



M.PHIL. PROGRAM SPECIFICATION - SPECIMEN
SESSION-2022-23

Introduction of Institute & Program	<p>Dow College of Pharmacy was established in 2007. It became Faculty of Pharmaceutical Sciences in 2012. The aim was to train pharmacist, 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.</p> <p>MPhil Program was launched in 2013 in four disciplines of Pharmacy ie Pharmacology, Pharmaceutics, Pharmacy Practice, Pharmacognosy and Pharmaceutical Chemistry.</p> <p>In addition to Pharm.D. Program, The M.Phil Program has been recognized by Pharmacy Council of Pakistan and five Departments are recognized by HEC.</p>
Introduction to Program	<p>Master of Philosophy (M.Phil) programs in Faculty of Pharmaceutical Sciences: <u>Post Graduate programme (M.Phil.)</u> was initiated in the year 2013, in all disciplines of Pharmacy. Presently, 9 students in five Batches are studying in M.Phil. Pharmacology and four students in two batches are studying in M.Phil Pharmaceutics Program.</p> <p>As per act of Dow University of Health Sciences, the name of <i>Faculty of Pharmaceutical Sciences</i> was given to this faculty in 2012.</p> <p>The university offers full-time postgraduate program in the key areas of <i>Faculty of Pharmaceutical Sciences</i> that refer to five major disciplines:</p> <ol style="list-style-type: none">1. Pharmacology2. Pharmaceutics3. Pharmaceutical Chemistry4. Pharmacognosy5. Pharmacy Practice <p>To cover these areas, the college has</p>



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developed the 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, 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

- (A) extensive course work 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 and design selected),
- (D) and finally writing and defending thesis (06 credit hours).

The program offers Master of Philosophy



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	<i>(M.Phil) degrees in the four major disciplines in Faculty of Pharmaceutical Sciences, covering the scope of research.</i>
Course Title (As approved by PCP)	<p>Pharmacy Council of Pakistan (PCP), the accreditation body has given NOC on following disciplines of 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> <p>Faculty of Pharmaceutical Sciences, Dow University of Health Sciences</p>
Course Title (As approved by HEC)	<p>HEC has given NOC on following discipline 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> <p>Faculty of Pharmaceutical Sciences, Dow University of Health Sciences</p>
Course Duration	M.Phil. Min 2 Year Max 4 Year
Type of Study	Basic and Applied Research Based Studies in Pharmacology, Pharmaceutics, Pharmacognosy, Pharmaceutical Chemistry and Pharmacy Practice.
Study System	Semester System
Total Credit Hours	M.Phil. = 30
Credit Hours Distribution –Semester Wise	<p><u>M.Phil. Program:</u></p> <p><u>Master of Philosophy (M. Phil) in Pharmacology:</u> Semester 1 = 12 Cr. Hrs Semester 2 = 12 Cr. Hrs.</p>



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	<p>6 Cr. Hrs (Thesis)</p> <p><u>Master of Philosophy (M. Phil) in 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	<p>16 weeks classes teaching, 2 weeks Preparatory Leaves</p> <p>2 weeks Exams conduction</p>
Teaching Hours Distribution	Time Table (to be handed over to students on commencement of classes)
Modules Detail with Credit Hours	NA
Assessment of Student	<p>Internal Evaluation (Assignments, presentations, Quiz/Test) =30 Marks</p> <p>Terminal Exam= 70 Marks</p> <p>Viva Examination after thesis submission and evaluation.</p>
Teaching Institution	Faculty of Pharmaceutical Sciences, Dow University of Health Sciences, OJHA Campus, Karachi.



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Degree Awarding Institution	Faculty of Pharmaceutical Sciences, Dow University of Health Sciences, Karachi.
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Annex- I

M.PHIL. COURSE SCHEMES **DEPARTMENT OF PHARMACOLOGY**

Year	Semester	Title of Course	Course Code	Credit Hrs.
	I	Biostatistics (Core-I)	PCL 701	2
		Research Methodology (Core-II)	PCL 703	2
		Epidemiology (Core-III)	PCL 705	2
		Instrumentation and Research Techniques (Major-I)	PCL 707	3
		Molecular Biology and Contemporary Medicine (Major-II)	PCL 709	2
		Autonomic Nervous System, Gastrointestinal System, and NSAIDs (Major-III)	PCL 711	2
		Blood, Cardiovascular and Respiratory system(Major-IV)	PCL 713	2
		Journal Club and teaching assistance assignments	----	NCH
		TOTAL		15
	2	Medical genetics and Gene therapy (Major-V)	PCL 702	3
		Proteomics and Bioinformatics (Major-VI)	PCL 704	2
		Chemotherapy and Toxicity (Major-VII)	PCL 706	2
		Neuropharmacology, Endocrinology and Autacoids (Major-VIII)	PCL 708	2
		Journal Club and teaching assistance assignments	----	NCH
		TOTAL		09
		A. TOTAL CREDIT HOURS OF COURSE WORK		24
		Research paper in Peer Reviewed scientific journals		NCH
		B. Research work & Submission of Thesis		6
		C. Grand total (A+B)	Grand Total	30



