

Department of Biotechnology and Microbiology
The Neotia University



B.Sc. (Hons.) in Biotechnology



B.Sc. (Hons.) in Microbiology



M.Sc. in Biotechnology



M.Sc. in Microbiology



100% Placement of All
Passout Students



24 Highest Salary
Lakhs/PA in 2024 (overall)



4.3+ Average Salary
Lakhs/PA in 2024 (overall)



600+ Companies
Connect

Faculty Members and researchers of TNU



Prof. (Dr.) Prosun Tribedi
Head of the Department (HOD),
Director-RGD (TNU)



Dr. Ranajit Kumar Sarker
PhD
Assistant Professor



Dr. Diwakar Kumar Singh
PhD
Assistant Professor



Dr. Poulomi Chakraborty
PhD
Assistant Professor



Dr. Sarita Sarkar
PhD
Assistant Professor



Dr. Ishita Rehman
PhD
Assistant Professor



Dr. Sharmistha Das
PhD
Assistant Professor



Dr. Payel Paul
PhD
Assistant Professor



Dr. Anirban Das Gupta
PhD
Assistant Professor



B.Sc. (Hons.) in Biotechnology / Microbiology

M.Sc. in Biotechnology / Microbiology

Also Offered:
Ph.D. in
Biotechnology /
Microbiology

Eligibility Criteria

B.Sc. (Hons.) in Biotechnology / Microbiology : 12th standard pass with any 3 Science Subjects with at least 55% marks.

M.Sc. in Biotechnology / Microbiology : Graduation B.Sc. in any Life Science Subjects in B.Sc. (Botany, Zoology, Microbiology, Biotechnology, Biochemistry, Agricultural Sciences etc.) with at least 55% marks.

Fees Structure

Fee Per Semester (Rs.)	One Time Fee (Rs.)	1st Semester Fee (Rs.)	Total Course Fee (Rs.)
B.Sc. (Hons.) in Biotechnology / Microbiology (4 years)			
55,000	29,000	84,000	3,59,000
According to NEP there are 2 options- 1) Student who would opt for B.Sc. (Hons.) in Biotechnology, B.Sc. (Hons.) in Microbiology will have to spend 4 years & need to secure a total of 160 credits & have to pay Rs.10000/- each in 7th & 8th Semester for OJT. OR 2) Student who wish to take B.Sc. (Hons with Research) in Biotechnology, Microbiology will have to spend 4 years (with 160 credits) and must have an average of 75% & above in all six semesters along with 12 credits research course in the last year of the curriculum at the Department. In that case they need to pay Rs. 55000/- each in 7th & 8th Semesters & would be awarded Degree (Honours with Research).			
M.Sc. in Biotechnology / Microbiology (2 years)			
40,000	29,000	69,000	1,89,000

Scope and Opportunities:

Biotechnology: Biotechnology sector in India is rapidly experiencing an unprecedented surge, making it a vibrant "sunrise sector" poised for explosive growth. With a supportive government and a blossoming startup ecosystem, the sector is on track to reach a staggering \$300 billion valuation by 2030. Biotechnology sector is a force to be reckoned with, offering promising advancements in healthcare, agriculture, and more. Here's a quick glimpse:

- **Thriving Industry:** Valued at \$80 billion in 2022, the sector is expected to nearly quadruple in size by 2030.
- **Startup Hub:** Biotech startups have exploded, with over 5,300 in 2021 compared to just 50 a decade earlier.
- **Focus Areas:** India is a major player in biopharmaceuticals (vaccines, drugs) and biosimilars (generic versions of biological drugs) Agriculture and bioinformatics are also growing sectors.

Director's Message

Prof. (Dr.) Prosun Tribedi
Director-R&D, The Neotia University (TNU).



Modern life science has emerged as the field of science and technology which is being used to tackle the challenges of the twenty first century. Emerging diseases, antimicrobial resistance, widespread incidence of cancer, diabetes, heart conditions global pandemics, climate change, energy crisis, and the availability of clean water are some of the greatest threats to humanity in this century. Twenty first century problems require twenty first century solutions and research and development in modern life science can deliver those solutions. Furthermore organized and focused R&D efforts in this field can also generate widespread employment and empower the youth. Microbiology and Biotechnology are at the vanguard of modern life science and are two essential pillars of this rapidly emerging field. Hence a robust course structure including UG, PG and PhD courses is essential for the holistic development and successful career of the bright young students of our country.

Microbiology: Microbiology is the scientific exploration of microscopic organisms invisible to the unaided eye – a hidden world teeming with life! These microbes, including bacteria, archaea, fungi, viruses, and protists, play a fundamental role in our planet and are the most ancient inhabitants of the planet. Microbiology is a dynamic field with far-reaching impacts. By studying these tiny titans, we gain a deeper understanding of the world around us and unlock possibilities for a healthier future. Here's a quick glimpse:

- **Microbial Marvels:** Microbes are everywhere – in the air we breathe, the food we eat, and even inside our bodies. They are essential for nutrient cycling, decompose organic matter, and some even fix nitrogen in the soil, making it usable for plants.

- **Friend or Foe?** While some microbes cause diseases like pneumonia or food spoilage, others are beneficial. Our gut microbiome aids digestion and protects us from harmful pathogens. Microbes are also used in the production of antibiotics, vaccines, and biofuels.
- **Unlocking Secrets:** Microbiologists use advanced techniques like microscopy, culturing, and genetic analysis to study microbes. Their research helps us understand infectious diseases, develop new drugs, and create innovative solutions for environmental issues.



