

# **MASTER OF PHARMACY (M. PHARM) PROGRAM**

**(One and Half Year Graduate Program in Pharmacy)**

*for*

**Private Universities in Bangladesh**

**Approved by**

**University Grants Commission (UGC)**

**Dhaka, Bangladesh**

**Date of Approval**

## INTRODUCTION

The M. Pharm. program has been designed for the students to acquire advanced knowledge and skills in pharmaceutical sciences contemplating a career in the teaching, patient orientated services in hospital & community pharmacies and pharmaceutical industries (marketing, manufacturing, research & development, drug information, regulatory agencies or registration departments). The course also prepares postgraduates for entry into higher research degree program in appropriate areas of the pharmaceutical sciences in home and abroad. Lectures along with practical classes, research activities, seminars, interactive small group teaching and tutorials will be part of the M. Pharm program.

The courses provide the masterly knowledge that are required of the modern practicing specialist Pharmacists for legal and ethical aspects, quality and standards of pharmaceutical care; improving the community health, drug therapy management and rational utilization of drugs.

## OBJECTIVES

The principal objectives of this curriculum are:

- To potentiate the academic and scientific knowledge gathered at the undergraduate (B. Pharm) level for better practice in the professional fields.
- To promote research activities on different fields of pharmacy so as to develop newer techniques of formulation, quality control and standardization of drug and drug product including validation, other organizations in drug research, marketing, sales and administration.
- To develop and propagate novel ideas with a view to nourish Pharmacy professionalism among the graduates.

## MAJORS IN M. PHARM PROGRAM

Pharmacy is a profession subject and with the advancement and diversity of knowledge and services pharmacy practice areas has also been diversified. Based on the national and international needs, Master in Pharmacy program may be divided in the following majors. However, respective universities must ensure the proper infrastructures and faculties to run the program.

1. M.Pharm in Pharmaceutical Chemistry
2. M.Pharm in Pharmaceutical Technology
3. M.Pharm in Pharmacology and Clinical Pharmacy
4. M.Pharm in Pharmaceutical Marketing
5. M. Pharm in Pharmacy



## ENTRY REQUIREMENTS

Students seeking admission to pursue the course for the degree of M. Pharm should have passed the B. Pharm from any recognized university or any other recognized institute/university at home and abroad. A prospective candidate for M. Pharm study must have a cGPA result of at least 2.50 for M. Pharm (General Group) and 3.00 for M. Pharm (Thesis Group) in the B.Pharm final examination.

## THE CURRICULUM AND DURATION

The degree of M. Pharm will be conferred by the university after a student has satisfactorily completed all the required courses offered. The total duration of the M.Pharm for both the general and thesis group will be one and half academic year (eighteen months). The duration of a semester is six months including class tests, assignments, mid-term and final examinations. The duration of a semester is eighteen weeks which may be used as follows

Classes (Theoretical and Practical)	15 weeks
Recess before examination	1 week
Semester final examination	2 weeks
<b>Total</b>	<b>18 weeks</b>

*However, for thesis students, the duration of thesis works will be two semesters.*

## COURSE PATTERN AND CREDIT STRUCTURE

The entire graduate program is covered through a set of theoretical courses, laboratory courses, project/ thesis work etc. The total credit for each Major of M.Pharm Program will be 36 credits.

## ASSIGNMENT OF CREDITS

1. Theoretical Courses: Two lectures of 90 minutes per week. For a course of 3 (Three) credits total class conduct hours will be 45 hours and for a course of 2 (Two) credit total class conduct hours will be 30 hours. So for 15 hours class the credit point 1.0 will be calculated.
2. Seminar on published research articles: Two seminars (for General group) will be in last two semesters. The total assigned credit for two seminars will be 7 including presentation. If any university would like to introduce the practical courses in the masters level, only three practical courses may be assigned with 3 credits. In that case there will be one seminar during the semester and the credits for the seminar will be 4.
3. Laboratory: Credit for laboratory work usually will be 30 class hours per semester. For 30 hours laboratory work credit will be 1.0 (One).

  
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4. Thesis: Duration of the thesis work (for thesis group) will be two semesters. The total assigned credit for Project will be 10 including presentation.

5. Oral Assessment: After completion of two semesters, both students of thesis and general group should sit for an oral assessment which will be conducted in the presence of an external member and it will carry 1.0 credit.

### **CORE, MAJOR AND ELECTIVE COURSES**

To participate in M.Pharm program, all students have to take three core courses as compulsory. Three major courses have to be taken relevant to the specific major program or track as mentioned in the guideline below. On the basis of major course each non-thesis student has to take three elective courses and thesis student will take two elective courses.

### **ACADEMIC SCHEDULE AND SEMESTER**

English calendar year will be considered as the academic year and this will be divided into **TWO** semesters as stated below:

Spring Semester: January to June and Fall Semester: July to December

### **GRADING SYSTEM**

The total performance of a student in a given course is based on a scheme of continuous assessment. For theoretical courses this continuous assessment is made through homework assignment, attendance, quizzes, seminars etc. The mid-semester examination will be of one and half hour duration and semester final examination will be of three hours duration. The distribution of marks for a given course will be as follows:

Sl.	Assessment / Examination	Marks in %
1.	Assessment (class tests/quizzes, assignment and attendance)	20
2.	Mid Term Examination	30
3.	Final Examination	50
4.	Total	100

University should follow a grading system that is in congruence with UGC (University Grant Commission of Bangladesh) norms and standards.

