INSTITUTE OF PHARMACEUTICAL SCIENCES, KUK

Scheme of examination M. Pharmacy w.e.f. 2017-18

The specializations in M. Pharm program is given in Table 1.

Table – 1: List of M.Pharm. Specializations and their Code

Sr. No.	Specialization	Code
1.	Pharmaceutics	MPH
2.	Pharmaceutical Chemistry	MPC
3.	Pharmacology	MPL
4.	Pharmacognosy	MPG

The course of study for M.Pharm specializations shall include Semester wise Theory & Practical as given in Table – 2 to 7.

Table – 2: Course of study for M. Pharm. (Pharmaceutics)

Course Code	Course	Credit Hours	Credit Points	Hrs/Wk	Marks
Semester I					
MPH101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPH102T	Drug Delivery System	4	4	4	100
MPH103T	Modern Pharmaceutics	4	4	4	100
MPH104T	Regulatory Affair	4	4	4	100
MPH105P	Pharmaceutics Practical I	12	6	12	100
	Seminar/Assignment	7	4	7	100
Total		35	26	35	**650**
Semester-II					
MPH201T	Molecular Pharmaceutics (Nano Tech and targeted DDS)	4	4	4	100
MPH202T	Advanced Biopharmaceutics & Pharmacokinetics	4	4	4	100
MPH203T	Computer Aided Drug development	4	4	4	100
MPH204T	Cosmetics and Cosmeceuticals	4	4	4	100
MPH205T	Pharmaceutics Practical II	12	6	12	150
	Seminar / Assignment	7	4	7	100
	Total	35	26	35	**650**

Table -3: Course of study for M. Pharm. (Pharmaceutical Chemistry)

Course Code	Course	Credit Hours	Credit Points	Hrs/Wk	Marks
Semester I					
MPC101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPC102T	Advanced Organic Chemistry-I	4	4	4	100
MPC103T	Advanced Medicinal Chemistry	4	4	4	100
MPC104T	Chemistry of Natural Products	4	4	4	100
MPC105T	Pharmaceutical Chemistry Practical I	12	6	12	150
	Seminar/Assignment	7	4	7	100
Total		35	26	35	**650**
Semester II					
MPC201T	Advanced Spectral Analysis	4	4	4	100
MPC202T	Advanced Organic Chemistry-II	4	4	4	100
MPC203T	Computer Aided Drug Design	4	4	4	100
MPC204T	Pharmaceutical Process Chemistry	4	4	4	100
MPC205T	Pharmaceutical Chemistry Practical II	12	6	12	150
	Seminar/Assignment	7	4	7	100
Total		35	26	35	**650**

Table-4: Course of Study for (Pharmacology)

Course Code	Course	Credit Hours	Credit Points	Hrs/Wk	Marks
Semester I					
MPL101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPL102T	Advanced Pharmacology-I	4	4	4	100
MPL103T	Pharmaceutical and Toxicological Screening Methods-I	4	4	4	100
MPL104T	Cellular and Molecular Pharmacology	4	4	4	100
MPL105T	Pharmacology Practical I	12	6	12	150
	Seminar/Assignment	7	4	7	100
Total		35	26	35	**650**
Semester II					
MPL201T	Advanced Pharmacology II	4	4	4	100
MPL202T	Pharmacological and Toxicological Screening Methods-II	4	4	4	100
MPL203T	Principals of Drug Discovery	4	4	4	100
MPL204T	Experimental Pharmacology Practical-II	4	4	4	100
MPL205T	Pharmacology Practical-II	12	6	12	150
	Seminar/Assignment	7	4	7	100
Total		35	26	35	**650**

Table-5: Course of Study for (Pharmacognosy)

Course Code	Course	Credit Hours	Credit Points	Hrs/Wk	Marks
Semester I					
MPG101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPG102T	Advanced Pharmacognosy-I	4	4	4	100
MPG103T	Phytochemistry	4	4	4	100
MPG104T	Industrial Pharmacognostical Technology	4	4	4	100
MPG105T	Pharmacognosy Practical I	12	6	12	150
	Seminar/Assignment	7	4	7	100
Total		35	26	35	**650**
Semester II					
MPG201T	Medicinal Plant biotechnology	4	4	4	100
MPG202T	Advanced Pharmacognosy-II	4	4	4	100
MPG203T	Indian System of medicine	4	4	4	100
MPG204T	Herbal Cosmetics	4	4	4	100
MPG205T	Pharmacognosy Practical II	12	6	12	150
	Seminar/Assignment	7	4	7	100
Total		35	26	35	**650**

Table-6: Course of Study for M.Pharm III semester (Common for all specializations)

