ADAMAS UNIVERSITY
KOLKATA
PURSUE EXCELLENCE

School of Medical Sciences

Department Of Pharmaceutical Technology

Bachelor of Pharmacy (B. Pharm)

Course Grid -

Table-I: Course of study for Semester – I

*Applicable ONLY for the students who have studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics (RM) course.

**Applicable ONLY for the students who have studied Physics / Mathematics / Chemistry at HSC and appearing for Remedial Biology (RB) course.

Course Code	Name Of The Course	No. Of Hours	Tutorial	Credit Points
PHM41101	Human Anatomy and Physiology I–Theory	3	1	4
PHM41103	Pharmaceutical Analysis I – Theory	3	1	4
PHM41105	Pharmaceutics I – Theory	3	1	4
PHM41107	Pharmaceutical Inorganic Chemistry– Theory	3	1	4
PHM41109	Communication skills – Theory	2	-	2
PHM41111/ PHM41113	**Remedial Biology/ *Remedial Mathematics – Theory	2	-	2
PHM41201	Human Anatomy and Physiology – Practical	4	-	2
PHM41203	Pharmaceutical Analysis I – Practical	4	-	2
PHM41205	Pharmaceutics I – Practical	4	-	2
PHM41207	Pharmaceutical Inorganic Chemistry – Practical	4	-	2
PHM41209	Communication skills– Practical	2	-	1
PHM41211	**Remedial Biology – Practical	2	-	1
	Total	**34*/36****	**4**	**29*/30****

Table II: Course of study for semester – II

Course Code	Name Of The Course	No. Of Hours	Tutorial	Credit Points
PHM41102	Human Anatomy and Physiology II – Theory	3	1	4
PHM41104	Pharmaceutical Organic Chemistry I – Theory	3	1	4
PHM41106	Biochemistry – Theory	3	1	4
PHM41108	Pathophysiology - Theory	3	1	4
PHM41110	Computer Applications in Pharmacy - Theory	3	-	3
PHM41112	Environmental sciences – Theory	3	-	3
PHM41202	Human Anatomy and Physiology II –Practical	4	-	2
PHM41204	Pharmaceutical Organic Chemistry I – Practical	4	-	2
PHM41206	Biochemistry – Practical	4	-	2
PHM41210	Computer Applications in Pharmacy – Practical	2	-	1
	Total	**32**	**4**	**29**

* Departmental Examination (DE)

Table-III: Course of study for Semester – III

Course Code	Name of the Course	No. Of Hours	Tutorial	Credit Points
PHM42101	Pharmaceutical Organic Chemistry II – Theory	3	1	4
PHM42103	Physical Pharmaceutics I – Theory	3	1	4
PHM42105	Pharmaceutical Microbiology – Theory	3	1	4
PHM42107	Pharmaceutical Engineering – Theory	3	1	4
PHM42201	Pharmaceutical Organic Chemistry II – Practical	4	-	2
PHM42203	Physical Pharmaceutics I – Practical	4	-	2
PHM42205	Pharmaceutical Microbiology – Practical	4	-	2
PHM42207	Pharmaceutical Engineering - Practical	4	-	2
	Total	**28**	**4**	**24**

Table-IV: Course of study for Semester – IV

Course Code	Name of the Course	No. of hours	Tutorial	Credit Points
PHM42102	Pharmaceutical Organic Chemistry III – Theory	3	1	4
PHM42104	Medicinal Chemistry I – Theory	3	1	4
PHM42106	Physical Pharmaceutics II – Theory	3	1	4
PHM42108	Pharmacology I – Theory	3	1	4
PHM42110	Pharmacognosy and Phytochemistry I – Theory	3	1	4
PHM42204	Medicinal Chemistry I – Practical	4	-	2
PHM42206	Physical Pharmaceutics II – Practical	4		2
PHM42208	Pharmacology I – Practical	4	-	2
PHM42210	Pharmacognosy and Phytochemistry I – Practical	4	-	2
	Total	**33**	**6**	**28**

Table-V: Course of study for Semester – V

Course Code	Name of the course	No. of Hours	Tutorial	Credit Points
PHM43101	Medicinal Chemistry II – Theory	3	1	4
PHM43103	Industrial Pharmacy I – Theory	3	1	4
PHM43105	Pharmacology II – Theory	3	1	4
PHM43107	Pharmacognosy and Phytochemistry II – Theory	3	1	4
PHM43109	Pharmaceutical Jurisprudence – Theory	3	1	4
PHM43203	Industrial Pharmacy I – Practical	4	-	2
PHM43205	Pharmacology II – Practical	4	-	2
PHM43207	Pharmacognosy and Phytochemistry II – Practical	4	-	2
	Total	**27**	**5**	**26**

