MPhil Program Pharmacy

Eligibility Criteria for M.Phil. Degree Program

To be eligible for admission to an M. Phil. a candidate must possess

i. Sixteen years of education or 4-year education (B. Pharmacy) or Seventeen years of qualifications i.e. MBBS, or Pharm. D or any other relevant degree; with at least 2nd Division or a CGPA of 2.5 on a scale of 4.00, from a HEC recognized University after HSSC/F.A/F.Sc./Grade 12 or equivalent qualifications.

ii. Entry Test: Qualifying the Graduate Assessment Test conducted by Shaheed Benazir Bhutto University or NTS/ETS/PTS or any recognized testing agency with a minimum 50% cumulative score at the time of admission (valid test) to M. Phil.

MPhil in Pharmacy (Program Objectives)

1. Build advanced knowledge in pharmaceutical sciences, including drug design, natural products, and delivery systems.
2. Develop skills in research methodology, data analysis, and modern instrumentation.
3. Promote evidence-based integration of traditional and modern medicine.
4. Ensure ethical research conduct and effective scientific communication.
5. Prepare graduates for doctoral studies, academia, and industry roles.

Requirements for Award of MPhil Degree

For the award of MPhil degree candidates shall complete **24** credit hours of coursework along with a minimum of six (6**)** credit hours for research work/thesis.

The MPhil degree is awarded upon successful completion of a minimum of 1.5 years (three regular semesters) and must be completed within a maximum of four years (eight regular semesters). Any extension beyond eight semesters will be considered under exceptional circumstances, in accordance with Clause 2.3(ii) of the *Graduate Education Policy* issued by the Higher Education Commission (HEC), 2023.

MPhil Courses

1. PHARM-721: Advanced Heterocyclic Chemistry
2. PHARM-722: Drug Design Concepts

3. PHARM-723: Solid Dosage Form; Floating Drug Delivery System
4. PHARM-724: Biodegradable Polymers
5. PHARM-725: Nanomedicine
6. PHARM-726: Spectral Analysis of Alkaloidal Drugs
7. PHARM-727: Clinical Disorders and Their Management
8. PHARM-728: Pre-formulation Studies
9. PHARM-729: Extraction and Isolation Techniques
10. PHARM-730: Instrumental Techniques
11. PHARM-731: Standardization of Natural Products
12. PHARM-732: Functional Elucidation of Herbal Medicines
13. PHARM-733: Natural Antidepressants
14. PHARM-734: Targeted Drug Delivery System and its In-Vitro/In-Vivo Evaluation
15. PHARM-735: Traditional Medicine and Its Modern Formulation
16. PHARM-736: Principles of Antimicrobial Therapy
17. PHARM-737: Bioactive Natural Microbial Products
18. PHARM-738: Molecular Pharmacology-I
19. PHARM-739: Neuroinflammation Pathways
20. PHARM-740: Nutraceuticals and Functional Foods
21. PHARM-741: Clinical Pharmacology
22. PHARM-742: Synthetic Chemistry-I
23. PHARM-743: Research Methodology
24. PHARM-744: Computer Applications in Pharmacy
25. PHARM-745: Biostatistics

Eligibility Criteria for Ph.D. Degree Program

To be eligible for admission to a Ph.D. degree program, a candidate must possess

i. The relevant M. Phil or equivalent degree with at least a First Division (annual system) or a CGPA of 3.00 on scale of 4.00 from any recognized university as per Higher Education Commission of Pakistan (HEC) criteria.

ii. Entry Test: Graduate Assessment Test conducted by Shaheed Benazir Bhutto University Sheringal or NTS/ETS/PTS or any HEC recognized testing agency with a minimum 60% score.

PhD in Pharmacy (Program Objectives)

1. Conduct original, independent research that contributes to pharmaceutical innovation.
2. Attain expertise in advanced analytical and experimental techniques.
3. Address global health challenges through interdisciplinary and translational research.
4. Uphold international research ethics and academic standards.
5. Develop leadership, teaching, and grant-writing capabilities for academic and industrial careers.

Requirements for Award of PhD Degree

To qualify for the award of a PhD degree, the following conditions must be met:

a. **Coursework Completion**

i. Students must complete a minimum of 18 credit hours of coursework.

ii. Courses must be delivered through regular, on-campus classes taught by full-time faculty members of the university.

iii. Coursework should preferably consist of 800-level courses.

b. Research: The PhD degree shall be primarily research-based. Completion of coursework alone does not qualify a candidate for the degree; original and substantial research (12 credit hours) remains the core requirement.

PhD Courses

1. PHARM-801: Pharmaceutical Dosage form

2. PHARM-802: Pharmaceutical Packaging materials
3. PHARM-803: Pharmaceutical Excipients
4. PHARM-804: Clinical Pharmacy and therapeutics
5. PHARM-805: Quality Control of finished dosage form
6. PHARM-806: Advances in Drug Metabolism
7. PHARM-807: Electrochemistry in Pharmacy
8. PHARM-808: Clinical disorders and their management
9. PHARM-809: Hormones and Autocoids
10. PHARM-810: Physiology of cardiovascular and digestive system
11. PHARM-811: Physiology of Nervous system
12. PHARM-812: Pharmacology of Nervous system
13. PHARM-813: Advanced Pharmacology
14. PHARM-814: Natural products
15. PHARM-815: Advanced Pharmacognosy
16. PHARM-816: Kinetics and stability of pharmaceuticals
17. PHARM-817: Parenteral formulations
18. PHARM-818: Spectrophotometric Techniques
19. PHARM-819: Mass Spectrometry
20. PHARM-820: Advance Instrumental Techniques
21. PHARM-822: Advances in Antibiotics
22. PHARM-823: Pharmacology of Cardiovascular Systems
23. PHARM-824: Drug Therapy of Respiratory Diseases
24. PHARM-825: Isolation and Extraction of Natural Products
25. PHARM-826: Therapy of Cancer
26. PHARM-827: Synthetic chemistry
27. PHARM-828: Chromatographic methods for drug analysis
28. PHARM-829: Enzymes kinetics
29. PHARM-831: Special topics in organic chemistry
30. PHARM-832: Smart Drug Delivery System
31. PHARM-833: Special topics in physical pharmacy
32. PHARM-834: Chemistry of secondary metabolites

33. PHARM-835: Analytical pharmacognosy
34. PHARM-836: Biosynthesis of natural products
35. PHARM-837: Structure elucidation of natural products
36. PHARM-838: Natural toxicants
37. PHARM-839: Advanced Phytopharmaceutical Analysis
38. PHARM-840: Industrial Pharmacognosy
39. PHARM-841: Standardization of Phytomedicine