WOMEN UNIVERSITY SWABI

KHYBER PAKHTUNKHWA-PAKISTAN

Department of Health Biotechnology

Welcome to Women University Swabi, a university that is committed to empower women through higher education and provide them opportunities to work in a wide array of settings such as education, business, industry, health, and social services sectors.

To me, the job of a university is not only to produce degree holders and commercially marketable human resources, but I believe it is more than that. Universities are required to produce loyal, honest and enlightened human beings who can empathetically understand the needs of society, reverentially work in both national and international community, and take better care of the future generations.

Department of Health Biotechnology

Vision

The vision of the Department of Health Biotechnology is that the knowledge in theory and practical aspects of Biotechnology is imperative for the development of the country and health and hygiene of Pakistani Population.

Mission

- **Our mission** is to produce skilled graduates who can choose research fields or professional career as a Biotechnologist in various industries even though the institution is located in remote areas of Pakistan.
- Since majority of the students are from financially and socially frail, their primary aim is to get a job after their studies with minimum financial expenditure.
- Our **Ehsaas Program Scholarships reflect** the achievement of this objective as most of them selected their career in the field of Health Biotechnology.

BS
Health Biotechnology

ABOUT US

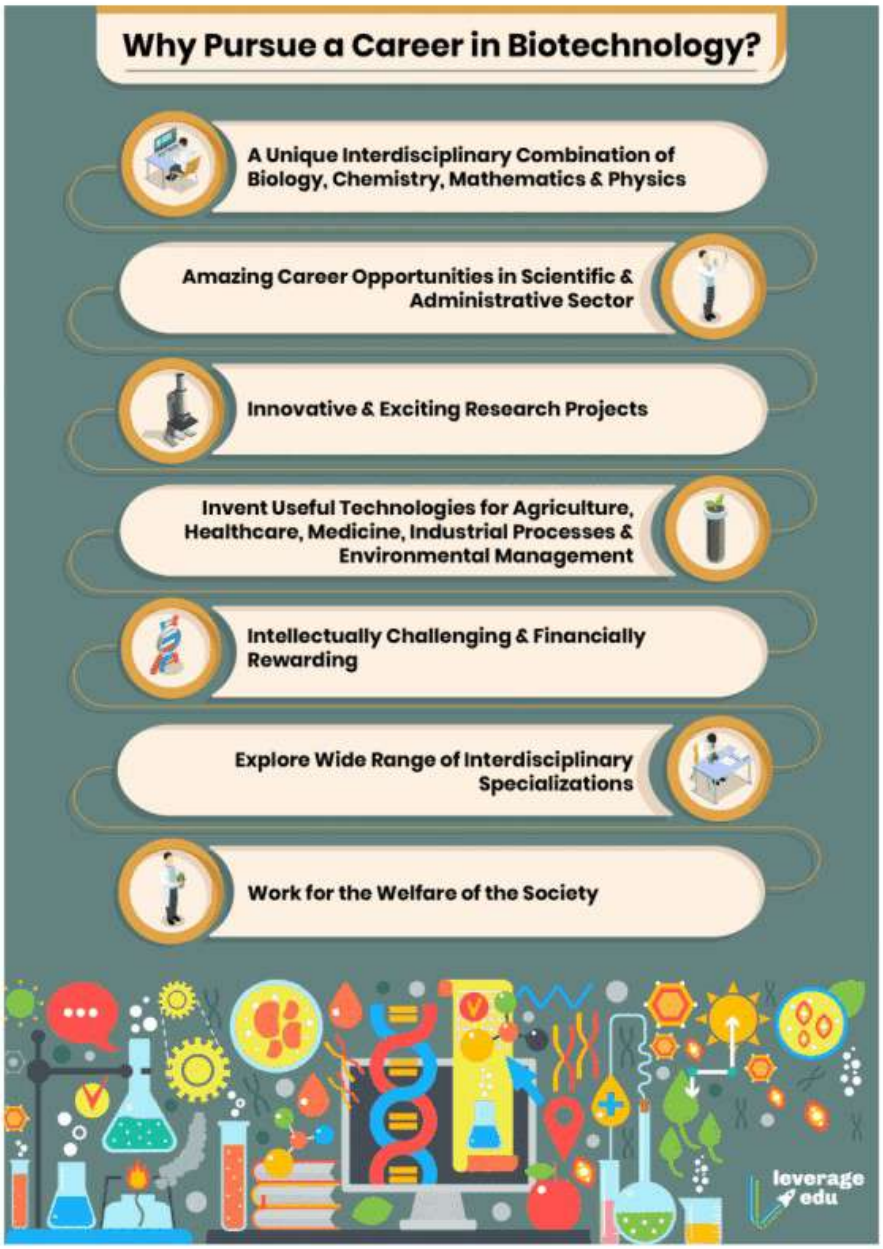
The Department of Health Biotechnology was established at the Women University Swabi in 2022. The department focuses on high quality teaching with inspirational lecturers, cutting-edge research and world-class facilities with a stimulating environment, where your knowledge, skills and confidence will grow. Our emphasis on problem solving and laboratory work allows you to develop a confidence that can extend well beyond your studies, allowing you to tackle new and unfamiliar challenges. Biotechnology is growing at a fast pace in Pakistan and is rapidly gaining significance and opportunities throughout the world. Pakistan is one of the leading markets for Biotechnology industries and there is a huge focus of Indian government on Research Development in Biotechnology. The complex multi-faceted nature of biotechnology is the result of its amalgamation with other scientific disciplines such as physics, chemistry, mathematics, electronics, mechanics, information technology and programming. This has made possible the description of life processes at the cellular and molecular level and has largely enabled scientists to predict and engineer these processes. You'll find the degree programs in Biotechnology Department are so much more than just lectures and labs. Our professors are acclaimed, published scientists who are committed to the future success in industry, research, consulting or education, as well as graduate schools. The combination of teaching, research and hands-on experience will strengthen your ability to solve problems, work both independently and collaboratively, and think and analyze critically. Small class sizes ensure plenty of one-on-one time with your professors.

