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Geethanjali College of Pharmacy

Approved By AICTE, PCI New Delhi, Permanently Affiliated to JNTUH & Accredited by NBA (B. Pharmacy)
Recognized Under UGC Section 2F & 12B of UGC Act, 1956, by DSIR-SIRO & HI/BI of MSME Certified by ISO 9001:2015
Cheeryal (V), Keesara (M), Medchal-Malkajgiri District, Telangana State - 501 301.

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S. No.	List of Documents									
1.	JNTUH, Hyderabad (Affiliating University) prescribed syllabus copies showing									
	courses that include experimental learning through project work/field work/internship for the year 2016-17, 2017-18, 2018-19, 2019-20, and 2020-21.									
2.	Minutes of the College Academic Committee meetings with approvals for courses that include experimental learning through project work/field work/internship for the year 2016-17, 2017-18, 2018-19, 2019-20, and 2020-21.									

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Geethanjali College of Pharmacy Cheeryal(V), Keessia(M), Madcha. Dist. T.S. -501301.

Sponsored by: TEJA EDUCATIONAL SOCIETY, HYDERABAD.

Office: Sy. No. 33 & 34, Cheeryal (V), Keesara (M), Medchal-Malkajgiri (District), Telangana State - 501 301.

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. PHARMACY I YEAR COURSE STRUCTURE AND SYLLABUS

Effective from Academic Year 2017-18 Admitted Batch

I Year I semester

S.	Course Code	Subject	L	T	Р	Credits
No						
1	PS101	Human Anatomy and Physiology I	3	1	-	3
2	PS102	Pharmaceutical Analysis I	3	1	-	3
3	PS103	Pharmaceutics I	3	1	-	3
4	PS104	Pharmaceutical Inorganic Chemistry-I	3	1	-	3
5	HS105	Communication skills	2	-	-	2
6	BS106/BS107	Remedial Biology# / Remedial Mathematics\$	2#/3\$	-	-	2 [#] /3 ^{\$}
7	PS108	Human Anatomy and Physiology-I lab	-	-	4	2
8	PS109	Pharmaceutical Analysis-I lab	-	-	4	2
9	PS110	Pharmaceutics I lab	-	-	4	2
10	PS111	Pharmaceutical Inorganic Chemistry-I lab	-	-	4	2
11	HS112	Communication skills lab	-	-	2	1
12	BS113	Remedial Biology lab	-	-	2	1
		Total	16/17	4	20	26 [#] /26 ^{\$}

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

I Year II semester

S.	Course	Subject	L	T	Р	Credits
No	Code					
1	PS201	Human Anatomy and Physiology II	3	1	-	3
2	PS202	Pharmaceutical Organic Chemistry I	4	1	-	4
3	BS203	Biochemistry	3	1	-	3
4	BS204	Pathophysiology	3	1	-	3
5	CS205	Computer Applications in Pharmacy	3	-	-	3
6	PS206	Human Anatomy and Physiology II lab	-	-	4	2
7	PS207	Pharmaceutical Organic Chemistry I lab	-	-	4	2
8	BS208	Biochemistry lab	-	-	4	2
9	CS209	Computer Applications in Pharmacy lab	-	-	2	1
10	*MC200	NSS		-	-	-
		Total	16	4	14	23

^{*}MC - Mandatory Course - Satisfactory/ Unsatisfactory.



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

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. PHARMACY II YEAR SYLLABUS (R17)

Effective from Academic Year 2017-18 Admitted Batch

II YEAR I SEMESTER

S. No	Course Code	Course Title	L	Т	P	Credits
1	PS301	Pharmaceutical Organic Chemistry-II	3	1	0	4
2	PS302	Physical Pharmaceutics-I	3	1	0	4
3	BS303	Pharmaceutical Microbiology	3	1	0	4
4	PC304	Pharmaceutical Engineering	3	1	0	4
5	PS305	Pharmaceutical Organic Chemistry-II Lab	0	0	4	2
6	PS306	Physical Pharmaceutics-I Lab	0	0	4	2
7	BS307	Pharmaceutical Microbiology Lab	0	0	4	2
8	PC308	Pharmaceutical Engineering Lab	0	0	4	2
9	*MC300	NSO	0	0	0	0
		Total Credits	12	04	17	24

II YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	PS401	Pharmaceutical Organic Chemistry-III	3	1	0	4
2	PC402	Medicinal Chemistry-I	3	1	0	4
3	PS403	Physical Pharmaceutics-II	3	1	0	4
4	PC404	Pharmacology-I	3	1	0	4
5	PC405	Pharmacognosy and Phytochemistry-I	3	1	0	4
6	PC406	Medicinal Chemistry-I Lab	0	0	4	2
7	PS407	Physical Pharmaceutics-II Lab	0	0	4	2
8	PC408	Pharmacology-I Lab	0	0	4	2
9	PC409	Pharmacognosy and Phytochemistry-I Lab	0	0	4	2
10	*MC400	Gender Sensitization Lab	1	0	0	0
		Total Credits	16	05	16	28

*MC-Satisfactory/Dissatisfactory

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.PHARM. III YEAR COURSE STRUCTURE & SYLLABUS (R16)

Applicable From 2016-17 Admitted Batch

III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	Т	Р	Credits
1	PS501	Pharmaceutical Microbiology	4	1	0	4
2	PS502	Pharmaceutical Technology - I	4	1	0	4
3	PS503	Pharmacology – I	4	1	0	4
4	PS504	Pharmacognosy – II	3	1	0	3
5		Open Elective - II	3	0	0	3
200	PS505	Drug Regulatory Affairs			l.	
	PS506	Active Pharmaceutical Ingredient Process			A	K/T
		Development	4	100	1	4500
95	MS507	Entrepreneurship and Small Business Enterprises	SE S		1	
6	PS508	Pharmaceutical Microbiology Lab	0	0	3	2
7	PS509	Pharmaceutical Technology - I Lab	0	0	3	2
8	PS510	Pharmacology – I Lab	0	0	3	2
9	*MC500	Professional Ethics	3	0	0	0
		Total	21	4	9	24

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD B.PHARM. III YEAR COURSE STRUCTURE & SYLLABUS (R16)

Applicable From 2016-17 Admitted Batch

III YEAR II SEMESTER

S. No.	Course	,				
J. NO.	Code	Course Title	L	T	Р	Credits
1	► PS601 V	Medicinal Chemistry - I	-	 		
2	PS602	Pharmaceutical Technology - II	3	1	0	3
3	PS603 /	Pharmacology – II	3	1	0	3
4	PS604 V	Chemistry of Natural Products	4	1	0	4
5		Open Elective - III	3	1	0	3
	PS605 PS606	Generic Product Development Drug Design and Discovery Screening Methods in Pharmacology	3	0	0	3
6	PS608 🗸	Medicinal Chemistry - I Lab	-		7,54	
7	PS609 /	Pharmaceutical Technology – II Lab	0	0	3	2
8	PS610 🗸	Pharmacology – II Lab	0	0	3.	. 2
9	HS611 🗸	Advanced English Commission	0	0	3.	2
		Advanced English Communication skills Late Total	0	0	3.	2
		Total	16	04	12	24

III YEAR II SEMESTER

Code	Subject	T	C	Р	Code	С
R60022	Medicinal Chemistry - I	3+1	3	3	(R60070)	2
R60023	Pharmaceutical Technology-II	3+1	3	3	(R60071)	2
R60024	Pharmacology II	4+1	4.	3.	(R60072)	2
R60025	Chemistry of Natural Products	4+1	4.	3,4∞	(R60073)	2
R60026	Pharmaceutical Jurisprudence	4+1	4/	-		-
R60069	Advanced Communication Skills Lab			3:		2
	Total	23	18	15		10

IV YEAR I SEMESTER

Code	Subject	T	C	Р	Code	C
R70027	Pharmacognosy III	3+1	3,	3.	(R70075)	. 2
R70028	Biopharmaceutics and Pharmacokinetics	3+1	3	3-	(R70076)	. 2
R70029	Pharmacology III	4+1	4:	3.	(R70077)	2
R70030	Medicinal Chemistry II	4+1	4.	3-	(R70078)	2
R70031	Pharmacy Administration	4+1	4			
R70074	Seminar / Industrial Visit	1.		-		2
	Total	23	18	12		10