Course Code	Course	Credit Hours	Credit Points
MRM301T	Research Methodology and Biostatistics*	4	4
-	Journal club	1	1
-	Discussion/Presentation (Proposal Presentation)	2	2
-	Research Work	28	14
	Total	35	21

*Non University Exam

Table -7 : Course of study for M. Pharm. IV Semester
(Common for All Specializations)

Course Code	Course	Credit Hours	Credit Points
-	Journal Club	1	1
-	Research Work	31	16
-	Discussion/Final Presentation	3	3
	Total	20	20

Table -8 : Semester wise credits distribution

I	26
II	26
III	21
IV	20
Co-curricular Activities (Attending conference, scientific presentation and other scholarly activities)	Minimum=02 Maximum=7*
Total Credits Points	Minimum=95 Maximum-100*

*Credits Points for Co-curricular Activities

Table-9: Guidelines for Awarding Credit Points for Co-curricular Activities

Name of the Activity	**Maximum Credit Points Eligible/Activity**
Participation in National Level Seminar/Conference/Workshop/Symposium/Training Program (related to the specialization of the student)	01
Participation in National Level Seminar/Conference/Workshop/Symposium/Training Program (related to the specialization of the student)	02
Academic Award/Research Award from State Level/National Agencies	01
Academic Award/Research Award from International Agencies	02
Research/Review Publication in National Journals (Indexed in Scopus/web of Science)	01
Research/Review Publication in International Journals (Indexed in Scopus/Web of Science)	02

Note: International Conference: Held Outside India

International Journal: The Editorial Board outside India

*The credit points assigned for extracurricular and or co-curricular activities shall be given by the Principals of the Colleges and the same shall be submitted to the University. The criteria to acquire this credit point shall be defined by the colleges from time to time.

Table-10: Scheme for Internal assessment and end semester (Pharmaceutics-MPH)

Course Code	Course	Internal Assessment			Total	End Semester Exam		Total Marks
		Continuous Mode	Sessional Exam					
			Marks	Marks		Marks	Duration	
SEMESTER I								
MPH101T	Modern Pharmaceutical Analytical Techniques	10	15	1 Hr	25	75	3 Hrs	100
MPH102T	Drug Delivery System	10	15	1 Hr	25	75	3 Hrs	100
MPH103T	Modern Pharmaceutical	10	15	1 Hr	25	75	3 Hrs	100
MPH104T	Regulatory Affair	10	15	1 Hr	25	75	3 Hrs	100
MPH105T	Pharmaceutics Practical I	20	30	6 Hr	50	100	6 Hrs	150
-	Seminar/Assignment							100
Total								**650**

SEMESTERII

MPH201T	Molecular Pharmaceutical Nano Tech and Targeted (DDS)	10	15	1 Hr	25	75	3 Hrs	100
MPH202T	Advanced Biopharmaceutics & Pharmacokinetics	10	15	1 Hr	25	75	3 Hrs	100
MPH203T	Computer Aided Drug Development	10	15	1 Hr	25	75	3 Hrs	100
MPH204T	Cosmetic and cosmecutical	10	15	1 Hr	25	75	3 Hrs	100
MPH205T	Pharmaceutical CS Practical II	20	30	6hrs	50	100	6hrs	150
	Seminar/Assignment	-	-	-	-	-	-	100
Total								**650**

Table -11 : Schemes for internal assessments end semester (Pharmaceutical Chemistry-MPC)

Course Code	Course	Internal Assessment			Total	End Semester Exam		Total Marks
		Continuous Mode	Sessional Exam					
			Marks	Marks		Marks	Duration	
SEMESTER I								
MPC101T	Modern Pharmaceutical Analytical Techniques	10	15	1 Hr	25	75	3 Hrs	100
MPC102T	Adv Org-I	10	15	1 Hr	25	75	3 Hrs	100
MPC103T	Adv MedchemI	10	15	1 Hr	25	75	3 Hrs	100
MPC104T	CNP	10	15	1 Hr	25	75	3 Hrs	100
MPC105T	Pharm Chem Practical I	20	15	1 Hr	25	75	3 Hrs	150
	Seminar/Assignment		30	6 hrs	50	100	6Hrs	100
Total								**650**
Course Code	**Course**	**Internal Assessment**			**Total**	**End Semester Exam**		**Total Marks**
		Continuous Mode	**Sessional Exam**					
			Marks	**Marks**		**Marks**	**Duration**	
SEMESTER II								
MPC201T	Advance Spectral analysis	10	15	1 Hr	25	75	3 Hrs	100
MPC202T	Advanced Organic ChemII	10	15	1 Hr	25	75	3 Hrs	100
MPC203T	Computer Aided Drug Design	10	15	1 Hr	25	75	3 Hrs	100
MPC204T	CNP Process Chem.	10	15	1 Hr	25	75	3 Hrs	100
MPC205T	Pharm Chem Practical II	20	15	1 Hr	25	75	3 Hrs	150
	Seminar/Assignment		30	6 hrs	50	100	6Hrs	100
Total								**650**

