

B. PHARMACY (Scheme of Studies) 2018-22

Even Semester

B. Pharmacy

YEAR	Odd Semester										Even Semester									
SMAS	Course code	Course Title	Type	L	T	P	C	Course code	Course Title	Type	L	T	P	C						
	BP101T	Human Anatomy and Physiology I – Theory		3	1	1	4	BP201T	Human Anatomy and Physiology II – Theory		3	1	1	4						
	BP102T	Pharmaceutical Analysis I – Theory		3	1	1	4	BP202T	Pharmaceutical Organic Chemistry I – Theory		3	1	1	4						
	BP103T	Pharmaceutics I – Theory	EM/EP	3	1	1	4	BP203T	Biochemistry – Theory		3	1	1	4						
	BP104T	Pharmaceutical Inorganic Chemistry – Theory		3	1	1	4	BP204T	Pathophysiology – Theory		3	1	1	4						
	BP105T	Communication skills – Theory *	SD	2	-	-	2	BP205T	Computer Applications in Pharmacy – Theory *	SD	3	-	-	3						
	BP106RBT/	Remedial Biology/		2	-	-	2	BP206T	Environmental sciences in Pharmacy *	OE	3	-	-	3						
	BP107P	Human Anatomy and Physiology – Practical	SD	-	-	4	2	BP207P	Human Anatomy and Physiology II – Practical	SD	-	-	4	2						
	BP108P	Pharmaceutical Analysis I – Practical	SD	-	-	4	2	BP208P	Pharmaceutical Organic Chemistry I – Practical	SD	-	-	4	2						
	BP109P	Pharmaceutics I – Practical	EP	-	-	4	2	BP209P	Biochemistry – Practical	SD	-	-	4	2						
	BP110P	Pharmaceutical Inorganic Chemistry – Practical	SD	-	-	4	2	BP210P	Computer Applications in Pharmacy – Practical *	SD	-	-	2	1						
	BP111P	Communication skills – Practical *	SD	-	-	2	1													
	BP112RBP	Remedial Biology – Practical *	SD	-	-	2	1													
	Total			16	4	20	30	Total			18	4	14	29						

SECOND														
Course code	Course Title	Type	L	T	P	C	Course code	Course Title	Type	L	T	P	C	
BP301T	Pharmaceutical Organic Chemistry II – Theory		3	1	1	4	BP401T	Pharmaceutical Organic Chemistry III – Theory		3	1	1	4	
BP302T	Physical Pharmaceutics I – Theory		3	1	1	4	BP402T	Medicinal Chemistry I – Theory	SD	3	1	1	4	
BP303T	Pharmaceutical Microbiology – Theory	SD	3	1	1	4	BP403T	Physical Pharmaceutics II – Theory		3	1	1	4	
BP304T	Pharmaceutical Engineering – Theory	EM	3	1	1	4	BP404T	Pharmacology I – Theory		3	1	1	4	
BP305P	Pharmaceutical Organic Chemistry II – Practical	SD	-	-	4	2	BP405T	Pharmacognosy and Phytochemistry I – Theory		3	1	1	4	
BP306P	Physical Pharmaceutics I – Practical	SD	-	-	4	2	BP406P	Medicinal Chemistry I – Practical	SD	-	-	4	2	
BP307P	Pharmaceutical Microbiology – Practical	SD	-	-	4	2	BP407P	Physical Pharmaceutics II – Practical	SD	-	-	4	2	
BP308P	Pharmaceutical Engineering – Practical	SD	-	-	4	2	BP408P	Pharmacology I – Practical	SD	-	-	4	2	
	Total		12	4	16	24	Total			15	5	16	28	

THIRD														
Course code	Course Title	Type	L	T	P	C	Course code	Course Title	Type	L	T	P	C	
BP501T	Medicinal Chemistry II – Theory	SD	3	1	1	4	BP601T	Medicinal Chemistry III – Theory	SD	3	1	1	4	
BP502T	Industrial Pharmacy – Theory	EM/EP	3	1	1	4	BP602T	Pharmacology III – Theory		3	1	1	4	
BP503T	Pharmacology II – Theory	SD	3	1	1	4	BP603T	Herbal Drug Technology – Theory		3	1	1	4	
BP504T	Pharmacognosy and Phytochemistry II – Theory		3	1	1	4	BP604T	Biopharmaceutics and Pharmacokinetics – Theory	SD	3	1	1	4	
BP505T	Industrial Pharmacy – Theory	EM/EP	3	1	1	4	BP605T	Pharmaceutical Biotechnology – Theory	SD	3	1	1	4	
BP506P	Pharmaceutical Jurisprudence – Practical	EM	-	-	4	2	BP606T	Quality Assurance – Theory	EM	3	1	1	4	
BP507P	Pharmacology II – Practical	SD	-	-	4	2	BP607P	Medicinal chemistry III – Practical	SD	-	-	4	2	
BP508P	Pharmacognosy and Phytochemistry II – Practical	SD	-	-	4	2	BP608P	Pharmacology III – Practical	SD	-	-	4	2	
	Total		15	5	12	26	Total			18	6	12	30	