Letter grades and corresponding grade points will be awarded in accordance with the provision shown below:

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Numerical Grade	Grade	Grade Point
80% or above	A+	4.00
75%-79.99%	A	3.75
70%-74.99%	A-	3.50
65%-69.99%	B+	3.25
60%-64.99%	B	3.00
55%-59.99%	B-	2.75
50%-54.99%	C+	2.50
45%-49.99%	C	2.25
40%-44.99%	D	2.00
Less than 40%	F	0.00
	I	Incomplete
	W	Withdrawal

## PERFORMANCE EVALUATION

The performance of a student will be evaluated in terms of semester grade point average (GPA) and cumulative grade point average (CGPA) which is the grade average for all the semesters. To be awarded a degree a student has to obtain a minimum Cumulative Grade Point Average (CGPA) of 2.5.

Students who will fail to maintain this minimum rate of progress will not be in good standing. This can happen when one or more of the following conditions exist:

Semester GPA falls below 2.0 or

Cumulative GPA falls below 2.25

All such students can make up deficiencies in GPA and credit requirements by completing courses in next semester(s) and backlog courses, if there is any, with better grades which should not be more than 65% (in letter Grade B+).

The methods of assessment that a teacher proposes to follow for a course will be announced on the first day of class.

## CLASS ATTENDENCE

All students are expected to attend classes regularly. The UGC believes that regular attendance is an essential for effective learning. A student is required to attend at least 70% of all the classes held in every course in order to sit for the final examination.

## ABSENCE DURING SEMESTER

A student should not be absent from quizzes, tests, mid-semester examinations etc., during the semester. Such absence will naturally lead to reduction in points/marks, which shall count towards the final grade. Absence in the final examination held at the end of each academic semester will result in F grades. Student absence from MID-TERM will have to retake the

course. Students can take withdrawal not more than one semester and students should complete the course within two years.

### EXAMINATION PROCEDURE

The examination committee, selection of examiners, mid-term and final examinations procedure will be followed as that of B. Pharm examination procedure.

### Calculation of GPA and CGPA:

Grade point average (GPA) is the weighted average of the grade point obtained in all the courses passed/completed by a student. The GPA should be calculated as per the guidelines of UGC.

### AWARD OF DEGREE

To obtain a Master of Pharmacy (M. Pharm) degree in any Major subject, a student must successfully complete a total of 36.0 credits for thesis group and 36 credits for non-thesis/General group.

Master of Pharmacy Course					
General group					
	Number of course to be taken	Marks per course	Total marks	Credits	Total credits
Core course	3	100	300	3	9
Track course	3	100	300	3	9
Electives	3	100	300	3	9
Two Seminars (on Published Papers)	1	50	50	7	7
Viva voce	1	50	50	1	2
			<b>1000</b>		<b>36</b>
Thesis group					
	Number of course to be taken	Marks per course	Total marks	Credits per course	Total credits
Core course	3	100	300	3	9
Track course	3	100	300	3	9
Electives	2	100	200	3	6
Thesis	1	100	100	8	8
Thesis Presentation	1	50	50	1	2
Viva voce	1	50	50	1	2
			<b>1000</b>		<b>36</b>



Core courses		
1	Advanced Pharmacology I	These core courses must have to be taken by the students of any specialized course for the intended degree
2	Advanced Pharmaceutical Analysis	
3	Research Methodology	

	Track / Major / Specialized	Courses
1	M.Pharm in Pharmaceutical Chemistry	Advanced Medicinal & Synthetic Chemistry, Advanced Organic Chemistry, Pharmaceutical Quality Control and Quality Assurance,
2	M.Pharm in Pharmaceutical Technology	Advanced Pharmaceutical Technology, Advanced Biopharmaceutics and Pharmacokinetics, Pharmaceutical Industrial Management
3	M.Pharm in Pharmacology and Clinical Pharmacy	Advanced Pharmacology II, Clinical Toxicology, Clinical Pharmacy
4	M.Pharm in Pharmaceutical Marketing	Pharmaceutical Marketing, Drug Regulatory Affairs, Pharmacoeconomics
5.	M. Pharm in Pharmacy	Advanced Pharmaceutical Technology-I, Advanced Biopharmaceutics and Pharmacokinetics, Drug Use Management

ELECTIVE COURSES (Thesis and Non-thesis group)		
Course code	Course Title	Credits
MPH509	Advanced Biostatistics	3.0
MPH510	Bioinformatics	3.0
MPH511	Clinical Pharmacy	3.0
MPH512	Applied Medicinal Chemistry and Drug Discovery	3.0
MPH513	Computational Chemistry and Molecular Modelling	3.0
MPH514	Alternative Medicines and its Recent Advancement	3.0
MPH515	Chemical Biology & Molecular Pharmacology,	3.0
MPH516	Cellular & Molecular Biology	3.0
MPH518	Industrial Microbiology	3.0
MPH519	Brand Management	3.0
MPH520	Advanced Pharmaceutical Biotechnology	3.0
MPH521	Tissue Engineering and Regenerative Medicine	3.0
MPH522	Concepts in Pharmaceutical Drug Development	3.0
	THREE PRACTICAL FROM CORE, MAJOR and ELECTIVE COURSES: NON-THESIS GROUP (if any)	3.0



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