



## School of Biochemistry (MPhil and PhD Programs)

<b>Program:</b>	MPhil Biochemistry
<b>Short Title:</b>	MPBC
<b>Duration:</b>	4 Semesters (2 years)
<b>Credit Hours:</b>	30 (The research supervisor may, however, recommend additional courses)
<b>Eligibility:</b>	MSc Biochemistry degree with CGPA 3.00 out of 4 in semester system or first division in annual system. MBBS, BDS and BS 4 years with major in Biochemistry.
<b>Location:</b>	Saleem Campus (females)

<b>Program:</b>	PhD Biochemistry
<b>Short Title:</b>	PhD BC
<b>Duration:</b>	8 Semesters (4 years)
<b>Credit Hours:</b>	18 credit hours of course work (The research supervisor may, however, recommend additional courses)
<b>Eligibility:</b>	M Phil/MS Biochemistry or equivalent degree with CGPA minimum 3.00 out of 4 from HEC recognized institutions. Must qualify subject test conducted by The University of Faisalabad.
<b>Location:</b>	Saleem Campus (females)

### Introduction

Biochemistry includes study of basic medical sciences, in a larger perspective of understanding the prevalence and pattern of diseases, with an objective to take up preventive measures through medical techniques. The department of Biochemistry, having 4 PhD faculty members –two of them with Post-Doctoral training and a lifelong experience in University teaching and research have planned to initiate MPhil and PhD Biochemistry programs in the University. To

strengthen these programs the department has planned to invite reputed scientists for special lecture sessions and seminars. The students will not only be motivated by their presence but also get the knowledge on recent developments in this subject. MPhil and PhD students in this department will have great opportunities to interact with senior faculty members and develop close liaison with them for effective learning and conducting research. Students may also work with faculty members as Teaching / Research Assistants and

avail the University resources for the promotion of teaching and research. Graduate research may focus on the areas of bio physical chemistry, genetics, enzymes and molecular mechanics.

**Infrastructural Facilities:**

The Department is having latest research facilities such as high speed and ultra-centrifuges, spectrophotometers, PCR techniques, electrophoresis and gel documentation etc.

**Careers:**

The graduates may join careers in academic, industrial and government department in today's world of biochemistry and Biotechnology, scientific Laboratories etc as detailed below

**Career Options:**

- Biotechnology Firms
- Agricultural Institutions
- Pharmaceutical Companies
- Forensic Labs
- Chemical manufacturing firms
- Pollution Control Agencies
- Cosmetic manufacturers
- Environment Protection Agency
- Hospitals
- Medical instrument companies

## MPhil Biochemistry

### List of Courses

Course Code	Course Title	Credit Hours
BCH-701	Introduction to Biochemistry	4(3-1)
BCH-702	Molecular Biochemistry	4(3-1)
BCH-703	Metabolism of macromolecules	4(4-0)
BCH-704	Cell Biology	3(3-0)
BCH-705	Advanced Biochemical Techniques	3(1-2)
BCH-706	Enzymology	2(2-0)
BCH-707	Biosafety & Ethics	3(2-1)
BCH-708	Proteomics	3(3-0)
BCH-709	Biomembrane & Cell Signaling	3(3-0)
BCH-710	Bioenergetics	2(2-0)
BCH-711	Biochemistry of Drugs & their Resistance	3(2-1)
BCH-712	Nutritional biochemistry	3(2-1)
BCH-713	Biotechnology	3(3-0)
BCH-714	Immunochemistry	3(2-1)
BCH-715	Water & Mineral Metabolism	2(2-0)
BCH-716	Biochemistry of chemical regulators	2(2-0)
BCH-717	Research Planning & Report Writing	2(2-0)
BCH-718	Special problem	1(1-0)
BCH-719	Seminar	1(1-0)

Course Code	Course Title	Credit Hours
BCH-721	Regulation of Metabolism in Health & Disease	3(3-0)
BCH-722	Advanced Medical biochemistry	3(3-0)
BCH-723	Biochemistry of Control system	3(3-0)
BCH-724	Gene Regulation & Expression	3(3-0)
BCH-725	Inherited diseases and molecular medicines	2(2-0)
BCH-726	Advanced cell biology	2(2-0)
BCH-727	Biostatistics	3(3-0)
BCH-728	Special problem	1(1-0)
BCH-729	Seminar	1(1-0)

**Note:** Major requirements for PhD degree are reproduced below

1. Successful completion of course work of atleast 18 credit hours.
2. Every candidate shall have to pass the comprehensive Examination after completing the course work.
3. Submission of Synopsis and its defence.
4. Satisfactory reports on thesis by two experts from academically advanced countries.
5. Successful defense of Thesis at University level alongwith atleast one publication in impact factor Journal.