FOURTH														
Course code	Course Title	Type	L	T	P	C	Course code	Course Title	Type	L	T	P	C	
BP701T	Instrumental Methods of Analysis – Theory	OE	3	1	1	4	BP801T	Biostatistics and Research Methodology	OE	3	1	1	4	
BP702T	Industrial Pharmacy II – Theory	EM	3	1	1	4	BP802T	Social and Preventive Pharmacy	OE	3	1	1	4	
BP703T	Pharmacy Practice – Theory	SD	3	1	1	4	BP803ET	Pharma Marketing Management	SD	3	1	1	4	
BP704T	Novel Drug Delivery System – Theory	EM	3	1	1	4	BP804ET	Pharmaceutical Regulatory Science	EM/EP	3	1	1	4	
BP705P	Instrumental Methods of Analysis – Practical	EM	4	-	-	2	BP805ET	Pharmacovigilance	EM	3	1	1	4	
BP706PS	Practice School	EP	-	-	12	6	BP806ET	Quality Control and Standardization of Herbs	EM	3	1	1	4	
							BP807ET	Computer Aided Drug Design	SD	3	1	1	4	
							BP808ET	Cell and Molecular Biology	EM	3	1	1	4	
							BP809ET	Cosmetic Science	EM/EP	3	1	1	4	
							BP810ET	Experimental Pharmacology	SD	3	1	1	4	
							BP811ET	Advanced Instrumentation Techniques	OE	3	1	1	4	
							BP812ET	Dietary Supplements and Nutraceuticals	OE	3	1	1	4	
							BP813PW	Project Work	EM	3	1	1	4	
	Total		16	4	12	24	Total			24	4	12	22	

Total Credits 213

[Signature]

OE Open elective
SD/SE Skill development / Skill enhancement
EM Employability
EP Entrepreneurship

B. PHARMACY (Scheme of Studies) 2020-24: Pharma

YEAR	Odd Semester					Even Semester					B. Pharmacy				
SMAS	Course code	Course Title	Type	L	T	P	C	Course code	Course Title	Type	L	T	P	C	
	BP101T	Human Anatomy and Physiology I – Theory	3	1	1	4		BP201T	Human Anatomy and Physiology II – Theory	3	1	1	4		
	BP102T	Pharmaceutical Analysis I – Theory	3	1	1	4		BP202T	Pharmaceutical Organic Chemistry I – Theory	3	1	1	4		
	BP103T	Pharmaceutics I – Theory	EM/EP	3	1	4		BP203T	Biochemistry – Theory	3	1	1	4		
	BP104T	Pharmaceutical Inorganic Chemistry – Theory	3	1	1	4		BP204T	Pathophysiology – Theory	3	1	1	4		
	BP105T	Communication skills – Theory *	SD	2	-	2		BP205T	Computer Applications in Pharmacy – Theory *	SD	3	-	3		
	BP106RBT/ BP106RMT	Remedial Biology/ Remedial Mathematics – Theory *		2	-	2		BP206T	Environmental sciences – Theory *	OE	3	-	3		
	BP107P	Human Anatomy and Physiology –Practical	SD	-	4	2		BP207P	Human Anatomy and Physiology II –Practical	SD	-	4	2		
	BP108P	Pharmaceutical Analysis I – Practical	SD	-	4	2		BP208P	Pharmaceutical Organic Chemistry I –Practical	SD	-	4	2		
	BP109P	Pharmaceutics I – Practical	EP	-	4	2		BP209P	Biochemistry – Practical	SD	-	4	2		
	BP110P	Pharmaceutical Inorganic Chemistry –Practical	SD	-	4	2		BP210P	Computer Applications in Pharmacy –Practical*	SD	-	2	1		
	BP111P	Communication skills – Practical*	SD	-	2	1									
	BP112RBP	Remedial Biology –Practical*	SD	-	2	1									
	Total			16	4	20	30	Total			18	4	14	29	

