



DOW UNIVERSITY OF HEALTH SCIENCES

SCHOOL OF POSTGRADUATE STUDIES

M.PHIL. PROGRAM SPECIFICATION-SESSION-2023-2024

Introduction of Institute & Program

Dow College of Pharmacy was established in 2007. The aim was to train pharmacists, who are a vital part of a complete health care system and can practice in a number of health care settings, including hospitals, clinics, etc.

Subsequently, an Mphil. Program was initiated in the year 2013, in all disciplines of Pharmacy. Presently, 15 students are studying in M.Phil Program at Faculty of Pharmaceutical Sciences.

In addition to the Pharm.D. Program, the M.Phil. Programs have been recognized by the Pharmacy Council of Pakistan.

The University offers full-time postgraduate program in the key areas of:

1. **Pharmacology**
2. **Pharmaceutics**
3. **Pharmaceutical Chemistry**
4. **Pharmacognosy**
5. **Pharmacy Practice**

We have developed a curriculum format to allow a greater range of options within the program to meet the requirements of candidates (primarily pharmacists) who have passion for teaching and research in pharmacy. Candidates from allied health sciences can also pursue their career under this program as per eligibility criterion of the program.

The program provides a sound understanding of drug and disease, drug and diagnostics, drug and instrumental approaches at the cellular, molecular and genetic level applying contemporary techniques of modern biomedicine. It provides opportunities to acquire the skills of synthesis, analysis and development of the idea required in the field of pharmaceutical research and ultimately translating it into a form of thesis using potential decision making abilities. Hence, the students are provided with a professional and an amicable environment to be trained as the subject specialists,



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	<p>true researchers and resource persons that are well equipped with the methodologies of modern trends of various disciplines of pharmaceutical sciences. The program involves various components such as:</p> <p>(A) Course work for two semesters (24 credit hours),</p> <p>(B) Synopsis writing and defense according to the rules and regulations drawn by the research department of the university,</p> <p>(C) Original research demanding extensive bench work or clinical work (depending upon the protocol and design selected),</p> <p>(D) Writing and defending thesis (06 credit hours).</p>
Eligibility /Admission Criteria	<ul style="list-style-type: none"> Pharm.D/ Bachelors' (BS) in any allied Science or equivalent degrees, with a CGPA of atleast 2.45 Entry Test (passed &valid) as per HEC criteria.
Course Title (As approved by PCP)	<p>The Pharmacy Council of Pakistan (PCP), the accreditation body of these disciplines, has given an NOC for the following disciplines as under:</p> <p>M.Phil. in Pharmacology M.Phil. in Pharmaceutics M.Phil. in Pharmacognosy M.Phil. in Pharmacy Practice M.Phil. in Pharmaceutical Chemistry</p>
Course Duration	M.Phil. Min 2 Year Max 4 Year; duration of study may not be extended.
Type of Study	Full Time
Study System	Semester System
Teaching & Degree Awarding Institution	<p>Teaching: Faculty of Pharmaceutical Sciences,</p> <p>DAI: Dow University of Health Sciences</p>
Credit Hours Distribution –Semester Wise	<p><u>Master of Philosophy (M. Phil) in</u></p> <p><u>Pharmacology:</u> Semester 1 = 12 Cr. Hrs Semester 2 = 12 Cr. Hrs. 6 Cr. Hrs (Thesis)</p> <p><u>Master of Philosophy (M. Phil) in</u></p>



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	<p><u>Pharmaceutics:</u> Semester 1 = 12 Cr. Hrs Semester 2 = 12 Cr. Hrs. 6 Cr. Hrs (Thesis)</p> <p><u>Master of Philosophy (M. Phil) in Pharmacy Practice:</u> Semester 1 = 12 Cr. Hrs Semester 2 = 12 Cr. Hrs. 6 Cr. Hrs (Thesis)</p> <p><u>Master of Philosophy (M. Phil) in Pharmacognosy:</u> Semester 1 = 12 Cr. Hrs Semester 2 = 12 Cr. Hrs. 6 Cr. Hrs (Thesis)</p> <p><u>Master of Philosophy (M. Phil) in Pharmaceutical Chemistry :</u> Semester 1 = 12 Cr. Hrs Semester 2 = 12 Cr. Hrs. 6 Cr. Hrs (Thesis)</p>
Study Hours Distribution	<ul style="list-style-type: none"> • 16 weeks teaching, • 2 weeks Preparatory Leaves • 2 weeks Exams conduction
Assessment of Student	<ul style="list-style-type: none"> • Internal Evaluation (Assignments, presentations, Quiz/Test) =30 Marks • Terminal Exam= 70 Marks • Viva Examination after thesis submission and evaluation.
Course Detail with Credit Hours See Annexure- I	Course Detail with Credit Hours See Annexure- I (See below)



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Annex- I

M.Phil. COURSE SCHEME **Department of Pharmacology**

Semester- I			Semester-II		
COURSE NO	SUBJECT	CR HR	COURSE NO	SUBJECT	CR HR
PCL 701	Biostatistics (Core-I)	2	PCL 702	Instrumentation and Research Techniques (Major-III)	2
PCL 703	Research Methodology (Core-II)	2	PCL 704	Proteomics and Bioinformatics (Major-IV)	2
PCL 705	Epidemiology (Core-III)	2	PCL 706	Drugs for Gastrointestinal and Endocrine Disorders (Major-V)	2
PCL 707	Molecular Biology and Contemporary Medicine (Major-I)	3	PCL 708	Chemotherapeutic Drugs and Toxicology (Major-VI)	3
PCL 709	Pharmacology of Drugs for Nervous system (Major-II)	3	PCL 710	Drugs for Cardiovascular and Respiratory Disorders (Major-VII)	3
----	Journal Club and teaching assistance assignments	NCH	----	Journal Club and Teaching Assistance Assignments	NCH
	Total Cr. Hr	12		Total Cr. Hr	12

