

Department of Biotechnology.

Shaheed Benazir Bhutto Women University. Peshawar

Welcome to Bioinformatics at Shaheed Benazir Bhutto Women University, Peshawar. The Department of Biotechnology at SBBWU campus came into existence in 2021. Since its establishment, it has struggled hard to rise to excellence. We offer exciting teaching, research, and professional development opportunities to meet the challenges in many fast-growing industries in diverse areas of Biological and Biomedical sciences. Biotechnology is an interdisciplinary science with a focus on the interpretation of complex biological phenomena. The aims and objectives of the Biotechnology department are based on the global vision Currently we are offering excellence in BS-Biotechnology. Students who are interested in the field of biology may consider the study of biotechnology.

Biotechnology refers to the employment of various types of “technology” to use, exploit, modify, or improve existing biological processes for a specific purpose; its overarching goal is to enhance the quality of human life - be it directly or indirectly - by producing and/or developing effective pharmaceuticals, bioenergy, disease-resistant and high-yield crops as well as animals, and microbes for remediation in an efficient, cost-effective and ethically responsible manner. The field has already shown immense promise and further innovations are certain to culminate in dramatic improvements in existing technologies and outcomes. Biotechnology is the next wave of change that is likely to be as sweeping and invasive as that brought about by information technology. The developed countries are focusing to expand and capitalize on biotechnology. Pakistan has recently initiated investment in the applications of biotechnology, especially in agriculture for developing insect-resistant and high-yield crops, vaccine production, textile, leather, and chemical industries, health, bioinformatics, and environmental biotechnology. With remarkable advancements in agriculture, biomedical research, and the pharmaceutical industry, biotechnology has become a major discipline that is likely to play an increasingly significant role in improving the economies of different countries, especially those that are developing. Pakistan must do its utmost to impart quality education in this exciting and promising field to its undergraduate and graduate students.

VISION:

Guided by a commitment to excellence, our vision for the Department of Biotechnology is to empower students with advanced knowledge and practical skills. These empowered individuals will not only excel as distinguished academicians, scientists, researchers, and entrepreneurs but also emerge as capable biotechnologists with a deep understanding of the vital role natural resources play on both national and global scales.

MISSION:

Our mission within the Department of Biotechnology is to spearhead progress in the life and health sciences through a multifaceted approach. Firstly, we aim to introduce academic programs and cutting-edge technologies that not only enrich the educational experience of our students but also bring tangible benefits to rural communities and industries. Secondly, we are committed to harnessing the diverse applications of biotechnology to cultivate a new generation of skilled biotechnologists. These graduates will play a pivotal role in advancing knowledge across plant, animal, and medical sciences, effectively addressing the complex challenges of our contemporary society.

MISSION STATEMENT OF THE BS PROGRAM:

The mission of BS in Biotechnology is to produce graduates in Biotechnology that will help the industry of biotechnology by making achievements. The students may seek careers in educational institutes, scientific research, development, and management in the biotechnology and pharmaceutical sectors.

PROGRAM OBJECTIVES:

After fulfilling the requirements for a Bachelor of Science degree in biotechnology, students will possess the ability to execute technical skills, improve their written and oral communication abilities, nurture critical thinking, comprehend the societal and environmental influence of life sciences, grasp practical aspects of biotechnology, and employ particular principles in the fields of industry and research development.

ADMISSION REQUIREMENTS: Higher Secondary School Certificate or equivalent (2nd division with at least 45% marks) in Pre-medical or equivalent qualification.

ELIGIBILITY: The minimum requirement for admission to a bachelor’s degree program is

At least 45% marks in the Intermediate (HSSC) examination with Pre-Medical or equivalent qualification.

DURATION: Four years program spread over 8 semesters, two semesters per year.

COURSE AND CREDIT REQUIREMENTS: A total of 124-136 credits are required to complete a Bachelor of Science in Biotechnology.

CURRICULUM BS-BIOTECHNOLOGY:

The Biotechnology program consists of a core curriculum that provides the integration of a variety of Biological courses. The bachelor's degree in biotechnology at SBBWU requires a total of 136 credit hours of courses in Biological Sciences, Biochemistry, and Biotechnology. The curriculum is designed by keeping in view the modern requirements and the interdisciplinary nature, the main focus is not only on biological research, an in-depth understanding of divisive concepts. Furthermore, to acquire hands-on experience, most of the Biotechnology courses are supported by projects and lab work.

In the final year of their degree, students are placed in relevant industries as internees to acquire real-life problem-solving skills and gain exposure to the latest technologies in applications. The students are also required to complete a final-year project based on research. The project is expected to have some value to the organization or industry. A student completes this BS degree in Four years by taking a combination of Biotechnology core courses.

FEATURES:

Department of Biotechnology has engaged experienced and qualified faculty and developed quality infrastructure. The department has classrooms equipped with modern teaching equipment, well-furnished and well-equipped labs both for teaching and practical work. The Department has equipped a Biological Laboratory.

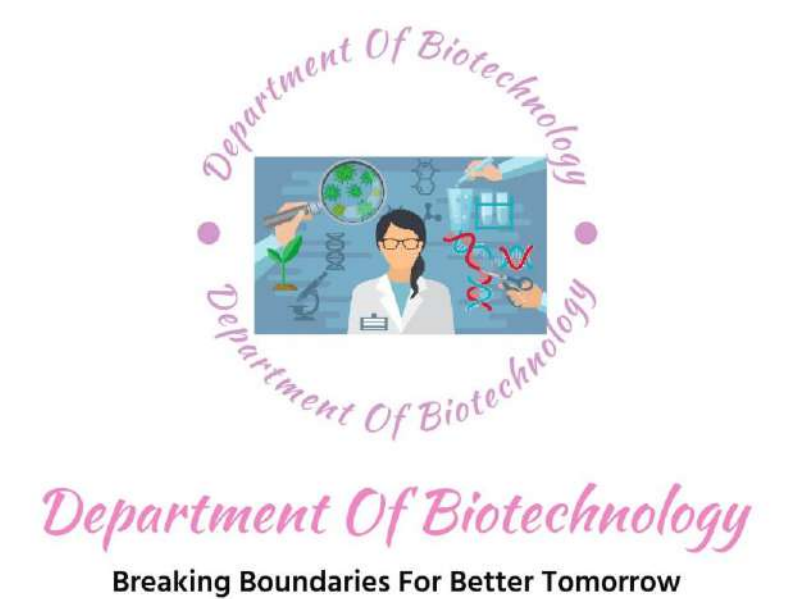
FACULTY:

The interdisciplinary nature of Biotechnology requires collaboration between several existing departments of Biological Sciences. Currently, the Department of Biotechnology has Eight (08) well-qualified full-time faculty members from the field of Biological Sciences. The breadth of the department faculty is adequate to cover the biotechnology core curriculum. Full-time faculty are actively involved in research and professional organizations.

1. Dr. Farhat Amin Received HEC University Best Teacher Award (2009). Associate Professor & Chairperson.
2. Dr. Nousheen BiBi Received SBBWU Best University Teacher Award 2022. Assistant Professor.
3. Dr. Aishma Khattak. Assistant Professor.
4. Dr. Humaira Naz. Assistant Professor.
5. Ms. Asma Bibi. Lecturer
6. Ms. Sidra Qureshi. Lecturer.
7. Ms. Asma Jamil
8. Ms. Aisha Ghani

Extra-curricular activities

In addition to coursework, students attend the weekly biotechnology colloquium series, with research seminars and professional training workshops, and complete an internship at a research institution or industry. Students also have opportunities to present their works at national and international conferences and publish research findings in scientific journals.



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