



# **DOW UNIVERSITY OF HEALTH SCIENCES**

**SCHOOL OF POSTGRADUATE STUDIES**

## **PROGRAM SPECIFICATION – SESSION 2025-26**

### **Introduction of Institute & Program**

The Mphil program in Pharmacology offered by institute of basic medical sciences (IBMS), has its focus on the study and research in basic, applied and clinical domains. Pharmacology, being an interdisciplinary field, incorporates the disciplines of physiology, biochemistry, organic chemistry, behavioral sciences, and medicine. With the advent of modern technology and consequently new research avenues, the field of pharmacology is bringing together an even wider range of disciplines, resulting in the merger of the traditional aspects of pharmacology with novel approaches drawn from other disciplines, such as biophysics, biomedical engineering, and molecular genetics.

The faculty members at IBMS have a broad range of research expertise spanning through the various phases of development of effective pharmacological interventions. Their expertise ranges from in vivo models development through to molecular pharmacology, and computational biology through to clinical application. The focus of the research would initially be focused on utilizing integrated physiological and pharmacological approaches with biochemical and molecular techniques to study disease states, underlying mechanisms of disease and drug actions, with a view to identifying novel mechanisms, therapeutic targets and agents with a clinical and translational focus.

The coursework and research activities in MPhil Pharmacology program will focus on deciphering the molecular basis of disease processes as well as their treatment mechanisms explained at the molecular level. Our curriculum emphasizes interdisciplinary doctoral training in molecular pharmacology while feeding the basic and applied side. Students will be trained in the fields of pharmacology, as well as in molecular, genetic, biophysical, and structural approaches to enable them to solve complex problems in basic and clinical pharmacology as well as patient care.

The program involves various components such as (A) extensive coursework for at least three semesters (24 credit hours),

(B) synopsis writing and defense according to the rules and regulations drawn by the research department of the university,

(C) and original research demanding extensive bench work or clinical work (depending upon the protocol



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	and design selected),  (D) and finally writing and defending thesis (06 credit hours).
<b>Course Title (As approved by PM&amp;DC/HEC)</b>	M.Phil Pharmacology
<b>Course Duration</b>	2-4 years
<b>Type of Study</b>	Full time (Semester System)
<b>Study System</b>	Semesters system
<b>Total Credit Hours</b>	30
<b>Credit Hours Distribution –Semester Wise</b>	<u>Credit Hours Distribution</u> Semester I =12 Semester II = 12 Semester III & IV = 06 (THESIS)
<b>Study Hours Distribution</b>	Course title = M.Phil Study per Semester = 16 weeks Examination = 2 weeks Semester Break = 2 weeks Working Hours = 8:30am - 3:00pm (except Friday)
<b>Teaching Hours Distribution</b>	Lecture hours/ Facilitation / Self Directed Studies/ Lab training/ Internship
<b>Modules Detail with Credit Hours</b>	<b>Semester 1 (General):</b> covering Genetics, Molecular Biology, Research Methodology and Biostatistics and Epidemiology <b>Semester 2 (Subject Specific):</b> Major I: General Pharmacology Major II: ANS, CVS,GIT and Respiratory Pharmacology Major III: CNS, Endocrine Pharmacology, Autacoids and NSAIDs Major IV: Antineoplastic and Antimicrobials <b>Each course holds 3 credit hours</b>
<b>Assessment of Student</b>	<ul style="list-style-type: none"> <li>Continuous Internal Assessment (<i>During Semester</i>)</li> <li>Semester Examination</li> <li>Thesis Defense Examination</li> </ul>
<b>Teaching Institution</b>	School of Postgraduate Studies
<b>Degree Awarding Institution</b>	Dow University of Health Sciences, Karachi