Table-VI: Course ofstudy for semester VI

Cours Code	Name of the Course	No. of Hours	Tutorial	Credit Points
PHM43102	Medicinal Chemistry III – Theory	3	1	4
PHM43104	Pharmacology III – Theory	3	1	4
PHM43106	Herbal Drug Technology – Theory	3	1	4
PHM43108	Biopharmaceutics and Pharmacokinetics – Theory	3	1	4
PHM43110	Pharmaceutical Biotechnology – Theory	3	1	4
PHM43112	Quality Assurance –Theory	3	1	4
PHM43202	Medicinal chemistry III – Practical	4	-	2
PHM43204	Pharmacology III – Practical	4	-	2
PHM43206	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
PHM44101	Instrumental Methods of Analysis – Theory	3	1	4
PHM44103	Industrial Pharmacy – Theory	3	1	4
PHM44105	Pharmacy Practice – Theory	3	1	4
PHM44107	Novel Drug Delivery System – Theory	3	1	4
PHM44201	Instrumental Methods of Analysis – Practical	4	-	2
PHM44601	Practice School	12	-	6
	Total	**28**	**5**	**24**

* Departmental Examination (DE)

Table-VIII: Course of study for semester VIII

Course Code	Name of the Course	No. of Hours	Tutorial	Credit Points
PHM44102	Biostatistics and Research Methodology - Theory	3	1	4
PHM44104	Social and Preventive Pharmacy - Theory	3	1	4
PHM44106	Pharma Marketing Management - Theory	3+3=6	1+ 1 = 2	4+4=8
PHM44108	Pharmaceutical Regulatory Science - Theory			
PHM44110	Pharmacovigilance - Theory			
PHM44112	Quality Control and Standardization of Herbals - Theory			
PHM44114	Computer Aided Drug Design - Theory			

PHM44116	Cell and Molecular Biology - Theory			
PHM44118	Cosmetic Science - Theory			
PHM44120	Experimental Pharmacology - Theory			
PHM44122	Advanced Instrumentation Techniques - Theory			
PHM44124	Dietary Supplements and Nutraceuticals - Theory			
PHM44401	Project Work	12	-	6
	Total	**24**	**4**	**22**

Table-IX: Semester wise credits distribution

Semester	Credit Points
I	**30**
II	29
III	24
IV	28
V	26
VI	30
VII	24
VIII	22
Extracurricular/ Co curricular activities	01 *
Total credit points for the program	**214**

* 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.

Tables-X: Schemes for internal assessments and end semester examinations semester wise

Tables-X: Schemes for internal assessments and end semester examinations semester wise

Semester - I

Course Code	Name of the Course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
PHM41101	Human Anatomy and Physiology I – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM41103	Pharmaceutical Analysis I – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM41105	Pharmaceutics – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM41107	Pharmaceutical Inorganic Chemistry – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM41109	Communication skills – Theory *	5	10	1 Hr	15	35	1.5 Hrs	50
PHM41111/ PHM41113	Remedial Biology/ Remedial Mathematics – Theory*	5	10	1 Hr	15	35	1.5 Hrs	50
PHM41201	Human Anatomy and Physiology – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM41203	Pharmaceutical Analysis I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM41205	Pharmaceutics – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM41207	Pharmaceutical InorganicChemistry – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM41209	Communication skills – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
PHM41211	Remedial Biology – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
Total		**75/80**	**125/130**	**24/26Hrs**	**200/210**	**525/540**	**33/35 Hrs**	**725/750**

* **Departmental examination** (DE)

Semester – II

Course Code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
PHM41102	Human Anatomy and Physiology II – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM41104	Pharmaceutical Organic Chemistry I – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM41106	Biochemistry – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM41108	Pathophysiology – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM41110	Computer Applications in Pharmacy – Theory*	10	15	1 Hr	25	50	2 Hrs	75
PHM41112	Environmental sciences – Theory*	10	15	1 Hr	25	50	2 Hrs	75
PHM41202	Human Anatomy and Physiology II –Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM41204	Pharmaceutical Organic Chemistry I– Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM41206	Biochemistry – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM41210	Computer Applications in Pharmacy – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
Total		**80**	**125**	**20 Hrs**	**205**	**520**	**30 Hrs**	**725**