Program Objective:

The program objectives of Biotechnology and Microbiology can be broadly categorized into two main areas: **Knowledge and Skill Development and Career Preparation.**

Knowledge and Skill Development	Career Preparation
Strong foundation in life sciences: Gain a deep understanding of core biological principles like genetics, biochemistry, microbiology, and immunology.	Research and Development: Prepare for careers in research institutions or pharmaceutical companies, developing new drugs, vaccines, or bioremediation technologies.
Modern biology techniques: Master laboratory techniques in areas like genetic engineering, cell culture, bioinformatics, and bioprocess engineering.	Industry: Equip yourself for roles in various industries like agriculture (improving crop yields), food science (developing food products), vaccines, or biofuels.
Critical thinking and problem-solving: Develop the ability to analyze complex biological problems and design solutions using biotechnology tools.	Entrepreneurship: Develop the skills and knowledge needed to launch your own start up
Effective communication: Learn to communicate scientific findings clearly and concisely, both verbally and in writing.	Teaching and Education: Pursue a career in teaching Biotechnology and/or Microbiology at the university or college level.

Department Highlights:

- **State-of-the-Art Laboratories:** The department possesses well-equipped laboratories for various applications, including microbiology, algal culture, molecular biology, biochemistry, and bioinformatics.
- **Experienced Faculty:** The department has a team of qualified and experienced faculty members actively involved in research and committed to providing students with a comprehensive learning experience.
- **Focus on Research:** The department encourages research through various initiatives, including individual research projects, collaborative research opportunities with faculty, and participation in national and international conferences. The department published more than 40 research articles in various prestigious peer-reviewed journals.
- **Research Grant:** The faculty of the department get research grant funded by SERB, DST, Government of India in recognizing outstanding research profile of the department.
- **Competitive Exams:** The department excels in competitive exams, with students achieving high GATE percentiles, showcasing its effective teaching and learning environment, preparing students with the necessary knowledge and skills for success.
- **Industry Exposure:** The department emphasizes practical experience and offers students industry exposure through internships, study tours, and in-house and outsourced programs,

bridging the gap between theoretical knowledge and practical application, preparing them for successful biotechnology careers.

Advantage of TNU

- **Innovation and Incubation:** The department fosters a culture of innovation and entrepreneurship, encouraging students to think creatively and develop solutions to real-world problems. This is evident in the numerous innovative projects undertaken by students, including the development of a DNA isolation kit, plastic-free sanitary napkins, algal jewelry, and even instruments like a UV Transilluminator. These achievements showcase the department's commitment to nurturing student creativity and problem-solving skill.
- **Campus Assistance:** The department actively facilitates job placements for students through on-campus recruitment drives. These drives attract various Multinational companies, providing students with ample opportunities to secure positions after graduation.
- **Memorandum of Understanding:** The department has established a prestigious Memorandum of Understanding (MoU) with Suraksha Diagnostics centres, specifically their R&D wing located in New Town. This collaboration opens doors for potential research opportunities, faculty exchange programs, and internship placements for students, fostering valuable industry experience and connections.

Industry Partners for Internship & Placement



Scholarships & Financial Aid

At TNU, we offer numerous merit-based as well as need-based scholarships (**25% to 100% on Tuition Fees**) to ensure that no student is left behind. There is no limit to the number of scholarships granted by the University and if a student is eligible as per the given criteria then he or she will get the **"Guaranteed Scholarship"**.

NAME	CRITERIA
SARVODAYA SCHOLARSHIP (25% to 50%)	>=65% Marks and Family Income-< 2.5Lakhs / Annum
GRAMOTTHAN SCHOLARSHIP (25% to 50%) (for students of South 2 Pgs. Gram Panchayat Area)	>=65% Marks and Family Income-< 5.0Lakhs / Annum
SPECIAL HILL STUDENTS' SCHOLARSHIP (25% to 50%) (for students from GTA Atrea-W.B, North-East States, Andaman & Nicobar Islands, Nepal and Bhutan)	>=65% Marks and Family Income-< 5.0Lakhs / Annum

NAME	CRITERIA
SAHODAYA SCHOLARSHIP (25%) (for the siblings of all TNU students - Present and passed out)	>=65% marks
SPORTS / CULTURAL SCHOLARSHIP (25%) (for the students state or national level champion in their relevant field)	>=65% marks
CHANCELLOR'S SCHOLARSHIP (25% to 100%) (if any one require beyond / more than the other scholarships)	Family Income < 2.5 Lakhs / Annum and interview by empowered committee of TNU
TNU's SWAMI VIVEKANANDA SCHOLARSHIP #*	As Per Eligibility Criteria of West Bengal Govt.

The scholarship will be granted if The Neotia University does not qualify under the criteria established by the West Bengal Government for the same.

* If a student receives the Swami Vivekananda Scholarship from the West Bengal Government or TNU, and the scholarship amount is Rs. 60,000 or more per year, that student will not qualify for any additional scholarships from The Neotia University.

West Bengal Govt. Student Credit Card is accepted at TNU

Lab & Experimental Equipment



Student working in Laminar Air Flow



Students working with Shaker



Magnetic Stirrer



Biotechnology Lab



Student working with Microscope

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