Table -12 : Schemes for internal assessments and end semester Examinations (Pharmacology-MPL)

Course Code	Course	Internal Assessment			Total	End Semester Exam		Total Marks
		Continuous Mode	Sessional Exam					
			Marks	Marks		Marks	Duration	
SEMESTER I								
MPL101T	Modern Pharmaceutical Analytical Techniques	10	15	1 Hr	25	75	3 Hrs	100
MPL102T	Advanced Pharmacology-I	10	15	1 Hr	25	75	3 Hrs	100
MPL103T	Pharmacological and Toxicological Screening Methods-I	10	15	1 Hr	25	75	3 Hrs	100
MPL104T	Cellular and Molecular Pharmacology	10	15	1 Hr	25	75	3 Hrs	100
MPL105T	Experimental Pharmacology-I	20	15	1 Hr	25	75	3 Hrs	150
	Seminar/Assignment		30	6 hrs	50	100	6Hrs	100
Total								**650**
SEMESTER II								
MPL201T	Advanced Pharmacology II	10	15	1 Hr	25	75	3 Hrs	100
MPL202T	Pharmacological and Toxiocological Screening Methods II	10	15	1 Hr	25	75	3 Hrs	100
MPL203T	Principals of Drug Discovery	10	15	1 Hr	25	75	3 Hrs	100
MPL204T	Clinical Research and Pharmacovigilance	10	15	1 Hr	25	75	3 Hrs	100
MPL205T	Experimental Pharmacology-II	20	15	1 Hr	25	75	3 Hrs	150
	Seminar/Assignment		30	6 hrs	50	100	6Hrs	100
Total								**650**

Table -13 : Schemes for internal assessments and end semester Examinations (Pharmacognosy-MPG)

Course Code	Course	Internal Assessment			Total	End Semester Exam		Total Marks
		Continuous Mode	Sessional Exam					
			Marks	Marks		Marks	Duration	
SEMESTER I								
MPG101T	Modern Pharmaceutical Analytical Techniques	10	15	1 Hr	25	75	3 Hrs	100
MPG102T	Advanced Pharmacognosy-I	10	15	1 Hr	25	75	3 Hrs	100
MPG103T	Phytochemistry	10	15	1 Hr	25	75	3 Hrs	100
MPG104T	Industrial pharmacognostical Technology	10	15	1 Hr	25	75	3 Hrs	100
MPG105T	Pharmacognosy Practical I	20	15	1 Hr	25	75	3 Hrs	150
	Seminar/Assignment		30	6 hrs	50	100	6Hrs	100
Total								**650**
SEMESTER II								
MPG201T	Medicinal Plant biotechnology	10	15	1 Hr	25	75	3 Hrs	100
MPG202T	Advanced Pharmacognosy-II	10	15	1 Hr	25	75	3 Hrs	100
MPG203T	Indian System of medicine	10	15	1 Hr	25	75	3 Hrs	100
MPG204T	Herbal Cosmetics	10	15	1 Hr	25	75	3 Hrs	100
MPG205T	Pharmacognosy Practical-II	20	15	1 Hr	25	75	3 Hrs	150
	Seminar/Assignment		30	6 hrs	50	100	6Hrs	100
Total								**650**

Table -14 : Schemes for internal assessments and end semester Examinations (Semester III & IV)

Course Code	Course	Internal Assessment			Total	End Semester Exam		Total Marks
		Continuous Mode	Sessional Exam					
			Marks	Marks		Marks	Duration	
SEMESTER III								
MRM301T	Research Methodology and Biostastics*	10	15	1 Hr	25	75	3 Hrs	100
-	Journal Club	-	-	-	25	-	-	25
-	Discussion/Presentation (Proposal Presentation)	-	-	-	50	-	-	50
-	Research Work*	-	-	-	-	350	1 Hr	350
Total								**525**
SEMESTER IV								
	Journal Club	-	-	-	25	-		25
	Discussion/Presentation (Proposal Presentation)	-	-	-	75	-		75
	Research Work and Colloquium	-	-	-	-	400	1 Hr	400
Total								**500**

*Non-University Exam.

Internal assessment: Continuous mode
The marks allocated for Continuous mode of Internal Assessment shall be awarded as per the scheme given below.