Job Opportunities

Health Biotechnology

- Research and development.
- Quality assurance/regulatory affairs.
- Manufacturing.
- Clinical research.
- Government (policymaking)
- Food, animal, and environmental science.
- Sales and technical support.
- Teaching in Universities and Collages
- Quality Control Area in Industries,
- Food Industries
- Pharmaceuticals Product Industries

Why to Choose Health Biotechnology as a Career?



BS (4 Years)
Health Biotechnology

(4 Years)
8 Semesters

Total Credit Hours 132

Admission Criteria

- Minimum 45 % marks at intermediate level or equivalent.

Scheme of Studies BS Health Biotechnology

Category	Course Code	Course Title	Credit Hours
Semester 1			
Major-01	BTCH-301	***Introduction to biotechnology***	3(2+1)
G. Ed.-01	ISL-301	Islamic Studies	3(3+0)
G. Ed.-02	ENG-301	English I	3(3+0)
G. Ed.-03	CS-301	Introduction to Computers	3(2+1)
G. Ed.-04	BTCH-302	***Biosafety and Biosecurity***	3(3+0)
G. Ed.-05	BTCH-303	***Cell and Molecular Biology***	
Semester 2			
Major-02	BTCH -302	***Ecology, Biodiversity & Evolution***	3(2+1)
G. Ed.-05	PAKS-301	Pakistan Studies	3(3+0)
G. Ed.-06	ENG-302	Basic Communication Skills	3(3+0)
G. Ed.-07	BCH-401	Introduction to Biochemistry	3(3+0)
G. Ed.-08	CS-302	Basic Computer programing	3(2+1)

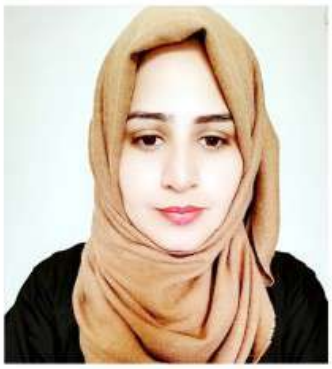
Category	Course Code	Course Title	Credit Hours
Semester 3			
Major-03	BTCH -401	***Cell and Molecular Biology***	3(2+1)
Major-04	BTCH -402	***Genetic Engineering***	3(2+1)
G. Ed.-09	ENG-401	Technical Report Writing	3(2+1)
G. Ed.-10	BTCH-403	Techniques in Biotechnology	3(2+1)
G. Ed.-11	MIC-401	Introduction to Microbiology I	3(2+1)
Semester 4			
Major-05	BTCH-403	***Biochemistry II***	3(2+1)
Major-06	BTCH-404	***Medical genetics***	3(2+1)
Major-07	BTCH-405	***Health Biotechnology***	3(2+1)
G. Ed.-12	BTCH-406	Research Methodology and skill enhancement	3(2+1)
G. Ed.-13	BTCH-407	Introduction to bioinformatics	3(2+1)
Semester 5			
Major-08	BTCH-501	***Immunology***	3(2+1)
Major-09	BTCH-502	***Cell and Tissue culture Technology***	3(2+1)
Major-10	BTCH-503	***enzymology***	3(2+1)
Major-11	BTCH-504	***Virology (E-IV)***	3(2+1)
Major-12	BTCH-505	***Microbial Biotechnology***	3(2+1)

Category	Course Code	Course Title	Credit Hours
Semester 6			
Major-13	BTCH-506	***Agriculture Biotechnology***	3(2+1)
Major-14	BTCH-507	***Biosafety and Bioethics***	3(2+1)
Major-15	BTCH-508	***Food Biotechnology***	3(2+1)
Major-16	BTCH-509	***Principle of Biochemical Engineering***	3(2+1)
Major-17	BTCH-510	***Epidemiology of Infectious diseases***	3(2+1)
Semester 7			
Major-18	BTCH-601	***Research Methodology & project Writing***	3(2+1)
Major-19	BTCH-602	***Pharmaceutical Biotechnology (E-III)***	3(2+1)
Major-20	BTCH-603	***Genetic Resources and Conservation***	3(2+1)
Major-21	BTCH-604	***Stem cell & therapeutics cloning***	3(2+1)
Major-22	BTCH-605	***Recombinant DNA technology***	3(2+1)
Semester 8			
Major-23	BTCH-606	***Nanotechnology***	3(2+1)
Major-24	BTCH-607	***Genomics & proteomics***	3(2+1)
Major-25	BTCH-608	***Research Dissertation/Research Project/Internship***	3(2+1)
Major-26	BTCH-609	***Gene Expression and Regulation.***	3(2+1)
Major-27	BTCH-610	***Molecular Diagnostics***	3(2+1)

Dr. Amtul Sami
HOD
Assistant Professor
Health Biotechnology

Dr. Shaila Mehwish
Assistant Professor
Health Biotechnology

Ms. Karishma Khan
Lecturer
Health Biotechnology



Ms. Faryal Ali
Lecturer
Health Biotechnology