Total Credit Hrs of Course Work (Semester1+2)	A	12+12
Credit hrs for Research work & M.Phil Thesis	B	06
TOTAL CREDIT HOURS (A +B)		30



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M.Phil. COURSE SCHEME

Department of Pharmaceutics

Semester- I			Semester-II		
COURSE NO	SUBJECT	CR HR	COURSE NO	SUBJECT	CR HR
PCE 701	Biostatistics (Core-I)	2	PCE 702	Advanced Pharmaceutical Technology (Major- III)	3
PCE 703	Research Methodology (Core-II)	2	PCE 704	Advanced Bio-Pharmaceutics and Pharmacokinetics (Major- IV)	3
PCE 705	Epidemiology (Core-III)	2	PCE 706	Advances in Industrial Pharmacy (Major-V)	3
PCE 707	Applied Physical Pharmacy (Major-I)	3	PCE 708	Pharmaceutical Quality Management Systems (Major - VI)	3
PCE 709	Pharmaceutical Microbiology (Major-II)	3	----	Journal Club and teaching assistance assignments	NCH
----	Journal Club and Teaching Assistance Assignments	NCH			
	Total Cr. Hr	12		Total Cr. Hr	12

Total Credit Hrs of Course Work (Semester1+2)	A	12+12
Credit for Research work & submission of Thesis	B	06
TOTAL CREDIT HOURS (A +B)		30



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M.Phil. COURSE SCHEME

Department of Pharmacy Practice

Semester- I			Semester-II		
COURSE NO	SUBJECT	CR HR	COURSE NO	SUBJECT	CR HR
PHP 701	Biostatistics (Core-I)	2	PHP 702	Applied Clinical Pharmacokinetics (Major-III)	3
PHP 703	Research Methodology (Core-II)	2	PHP 704	Applied Clinical Techniques (Major-IV)	2
PHP 705	Epidemiology (Core-III)	2	PHP 706	Pharmacotherapeutics- II (Major-V)	3
PHP 707	Pharmacotherapeutics-I (Major-I)	3	PHP 708	Design and interpretation of Clinical Trials (Major-VI)	2
PHP 709	Regulatory Guidelines in Clinical Pharmacy Practice (Major-II)	3	PHP 710	Health Systems in Pharmacy Practice (Major-VII)	2
-----	Journal Club and teaching assistance/ Clinical Practice assignments		-----	Journal Club and teaching assistance/ Clinical Practice assignments	NCH
	Total Cr. Hr	12		Total Cr. Hr	12

Total Credit Hrs of Course Work (Semester1+2)	A	12+12
Credit for Research work & Submission of Thesis	B	06
TOTAL CREDIT HOURS (A +B)		30



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M.Phil. Course Scheme

Department of Pharmacognosy

Semester- I			Semester-II		
COURSE NO	SUBJECT	CR HR	COURSE NO	SUBJECT	CR HR
PCG-701	Biostatistics (Core-I)	02	PCG-702	Natural Product Drug Discovery And Regulatory Affairs Of Herbal Medicines (Major-III)	03
PCG-703	Research Methodology (Core-II)	02	PCG-704	Cosmeceuticals and Nutraceuticals (Major-IV)	03
PCG-705	Epidemiology (Core-III)	02	PCG-706	Toxicology of Natural Substances (Major-V)	03
PCG-707	Instrumentation Techniques And Structure Elucidation Of Natural Products (Major-I)	03	PCG-708	Good Agriculture Practice of Herbal Medicine (Major-VI)	03
PCG-709	Biosynthesis of Natural Products (Major-II)	03	-----	Journal Club and Teaching Assistance Assignments	NCH
-----	Journal Club and Teaching Assistance Assignments	NCH			
	Total Cr. Hr	12		Total Cr. Hr	12

Total Credit Hrs of Course Work (Semester1+2)	A	12+12=24
Credit for Research work & submission of Thesis	B	06
TOTAL CREDIT HOURS (A +B)		30



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M.Phil. COURSE SCHEME
Department of Pharmaceutical Chemistry

Semester- I			Semester-II		
COURSE NO	SUBJECT	CR HR	COURSE NO	SUBJECT	CR HR
PCH 701	Biostatistics (Core-I)	2	PCH 702	Molecular modeling and computational chemistry (Major III)	3
PCH 703	Research Methodology (Core-II)	2	PCH 704	Quality Control and Quality Assurance (Major IV)	3
PCH 705	Research Methodology (Core-III)	2	PCH 706	Diagnostic Medicinal Chemistry (Major V)	3
PCH 707	Applied Instrumentation and Analytical techniques (Major- I)	3	PCH 708	Polymer chemistry (Major VI)	3
PCH 709	Advanced Medicinal Chemistry (Major-II)	3	----	Journal Club and teaching assistance assignments	NCH
----	Journal Club and teaching assistance assignments	NCH			
	Total Cr. Hr	12		Total Cr. Hr	12

Total Credit Hrs of Course Work (Semester1+2)	A	12+12=24
Credit for Research work & submission of Thesis	B	06
TOTAL CREDIT HOURS (A +B)		30