Table- 15: Scheme for awarding internal assessment: Continuous mode

Theory	
Criteria	**Maximum Marks**
Attendance (Refer Table-16)	8
Student – Teacher interaction	2
Total	10
Practical	
Attendance (Refer Table-16)	10
Based on Practical Records, Regular viva voce, etc.	10
Total	**20**

Table -16: Guidelines for the allotment of marks for attendance

Percentage of Attendance	**Theory**	**Practical**
95-100	8	10
90-94	6	7.5
85-89	4	5
80-84	2	2.5
Less than 80	0	0

Reexamination of end semester examinations:

Reexamination of end semester examination shall be conducted as per the schedule given in table 17. The exact dates of examinations shall be notified from time to time.

Table-17: Tentative schedule of end semester examinations

Semester	For Regular Candidates	For failed Candidates
I and II	November/December	May/June
II and IV	May/June	November/December

Grading of performances (Letter grades and grade points allocations):

Based on the performances, each student shall be awarded a final letter grade at the end of the semester for each course. The letter grades and their corresponding grade points are given in Table-18.

Table-18: Letter grades and grade points equivalent to Percentage of marks and performances

Percentage of marks obtained	Letter Grade	Grade Point	Performance
90.00-100	O	10	Outstanding
80.00-89.99	A	9	Excellent
70.00-79.99	B	8	Good
60.00-69.99	C	7	Fair
50.00-59.99	D	6	Average
Less than 50	F	0	Fail
Absent	AB	0	Fail

A learner who remains absent for any end semester examination shall be assigned a letter grade of AB and a corresponding grade point of zero. He/she should reappear for the said evaluation/examination in due course.

The Semester grade point average (SGPA)

The performance of a student in a semester is indicated by a number called 'Semester Grade Point Average' (SGPA). The SGPA is the weighed average of the grade points obtained in all the courses by the student during the semester. For example, if a student takers five courses (Theory/Practical) in a semester with credit C1, C2, C3 and C4 and the student's grade points in these courses are G1, G2, G3 and G4, respectively, and then students' SGPA is equal to:

$$SGPA = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4G_4}{C_1 + C_2 + C_3 + C_4}$$

The SGPA is calculated to two decimal points. It should be noted that, the SGPA for any semester shall take into consideration the F and ABS grade awarded in that semester. For example if a learner has a F or ABS grade in course 4, the SGPA shall then be computed as:

$$SGPA = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4 * \text{ZERO}}{C_1 + C_2 + C_3 + C_4}$$

Cumulative Grade Point Average (CGPA)

The CGPA is calculated with the SGPA of all the IV semesters to two decimal points and is indicated in final grade report card/final transcript showing the grades of all IV semesters and their courses. The CGPA shall reflect the failed statusin case of F grade(s), till the course(s) is/are passed. When the course(s) is/are passed by obtaining a pass grade on subsequent examination(s) the CGPA shall only reflect the new grade and not the fail grades earned earlier. The CGPA is calculated as:

$$CGPA = \frac{C_I S_I + C_2S_2 + S_3S_3 + S_4S_4}{C_1 + C_2 + C_3 + C_4}$$

Where$C_1+C_2+C_3$..... Is the total number of credits for semester I,II,III…….and S_1,S_2,S_3,……is the SGPA of semester I,II,III……

Declaration of class

The class shall be awarded on the basis of CGPA as follows:

First Class with Distinction = CGPA of 7.50 and above
Second Class = CGPA of 5.00 to 5.99

Journal Club/Proposal Presentation/Research work:

Each student of M.Pharm Course in semester III and IV will be evaluated by the committee constituted by the Director of the institute based upon his/her performance in Journal club/Proposal presentation/research work done for dissertation. Each student will have to give a seminar in III semester (Research work) based on the progress of his/her research work and evaluated on the following criteria:

Evaluation of research work		
Presentation of work	:	150 marks
Communication of work	:	50 marks
Question and answer skills	:	150 marks
Total	:	350 marks

Dissertation /Project/Research/Colloquium work:

All the students shall undertake a project under the supervision of a teacher of the institute of the institute in Semester III. At the end of semester IV, each student will submit 4 copies of the project report (typed & bound copy not less than 75 pages).

The internal and external examiner appointed by the University shall jointly evaluate the dissertation/project/research work/colloquium (at the end of 4th Semester) based on the following criteria:

Dissertation Evaluation	: 250	}
Viva-voce	:150	} 400

Evaluation of Dissertation

Objective(s) of the work done	:	50 marks
Methodology adopted	:	100 marks
Results and Discussions	:	50 marks
Conclusions and Outcomes	:	50 marks

Total	:	250 Marks

Viva-voce		
Presentation of work	:	50 marks
Communication skills	:	25 marks
Question and answer skills	:	75 marks

Total	:	150 Marks