SECOND														
Course code	Course Title	Type	L	T	P	C	Course code	Course Title	Type	L	T	P	C	Total
BP301T	Pharmaceutical Organic Chemistry II – Theory	3	1	1	4		BP401T	Pharmaceutical Organic Chemistry III – Theory	3	1	1	4		
BP302T	Physical Pharmaceutics I – Theory	3	1	1	4		BP402T	Medicinal Chemistry I – Theory	SD	3	1	1	4	
BP303T	Pharmaceutical Microbiology – Theory	SD	3	1	1	4	BP403T	Physical Pharmaceutics II – Theory	3	1	1	4		
BP304T	Pharmaceutical Engineering – Theory	EM	3	1	1	4	BP404T	Pharmaceutics I – Theory	3	1	1	4		
BP305P	Pharmaceutical Organic Chemistry II – Practical	SD	-	4	2		BP405T	Pharmacognosy and Phytochemistry I – Theory	3	1	1	4		
BP306P	Physical Pharmaceutics I – Practical	SD	-	4	2		BP406P	Medicinal Chemistry I – Practical	SD	-	4	2		
BP307P	Pharmaceutical Microbiology – Practical	SD	-	4	2		BP407P	Physical Pharmaceutics II – Practical	SD	-	4	2		
BP308P	Pharmaceutical Engineering –Practical	SD	-	4	2		BP408P	Pharmacology I – Practical	SD	-	4	2		
							BP409P	Pharmacognosy and Phytochemistry I –Practical	SD	-	4	2		
	Total		12	4	16	24	Total			15	5	16	28	

THIRD														
Course code	Course Title	Type	L	T	P	C	Course code	Course Title	Type	L	T	P	C	Total
BP501T	Medicinal Chemistry II – Theory	SD	3	1	1	4	BP601T	Medicinal Chemistry III – Theory	SD	3	1	1	4	
BP502T	Industrial Pharmacy – Theory	EM/EP	3	1	1	4	BP602T	Pharmacology III – Theory	3	1	1	4		
BP503T	Pharmacology II – Theory	SD	3	1	1	4	BP603T	Herbal Drug Technology – Theory	3	1	1	4		
BP504T	Pharmacognosy and Phytochemistry II – Theory	3	1	1	4		BP604T	Biopharmaceutics and Pharmacokinetics – Theory	SD	3	1	1	4	
BP505T	Pharmaceutical Jurisprudence – Theory	EM/EP	3	1	1	4	BP605T	Pharmaceutical Biotechnology – Theory	SD	3	1	1	4	
BP506P	Industrial Pharmacy – Practical	EM	-	4	2		BP606T	Quality Assurance – Theory	EM	3	1	1	4	
BP507P	Pharmacology II – Practical	SD	-	4	2		BP607P	Medicinal chemistry III – Practical	SD	-	4	2		
BP508P	Pharmacognosy and Phytochemistry II – Practica	SD	-	4	2		BP608P	Pharmacology III – Practical	SD	-	4	2		
							BP609P	Herbal Drug Technology – Practical	SD	-	4	2		
	Total		15	5	12	26	Total			18	6	12	30	

FOURTH														
Course code	Course Title	Type	L	T	P	C	Course code	Course Title	Type	L	T	P	C	Total
BP701T	Instrumental Methods of Analysis – Theory	OE	3	1	1	4	BP801T	Biostatistics and Research Methodology	OE	3	1	1	4	
BP702T	Industrial Pharmacy II – Theory	EM	3	1	1	4	BP802T	Social and Preventive Pharmacy	OE	3	1	1	4	
BP703T	Pharmacy Practice – Theory	SD	3	1	1	4	BP803ET	Pharma Marketing Management	SD	3	1	1	4	
BP704T	Novel Drug Delivery System – Theory	EM	3	1	1	4	BP804ET	Pharmaceutical Regulatory Science	EM/EP	3	1	1	4	
BP705P	Instrumental Methods of Analysis – Practical	EM	4	-	-	2	BP805ET	Pharmacovigilance	EM	3	1	1	4	
BP706Ps	Practice School	EP	-	-	-	6	BP806ET	Quality Control and Standardization of Herbs	EM	3	1	1	4	
							BP807ET	Computer Aided Drug Design	SD	3	1	1	4	
							BP808ET	Cell and Molecular Biology	EM	3	1	1	4	
							BP809ET	Cosmetic Science	EM/EP	3	1	1	4	
							BP810ET	Experimental Pharmacology	SD	3	1	1	4	
							BP811ET	Advanced Instrumentation Techniques	OE	3	1	1	4	
							BP812ET	Dietary Supplements and Nutraceuticals	OE	3	1	1	4	
							BP813PW	Project Work	EM	3	1	1	4	
	Total		16	4	12	24	Total			24	4	12	6	22