* The subject experts at department level shall conductexaminations

Semester – III

Course Code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
PHM42101	Pharmaceutical Organic Chemistry II – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM42103	Physical Pharmaceutics I – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM42105	Pharmaceutical Microbiology - Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM42107	Pharmaceutical Engineering - Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM42201	Pharmaceutical Organic Chemistry II – Practical	5	10	4 Hr	15	35	4 Hrs	50
PHM42203	Physical Pharmaceutics I – Practical	5	10	4 Hr	15	35	4 Hrs	50
PHM42205	Pharmaceutical Microbiology – Practical	5	10	4 Hr	15	35	4 Hrs	50
PHM42207	Pharmaceutical Engineering – Practical	5	10	4 Hr	15	35	4 Hrs	50
Total		**60**	**100**	**20**	**160**	**440**	**28Hrs**	**600**

Semester – IV

Course Code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Mar	Durati				

			ks	on				
PHM42102	Pharmaceutical Organic Chemistry III– Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM42104	Medicinal Chemistry I – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM42106	Physical Pharmaceutics II – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM42108	Pharmacology I – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM42110	Pharmacognosy I – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM42204	Medicinal Chemistry I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM42206	Physical Pharmaceutics II – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM42208	Pharmacology I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM42210	Pharmacognosy I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
Total		**80**	**130**	**22 Hrs**	**210**	**565**	**33 Hrs**	**775**

Semester – V

Course Code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
PHM43101	Medicinal Chemistry II– Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43103	Industrial PharmacyI – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43105	Pharmacology II– Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43107	Pharmacognosy II – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43109	Pharmaceutical Jurisprudence ¯ Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43203	Industrial PharmacyI– Practical	5	10	4 Hr	15	35	4 Hrs	50
PHM43205	Pharmacology II – Practical	5	10	4 Hr	15	35	4 Hrs	50
PHM43207	Pharmacognosy II – Practical	5	10	4 Hr	15	35	4 Hrs	50
Total		**65**	**105**	**17 Hr**	**170**	**480**	**27 Hrs**	**650**

Semester – VI

Course Code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
PHM43102	Medicinal Chemistry III – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43104	Pharmacology III – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43106	Herbal Drug Technology - Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43108	Biopharmaceutics and Pharmacokinetics – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43110	Pharmaceutical Biotechnology– Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43112	Quality Assurance– Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM43202	Medicinal chemistry III – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM43204	Pharmacology III – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM43206	Herbal Drug Technology – Practical	5	10	4 Hrs	15	35	4 Hrs	50
Total		**75**	**120**	**18 Hrs**	**195**	**555**	**30 Hrs**	**750**

Semester – VII

Course Code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
PHM44101	Instrumental Methods of Analysis – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM44103	Industrial Pharmacy – II Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM44105	Pharmacy Practice – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM44107	Novel Drug Delivery System – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM44201	Instrumental Methods of Analysis – Practical	5	10	4 Hrs	15	35	4 Hrs	50
PHM44601	Practice School	25	-	-	25	125	5 Hrs	150
Total		**70**	**70**	**8Hrs**	**140**	**460**	**21 Hrs**	**600**

Semester - VIII

Course Code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
PHM44102	Biostatistics and Research Methodology – Theory	10	15	1 Hr	25	75	3 Hrs	100
PHM44104	Social and Preventive Pharmacy – Theory	10	15	1 Hr	25	75	3 H rs	100
PHM44106	Pharma Marketing management - Theory	10+10 = 20	15+15= 30	1+1 =2 Hrs	25+25 =50	75+75=150	3+3=6Hrs	100+100=200
PHM44108	Pharmaceutical Regulatory Science – Theory							
PHM44110	Pharmacovigilance – Theory							
PHM44112	Quality Control and Standardizations of Herbals – Theory							
PHM44114	Computer Aided Drug Design – Theory							
PHM44116	Cell and Molecular Biology – Theory							
PHM44118	Cosmetic Science – Theory							

PHM44120	Experimental Pharmacology – Theory							
PHM44122	Advanced Instrumentation Techniques – Theory							
PHM44124	Dietary supplements and nutraceuticals - Theory							
PHM44401	Project Work	-	-	-	-	150	4 Hrs	150
	Total	**40**	**60**	**4 Hrs**	**100**	**450**	**16 Hrs**	**550**