SVKM'S NMIMS Deemed to be UNIVERSITY

SUNANDAN DIVATIA SCHOOL OF SCIENCE

Department of Biological Sciences

5 Year Integrated MSc in Biomedical Sciences

Placement Brochure

2024-2025

SVKM'S NMIMS Deemed to be UNIVERSITY

SUNANDAN DIVATIA SCHOOL OF SCIENCE

Contents

Dean's Message

Dr. Jayakumar Singh Bondili

The SVKM's NMIMS Sunandan Divatia School of Science, was born out of the foresight of the University with a view to provide undergraduate and postgraduate students an opportunity to venture into the fascinating world of Science. The School aspires to be Centre of Excellence by creating a conducive student-centric environment that supports high quality teaching and research in niche areas of Science and Technology.

The UG and PG programs in Biomedical/Biological Sciences are designed to develop student's scientific, experimental, and analytical skills. Further, the research-intensive and laboratory-based curriculum covers contemporary subjects and is intended to meet the needs of the ever-evolving chemical & pharmaceutical industry, medical diagnostics industry, clinical research organizations, and research institutions. Our students have been trained by excellent faculty who have a strong academic research background. Besides, the students are exposed to state-of-the- art infrastructure and equipment to enhance their hands-on skills. Moreover, the compulsory research project as part of the curriculum, develops their technical skills and makes them ready to face the industry. To ensure the holistic development of the student, besides academics, students are a part of various committees/cells to hone their creative, social, cultural, and interpersonal skills.

I take pleasure in inviting companies to our school, for placements. Our effort is to enable interaction between students and companies to find the best match between their aspirations and requirements.

Happy Reading!

About Us

Sunandan Divatia School of Science (SDSOS), NMIMS started in 2007 with the aim to develop technically skilled manpower for Industry. In the past years, this institution has not only established itself as an apex Research Centre but has also provided training to graduate students for posts in the Pharmaceutical industry, in Para-Medical fields and more recently in Clinical Research organisations.

The main motto of this institute is to bestow its constant endeavour towards excellence in the Science and Technology field and nurture the future by providing quality education and research benefits.

Vision

To groom and develop emerging professionals and scientific scholars for the global education and research sectors in the emerging fields of Basic and Applied Sciences.

Mission

- **To offer a broad, thorough and intellectually challenging approach in the areas of Science**
- **To achieve academic excellence combined with industry and career oriented training through extensive lab based practical modules to facilitate contemporary research in specialized areas of Science**
- **To promote holistic development of students with overall personal development**

Courses Offered

Department of Biological Sciences

The courses offered by the Department are:

- B.Sc. Biomedical Science
- M.Sc. Biological Sciences
- Ph.D. Biological Sciences

About the Course

The curriculum framework of the course is uniquely crafted to impart contemporary knowledge in the core domain of Life Sciences through value-added education and also hone the dry lab skills of each individual.

The course stands unequivocal in its amalgamation of enhancing the skills of the individuals through the hands-on practice of a plethora of techniques (cell culture, HPLC, etc.) assisted by the state-of-the-art infrastructure.

The interpersonal qualities of communication, teamwork, and leadership are instilled in each individual in coherence with societal awareness and sensitivity through the social involvement program, thereby imparting holistic growth.

The diverse theoretical understanding acquired through interdisciplinary domains such as bioinformatics and biostatistics along with the appropriate electives tailor the individual for the Biomedical industry and related fields of Biotechnology, Pharmaceutical/Biotech, Clinical Data Management, Molecular Diagnostics, etc.

Industrial training (both summer and six-month-long projects) not only aids in translating the theory to action but also assesses the student with contemporary standards.