OE Open elective
SD/SE Skill development / Skill enhancement
EM Employability
EP Entrepreneurship

Total Credits

213



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Table-VIII: Course of study for semester VIII

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP801T	Biostatistics and Research Methodology	3	1	4
BP802T	Social and Preventive Pharmacy	3	1	4
BP803ET	Pharma Marketing Management	3 + 3 = 6	1 + 1 = 2	4 + 4 = 8
BP804ET	Pharmaceutical Regulatory Science			
BP805ET	Pharmacovigilance			
BP806ET	Quality Control and Standardization of Herbals			
BP807ET	Computer Aided Drug Design			
BP808ET	Cell and Molecular Biology			
BP809ET	Cosmetic Science			
BP810ET	Experimental Pharmacology			
BP811ET	Advanced Instrumentation Techniques			
BP812ET	Dietary Supplements and Nutraceuticals			
BP813PW	Project Work	12	-	6
Total		24	4	22

Table-IX: Semester wise credits distribution

Semester	Credit Points
I	27/29 [§] /30 [#]
II	29
III	26
IV	28
V	26
VI	26
VII	24
VIII	22
Extracurricular/ Co curricular activities	01*
Total credit points for the program	209/211[§]/212[#]

* 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.

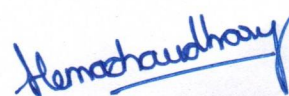
[§]Applicable ONLY for the students studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics course.

[#]Applicable ONLY for the students studied Mathematics / Physics / Chemistry at HSC and appearing for Remedial Biology course.


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Haryana 122103

Table-VI: Course of study for semester VI

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP601T	Medicinal Chemistry III – Theory	3	1	4
BP602T	Pharmacology III – Theory	3	1	4
BP603T	Herbal Drug Technology – Theory	3	1	4
BP604T	Biopharmaceutics and Pharmacokinetics – Theory	3	1	4
BP605T	Pharmaceutical Biotechnology – Theory	3	1	4
BP606T	Quality Assurance –Theory	3	1	4
BP607P	Medicinal chemistry III – Practical	4	-	2
BP608P	Pharmacology III – Practical	4	-	2
BP609P	Herbal Drug Technology – Practical	4	-	2
Total		30	6	30

Table-VII: Course of study for semester VII

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP701T	Instrumental Methods of Analysis – Theory	3	1	4
BP702T	Industrial PharmacyII – Theory	3	1	4
BP703T	Pharmacy Practice – Theory	3	1	4
BP704T	Novel Drug Delivery System – Theory	3	1	4
BP705P	Instrumental Methods of Analysis – Practical	4	-	2
BP706PS	Practice School*	12	-	6
Total		28	5	24

* Non University Examination (NUE)

Hemachaudhary

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Evaluation of Dissertation Book:

Objective(s) of the work done	15 Marks
Methodology adopted	20 Marks
Results and Discussions	20 Marks
Conclusions and Outcomes	20 Marks

Total 75 Marks

Evaluation of Presentation:

Presentation of work	25 Marks
Communication skills	20 Marks
Question and answer skills	30 Marks

Total 75 Marks

Explanation: The 75 marks assigned to the dissertation book shall be same for all the students in a group. However, the 75 marks assigned for presentation shall be awarded based on the performance of individual students in the given criteria.

22. Industrial training (Desirable)

Every candidate shall be required to work for at least 150 hours spread over four weeks in a Pharmaceutical Industry/Hospital. It includes Production unit, Quality Control department, Quality Assurance department, Analytical laboratory, Chemical manufacturing unit, Pharmaceutical R&D, Hospital (Clinical Pharmacy), Clinical Research Organization, Community Pharmacy, etc. After the Semester – VI and before the commencement of Semester – VII, and shall submit satisfactory report of such work and certificate duly signed by the authority of training organization to the head of the institute.

23. Practice School

In the VII semester, every candidate shall undergo practice school for a period of 150 hours evenly distributed throughout the semester. The student shall opt any one of the domains for practice school declared by the program committee from time to time.

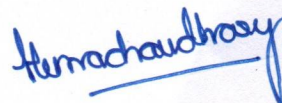
At the end of the practice school, every student shall submit a printed report (in triplicate) on the practice school he/she attended (not more than 25 pages). Along with the exams of semester VII, the report submitted by the student, knowledge and skills acquired by the student through practice school shall be evaluated by the subject experts at college level and grade point shall be awarded.



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