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M.PHIL. COURSE SCHEMES
DEPARTMENT OF PHARMACEUTICS

Year	Semester	Title of Course	Course Code	Credit Hrs.
1 st	I	Biostatistics (Core-I)	PCE 701	2
		Research Methodology (Core-II)	PCE 703	2
		Epidemiology (Core-III)	PCE 705	2
		Applied Physical Pharmacy (Major-I)	PCE 805	3
		Pharmaceutical Microbiology (Major-II)	PCE 807	3
		Journal Club and Teaching Assistance Assignments	----	NCH
			TOTAL	12
	II	Advanced Pharmaceutical Technology (Major- III)	PCE 702	3
		Advanced Bio-Pharmaceutics and Pharmacokinetics (Major- IV)	PCE 704	3
		Advances in Industrial Pharmacy (Major-V)	PCE 706	3
		Pharmaceutical Quality Management Systems (Major -VI)	PCE 708	3
		Journal Club and teaching assistance assignments	----	NCH
			TOTAL	12
		A. TOTAL CREDIT HOURS OF COURSE WORK		24
		Research paper in Peer Reviewed scientific journals		NCH
		B. Research work & Submission of Thesis		6
		Total		30



M.PHIL. COURSE SCHEMES

DEPARTMENT OF PHARMACY PRACTICE

Semester	Title of Course	Course Code	No. of Credit Hrs.
Semester-1	Biostatistics (Core-I)	PHP 701	2
	Research Methodology (Core-II)	PHP 703	2
	Epidemiology (Core-III)	PHP 705	2
	Pharmacotherapeutics-I (Major-I)	PHP 707	2
	Regulatory Guidelines in Clinical Pharmacy Practice (Major-II)	PHP 709	2
	Research Ethics in Pharmacy practice (Major-III)	PHP 711	2
	Journal Club and teaching assistance/ Clinical Practice assignments	-----	NCH
			12Credit hrs.
Semester-II	Applied Clinical Pharmacokinetics (Major-IV)	PHP 702	3
	Applied Clinical Biotechniques (Major-V)	PHP 704	2
	Pharmacotherapeutics- II (Major-VI)	PHP 706	3
	Design and interpretation of Clinical Trials (Major-VII)	PHP 708	2
	Health Management in Pharmacy Practice (Major-VIII)	PHP 710	2
	Journal Club and teaching assistance/ Clinical Practice assignments		NCH
			12 Credit hrs.
	A. TOTAL CREDIT HOURS OF COURSE WORK		24
	Research paper in Peer Reviewed scientific journals		NCH
	B. RESEARCH WORK & SUBMISSION OF THESIS		6
			30 Credit hrs.

- NCH (Noncredit hr) courses are compulsory and will be evaluated internally by PhD faculty of departments.



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DEPARTMENT OF PHARMACOGNOSY

SEMESTER	TITLE OF COURSE	COURSE CODE	CREDIT HOURS
Semester I	Biostatistics (Core-I)	PCG-701	02
	Research Methodology (Core-II)	PCG-703	02
	Epidemiology (Core-III)	PCG-705	02
	Instrumentation Techniques And Structure Elucidation Of Natural Products (Major-I)	PCG-707	03
	Biosynthesis of Natural Products (Major-II)	PCG-709	03
	Journal Club and Teaching Assistance Assignments	-----	NCH
Total Credit Hours in 1st Semester			12
	Natural Product Drug Discovery And Regulatory Affairs Of Herbal Medicines (Major-III)	PCG-702	03
Semester II	Cosmeceuticals and Nutraceuticals (Major-IV)	PCG-704	03
	Natural Toxicology (Major-V)	PCG-706	03
	Science of Clinical and Agricultural Practice of Herbal Medicine (Major-VI)	PCG-708	03
	Journal Club and Teaching Assistance Assignments	-----	NCH
Total Credit Hours in 2nd Semester			12
A. Total Credit Hours of Course Work			24
Research paper in Peer Reviewed scientific journals			NCH
B. Research work & Submission of Thesis			06
TOTAL			30

Total No of Credit Hours

Semester -I	Semester-II	Thesis	Total No. of Credit Hours
15	09	06	30



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DEPARTMENT OF PHARMACEUTICAL
CHEMISTRY

Year	Semester	Title of Course	Course Code	Credit Hrs.
1 st	I	Biostatistics (Core-I)	PCH 701	3
		Research Methodology and Epidemiology (Core-II)	PCH 703	3
		Applied Instrumentation and Analytical techniques (Major- I)	PCH 705	3
		Advanced Medicinal Chemistry (Major-II)	PCH 707	3
		Journal Club and teaching assistance assignments	----	NCH
		TOTAL		12
	II	Molecular modeling and computational chemistry (Major III)	PCH 702	3
		Quality Control and Quality Assurance (Major IV)	PCH 704	3
		Diagnostic Medicinal Chemistry (Major V)	PCH 706	3
		Polymer chemistry (Major VI)	PCH 708	3
		Journal Club and teaching assistance assignments	----	NCH
		TOTAL		12
		A. TOTAL CREDIT HOURS OF COURSE WORK		24
		Research paper in Peer Reviewed scientific journals		NCH
		B. Research work & Submission of Thesis		6

Total Credit hours:

Semester-1	Semester-2	Semester-3	Total No. of Credit Hrs.
12	12	6	30