Course Structure

HEALTH SCIENCES AND DISEASE

- Immunology
- Neurobiology and Clinical Psychology
- Developmental Biology
- Pathology
- Pharmacology and Toxicology
- Clinical Nutrition
- Pharmaceutical Industry and Clinical Research
- Cancer Biology

CELL AND MOLECULAR BIOLOGY

- Cell biology
- Molecular Biology: DNA and Replication
- Molecular Biology: Transciption and Translation
- Genetics
- Recombinant DNA Technology
- Omics
- Stem Cell Biology
- Molecular Neurobiology

MICROBIOLOGY

- Microbial Physiology
- Bioprocess Technology
- Parasitology and Virology
- Medical Microbiology

ECOLOGY

- Evolution and Adaptation
- Environmental Science
- Systematics and Diversity
- Environmental Biotechnology

INTERDISCIPLINARY COURSES

- Mathematics for Biologists
- Biophysics
- Organic and Inorganic Chemistry
- Biochemistry: Biomolecules and Metabolism
- Clinical Biochemistry
- Biostatistics
- Bioinformatics
- Data Analysis in Genome Biology

SOFT SKILLS

- R in Biology
- Introduction to Python
- Research Methodology
- Effective Communication Skills
- Leadership building skills
- Project management skills
- Research Seminar
- IPR and Patenting

Skills Developed in Post-graduate Studies

Semester VII

- R programming applications in biology
- Recombinant DNA technology, cloning and gene expression studies.
- Journal article presentation

Semester IX

- Cancer biology techniques
- Analysis of genomic data
- Python programming
- Journal article presentation

Semester VIII

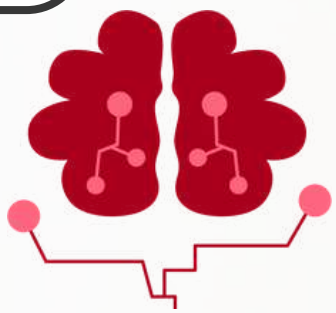
- Tools and techniques in research
- Animal tissue culture techniques
- Journal article presentation

Semester X

- Independent research project from a reputed research institute/ hospital/ university.

Why Recruit Us?

ROBUST ACADEMIC COURSEWORK

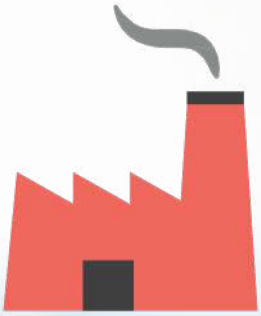


Innovative Practical Pedagogies
Strong technical literacy

GLOBAL EDUCATION APPROACH

- Global perspective on problem solving skills
- Global level of practical training

STRONG INDUSTRY CONNECT



- NMIMS's Centre of Scientific Excellence
- Industry Connect Initiatives

VIBRANT LEARNING ECO SYSTEM

- Multilateral development
- Industry Projects

OUTSTANDING INTERNSHIPS AND DISSERTATIONS

- Dedicated placement cell to enhance Employability Excellent Internship and dissertation opportunities

Extracurriculars

Extracurriculars have been an integral part of our student's college life with diverse activities ranging from sports, cosplay days, and nature walks to the annual college fest 'Excalibur', being a regular part of the academic calendar. Various student clubs, such as the students council, science club, and nature club have allowed the students to

Along with these co-curricular activities, our students also have founded 'Eureka', a student-run, monthly newsletter where they talk about the modern-age discoveries for the masses.

Instrumentation

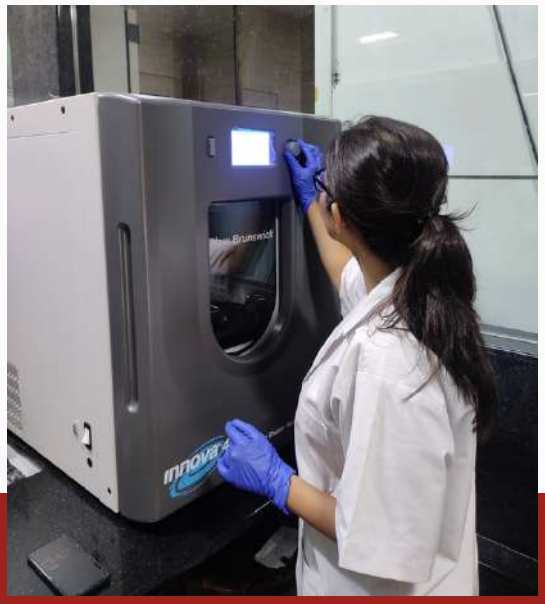
Biosafety Cabinet

Non-refrigerated Centrifuge

Waterbath

Deep Freezer

Instrumentation



Shaker Incubator

Gel Documentation System

Inverted Phase Contrast Microscope

Eppendorf Centrifuge

Instrumentation

ELISA Plate Reader

Electrophoresis

RT PCR

Animal Tissue Culture Lab

High-Performance Liquid Chromatography (HPLC)

