SWAMI VIVEKANANDA UNIVERSITY

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Student Skill development workshop on ‘Nanobiotechnology and Fourier transform infrared (FTIR) spectroscopy’

Department of Biotechnology

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Vision:

To create a generation of skilled, innovative, and environmentally conscious students equipped to tackle real-world challenges. We envision a future where students are empowered with technical, entrepreneurial, and sustainability-driven skills to contribute meaningfully to society and drive positive change.

Mission:

To provide hands-on learning experiences, mentorship, and capacity-building opportunities that enhance students' critical thinking, problem-solving, and leadership abilities. Through interactive workshops, industry exposure, and project-based learning, we aim to bridge the gap between theoretical knowledge and practical application. Our mission is to nurture creativity, foster sustainability, and equip students with the tools to excel in their careers and communities.

Participants Details:

B.Sc. Biotechnology and Microbiology Semester VI students from various colleges across South Bengal actively participated in the event, engaging in hands-on learning, discussions, and skill-building activities. Their enthusiasm and curiosity contributed to meaningful exchanges, fostering innovation and practical understanding of biotechnology applications for addressing real-world scientific and environmental challenges.

Name of the participants	**Stream**	**College name**
Anuska Biswas	B.Sc.(H) in Microbiology	Hooghly Women's College
Anwesha shil	B.Sc. (H) Molecular Biology and Biotechnology	Kanchrapara college
Neha Mandal	B.Sc. (H) Molecular Biology and Biotechnology	Kalyani Mahavidyalaya
Pritha Chakraborty	B.Sc.(H) in Microbiology	Hooghly women's college
Shreya Ghosh	B.Sc. (H) Molecular Biology and Biotechnology	Kanchrapara College

Speaker and Topic Details:

Dr. Sabyasachi Ghosh, Assistant Professor, Dept. of Biotechnology, Swami Vivekananda University	Nanobiotechnology
Dr. Priyankar Pal, Assistant Professor, Dept. of Biotechnology, Swami Vivekananda University	Fourier transform infrared (FTIR) spectroscopy
Dr. Srijan Haldar, Associate Professor, Dept. of Biotechnology, Swami Vivekananda University	Course Instructor

Workshop: Student Skill development workshop on ‘Nanotechnology and Fourier transform infrared (FTIR) spectroscopy’

The workshop provided students with hands-on training in nanobiotechnology and FTIR spectroscopy, essential tools in modern biosciences. Participants explored nanoparticle synthesis, characterization, and their applications in medicine, agriculture, and environmental science. FTIR spectroscopy sessions focused on molecular identification, structural analysis, and biomaterial research. Through expert lectures and practical demonstrations, students developed critical analytical skills, enhancing their ability to interpret spectral data and apply nanotechnology in real-world scenarios. This workshop bridged the gap between theory and practice, equipping students with industry-relevant expertise to drive innovation in biotechnology, healthcare, and sustainable development.

Date: 19th June, 2024
Time: 11 AM Onwards

Programme Outcome:

The Student Skill Development Workshop on ‘Nanobiotechnology and Fourier Transform Infrared (FTIR) Spectroscopy’ enhanced students’ understanding of nanotechnology applications and spectroscopic analysis. Participants gained hands-on experience in nanoparticle synthesis, characterization, and FTIR spectral interpretation for molecular identification. The workshop strengthened their analytical, problem-solving, and research skills, preparing them for advanced studies and industry applications. By integrating nanobiotechnology with FTIR spectroscopy, students learned innovative approaches for healthcare, environmental monitoring, and material sciences. The program bridged theoretical concepts with real-world applications, empowering students to contribute to scientific advancements, sustainable technology, and interdisciplinary research in biotechnology and nanoscience.

Conclusion

The Student Skill Development Workshop on ‘Nanobiotechnology and Fourier Transform Infrared (FTIR) Spectroscopy’ successfully equipped participants with essential knowledge and practical expertise in advanced biotechnological techniques. Through hands-on training and expert-led sessions, students gained a deeper understanding of nanoparticle synthesis, characterization, and FTIR spectral analysis for molecular identification. The workshop fostered critical thinking, analytical skills, and interdisciplinary learning, preparing students for future research and industry applications. By bridging theory with real-world applications, the program empowered students to explore innovative solutions in healthcare, environmental science, and biotechnology, contributing to scientific advancements and sustainable technological development.