Valid ACT Score+Interview	
	Route 5: CUET 2024 Score+Interview	



SCAN FOR MORE DETAILS

Pathways to Admission into the Ph.D. Program

In Person interview

Tour campus facilities
Meet with faculty &
current students

Cleared JGEEBILS

(Common entrance examination)

1

Hold National Fellowship

(CSIR-JRF, UGC-JRF, DBT-JRF,
ICMR, INSPIRE, etc.)

2

Selected applicant will join a vibrant research and learning community and be offered a competitive stipend.



Contact Details

PROFESSOR SANJEEV GALANDE

University Professor and Dean,
School of Natural Sciences,
Email: sanjeev.galande@snu.edu.in

PROFESSOR COLIN JAMORA

Senior Professor, and Head,
Department of Life Sciences
Email: colin.jamora@snu.edu.in

DR. NEELESH DAHANUKAR

Undergraduate (UG) Advisor, Assistant Professor,
Department of Life Sciences, School of Natural
Sciences
Email: neelesh.dahanukar@snu.edu.in

DR. ASHUTOSH SINGH

Postgraduate (PG) Advisor, Associate Professor,
Department of Life Sciences, School of Natural
Sciences
Email: ashutosh.singh@snu.edu.in

MR. ANIL KUMAR SHUKLA

Sr. Administrative Assistant, Department of Life
Sciences, School of Natural Sciences
Email: anil.shukla@snu.edu.in

Shiv Nadar Institution of Eminence

NH 91, Tehsil Dadri, Gautam Buddha Nagar, Uttar Pradesh - 201314, India
Ph: +91-120-7170100, +91-120-2662002

SHIV NADAR

INSTITUTION OF EMINENCE DEEMED TO BE

UNIVERSITY

DELHI NCR



Scan Here For More Details