-20°C & -80°C Freezer

FTIR

INDUSTRIAL VISITS

ACTREC CAR-T Cell Laboratory (2nd February 2024)

The students of 4th year Biomedical Sciences & 1st year M.Sc in Biological Sciences got an opportunity to visit the Advanced Centre for Treatment, Research and Education in Cancer (ACTREC) a the state of art of R&D wing of the Tata Memorial Centre. GMP facility was established in ACTREC that harnesses the power of the immune system to fight cancer.

The students were invited to visit the GMP lab as a part of the SACT Conference.

All the laboratory equipment including the biosafety cabinets along with the ongoing research was explained in great detail.

INDUSTRIAL VISITS

miBiome Therapeutics (26th February 2024)

miBiome Therapeutics is an advanced science and deep-tech start-up company comprising experienced scientists, doctors, and young coders. They use the latest coding techniques to ease the genome sequencing process. They house multiple equipment's such as Illumina and Oxford Nanopore models for carrying out Next-generation sequencing (NGS). The students of 4th year Biomedical Sciences were shown and taught about the day-to-day process of the laboratory. They were also made aware about the commercial applications and need of such integration between biology and data sciences

Summer Internships - 2024

Name	Location	Position
Vibhuti Saxena	Sunandan Divatia School of Science, Mumbai	Student Intern
Aishwarya Phadke	Forsch MedX, Mumbai	Student Intern
Diksha Uday	ICMR-NIRRCH, Mumbai	Student Intern

M.SC. DISSERTATION

Name	Institute	Project Supervisor/Guide	Project Title
Shreya Agiwal	ICT, Mumbai	Dr. Gunjan Prakash	Microencapsulation of polyunsaturated fatty acids (PUFA) to increase their oxidative stability and shelf-life
Diksha Uday	Yushuna Healthcare, SDSOS	Ms. Jaspreet Suthar	Exploring the Biological Activity of Herbal Extracts: Impact on NAD and CD38
Aishwarya Phadke	Njyme Solutions Pvt. Ltd, AIC CMMB	Dr. Shankara Rao Kola	Cloning, Expression, and Purification of PPK2 from *Pseudomonas aeruginosa*
Mansi Borkhataria	Yushuna Healthcare, SDSOS	Ms. Jaspreet Suthar	Unveiling the role of Herbal Extracts in NAD metabolism and CD38 modulation

M.SC. DISSERTATION

Name	Institute	Project Supervisor/Guide	Project Title
Rida Yasser	NCCS, Pune	Dr. Vidisha Tripathi	Understanding the role of lncRNAs in DNA damage response
Vrinda Salvi	IIT Bombay	Dr. Sreelaja Nair	Investigation of nuclear scaling during embryogenesis in zebrafish
Vibhuti Saxena	SDSOS, NMIMS	Dr. Bajarang Kumbhar	Understanding the differential binding affinity Of katanin hexamer with β-tubulin isotypes using molecular modelling approach

Student Profiles

Shreya Agiwal

Interests:

Drug Delivery, Encapsulation of bioactives, Microbiology

Aishwarya Phadke

Interests:

Cancer, Neurobiology, Immunology

Rida Yasser

Interests:

Immunology, Cancer Biology, Stem Cell Biology, Personalized medicine

Vrinda Salvi

Interests:

Stem Cell Biology, Drug Discovery

Student Profiles

Diksha Uday

Interests:

Drug Discovery, Genetics, Epigenetics, Cancer Biology

Vibhuti Saxena

Interests:

Cellular Dynamics, Drug Discovery, Bioinformatics

Mansi Borkhataria

Interests:

Immunotherapy, Stem Cell & Antibody-based research

Testimonials - 2024

5 Year Integrated Biomedical Science

Yashvi Thakkar

My time at SDSOS has been nothing short of transformative. The program provided a rich and fulfilling experience that extended far beyond textbooks. Throughout the course, I had the incredible opportunity to delve into practical applications of various fields, including molecular biology, cytology, microbiology, and bioinformatics. The curriculum wasn't just about knowledge acquisition; it was designed to equip us with a comprehensive understanding. The college fostered an interactive learning environment with internal assessments that not only tested our knowledge but also significantly bolstered my interpersonal and communication skills. This focus on holistic growth has been instrumental in preparing me for the professional world.

Shreya Rao

I can positively say that being a part of SDSOS was truly transformative for me. Working for the Student council for four years has honed my leadership abilities and overall personality development. Whether it was organizing events, facilitating meetings, or advocating for student needs, I learned the importance of effective communication, collaboration, and decision-making. The rigorous academic curriculum and supportive peers and faculty not only equipped me with the skills and knowledge needed for my career but also made science interesting with practical applications , wide approach and learning of human biology and most importantly sufficient laboratory hours, where I learned more than the classroom! My journey in SDSOS has definitely been a remarkable one with its own ups and downs but it has also taught me a lot of things, for career, and most importantly for life.

Anagha Oke

The 5 Year Integrated MSc in Biomedical Science is a great program that covers all aspects of human health and disease in a comprehensive way. The excellent teaching coupled with the exposure to laboratory skills right from the first day help gain a holistic understanding of the field. The course allows one to develop a research-like mindset due to the inclusion of research projects in the curriculum. More importantly, it teaches students necessary analytical skills such as coding in R and Python- to help them stay up-to-date with the latest advancements in the field.

Testimonials - 2024

5 Year Integrated Biomedical Sciences

Sukhada Suryakant Kanse

My five years at NMIMS School of Science have been truly transformative. The professors are not only experts in their fields but also genuinely invested in the success and growth of their students. The learning environment is dynamic and supportive, fostering both academic excellence and personal development. I am grateful for the invaluable experiences and education I received at NMIMS, which have equipped me with the knowledge and skills to succeed in my future endeavors.

Devanshi Sen

My college experience was a period of personal growth, intellectual and social engagement. The course layout was excellent and emphasized on holistic learning. I would like to thank all the faculties at NMIMS Sunandan Divatia School of Science, for their constant support and guidance. Even during the pandemic the institute helped the students by providing online classes, and an opportunity to learn from various online platforms like Coursera, as well as by conducting webinars. I am grateful for the experience I had in the past 5 years of college, it was a beautiful journey and has had a positive impact on my life.

Hetvi Gada

NMIMS SDSOS offers a comprehensive curriculum. The coursework covers a broad range of subjects, ensuring exposure to all the major areas within my field of Biomedical Sciences. While this doesn't necessarily make you a master in any specific area, it provides a strong foundation and allows you to explore your interests further. The learning environment is both encouraging and competitive, which pushes you to learn and grow alongside your peers.

Testimonials - 2024

5 Year Integrated Biomedical Sciences

Maitreyee Aurangabadkar

Studying Studying biomedical science has been a fantastic journey of discovery. It involves more than just learning facts, it includes solving cellular puzzles around the human body. Although the classes pose a decent challeng, the rewards are substantial. We got to learn about the latest research methods and gain deeper insight into how diseases develop, and delve into the world of potential cures. The labs offered are definitely the highlight of the program, with cutting edge methods taught throughout the course. This definitely is an amazing field to learn and explore.

Contact Us

Ms. Priyanka Patil
Placement Coordinator
Email: Priyanka.Patil@nmims.edu
Tel: +91 9764466180

Mr. Suvrat Chaturvedi
President Placement Committee
Email: suvrat.chaturvedi015@nmims.in
Tel: +91 9871326946

Ms. Shreya Agiwal
Vice President Placement Committee
Email: shreyaagiwal@gmail.com
Tel: +91 98922 15438