



Vidyasagar University

Midnapore-721102, West Bengal

POs & PSOs for the Post-Graduate Programme

in

BIOTECHNOLOGY & BIOINFORMATICS

National Educational Policy – 2020



[w.e.f. 2025-26]

Department of Biotechnology & Bioinformatics_2025-26

Program Outcomes (POs)

After successful completion of the program, students will be able to:

1. Demonstrate a deep understanding of biological principles governing cellular, molecular, and genetic processes.
2. Apply biotechnological and bioinformatics tools to analyze, interpret, and solve biological problems.
3. Design, conduct, and evaluate experimental research and data analysis using modern laboratory and computational techniques.
4. Develop biotechnological products, diagnostics, and processes relevant to industrial, agricultural, and healthcare sectors.
5. Exhibit ethical, safe, and sustainable research practices adhering to national and international biosafety and IPR standards.
6. Communicate scientific ideas effectively through technical reports, publications, and oral presentations.
7. Demonstrate critical thinking, problem-solving, and analytical reasoning skills relevant to professional biotechnology practice.
8. Engage in lifelong learning and adaptability to emerging areas such as synthetic biology, artificial intelligence in biology, and omics technologies.

Programme Specific Outcomes (PSOs)

PSO-1: Acquire theoretical and practical expertise in molecular biology, recombinant DNA technology, and bioinformatics tools.

PSO-2: Analyze and interpret genomic, transcriptomic, and proteomic data using computational biology approaches.

PSO-3: Apply biotechnological principles to develop sustainable solutions for agriculture, medicine, and environmental management.

PSO-4: Demonstrate proficiency in bioprocess optimization, fermentation technology, and product development.

PSO-5: Integrate digital, ethical, and entrepreneurial components for self-employment, start-up incubation, or industrial research.

PSO-6: Design and execute independent research projects, write scientific reports, and defend research findings effectively.

PSO-7: Contribute responsibly to biosafety, bioethics, and environmental conservation in the context of biotechnology applications.