IV YEAR II SEMESTER

Code	Subject	T	C	Р.	Code	C
R80032	Novel Drug Delivery Systems and Regulatory Affairs	3+1	3.	-3.	(R80080)	2
R80033	Pharmaceutical Biotechnology	4+1	4.	3	(R80081)	2
R80034	Pharmaceutical Analysis - II	3+1	3 .	3	(R80082)	2
R80035	Human Values and Professional Ethics	4	4 .		*	
R80036	Clinical Pharmacy Practice	4+1	4 .			• • .
R80079	Project work** & Comprehensive Viva		•			. 4
	Total	22	18	9		10

- ** Suggested areas for project work.

 1. Industrial Pharmacy
 2. Clinical Pharmacy / Pharmacology
 3. Pharmacognosy / Medical Chemistry
 4. Pharmaceutical Analysis / Quality Assurance
 5. Pharmaceutical Marketing

Geethanjali College of Pharmacy (neeryal(v)) Keesara(w), Heddhal Dist. 1.5.501301.

[PUBLISHED IN THE GAZETTE OF INDIA, No.19, PART III, SECTION 4]

Ministry of Health and Family Welfare (Pharmacy Council of India)

New Delhi, 10th May, 2008.

Pharm.D. Regulations 2008

Regulations framed under section 10 of the Pharmacy Act, 1948 (8 of 1948).

(As approved by the Government of India, Ministry of Health vide, letter No.V.13013/1/2007-PMS, dated the 13th March, 2008 and notified by the Pharmacy Council of India).

No.14-126/2007-PCI.— In exercise of the powers conferred by section 10 of the Pharmacy Act, 1948 (8 of 1948), the Pharmacy Council of India, with the approval of the Central Government, hereby makes the following regulations, namely:-

CHAPTER-I

- 1. Short title and commencement. (1) These regulations may be called the Pharm.D. Regulations 2008.
 - (2) They shall come into force from the date of their publication in the official Gazette.
- 2. Pharm.D. shall consist of a certificate, having passed the course of study and examination as prescribed in these regulations, for the purpose of registration as a pharmacist to practice the profession under the Pharmacy Act, 1948.

CHAPTER-II

- 3. Duration of the course.
 - a) Pharm.D: The duration of the course shall be six academic years (five years of study and one year of internship or residency) full time with each academic year spread over a period of not less than two hundred working days. The period of six years duration is divided into two phases
 - Phase I consisting of First, Second, Third, Fourth and Fifth academic year.
 - Phase II consisting of internship or residency training during sixth year involving posting in speciality units. It is a phase of training wherein a student is exposed to actual pharmacy practice or clinical pharmacy services and acquires skill under supervision so that he or she may become capable of functioning independently.
 - b) Pharm.D. (Post Baccalaureate): The duration of the course shall be for three academic years (two years of study and one year internship or residency) full time with each academic year spread over a period of not less than two hundred working days. The period of three years duration is divided into two phases
 - Phase I consisting of First and Second academic year.
 - Phase II consisting of Internship or residency training during third year involving posting in speciality units. It is a phase of training wherein a student is exposed to actual pharmacy practice or clinical pharmacy services, and acquires skill under supervision so that he or she may become capable of functioning independently.
- 4. Minimum qualification for admission to. –
- a) Pharm.D. Part-I Course A pass in any of the following examinations -
- (1) 10+2 examination with Physics and Chemistry as compulsory subjects along with one of the following subjects:

Mathematics or Biology.

- (2) A pass in D.Pharm course from an institution approved by the Pharmacy Council of India under section 12 of the Pharmacy Act.
- (3) Any other qualification approved by the Pharmacy Council of India as equivalent to any of the above examinations.

Provided that a student should complete the age of 17 years on or before 31st December of the year of admission to the course.

Provided that there shall be reservation of seats for the students belonging to the Scheduled Castes, Scheduled Tribes and other Backward Classes in accordance with the instructions issued by the Central Government/State Government/Union Territory Administration as the case may be from time to time.

b) Pharm.D. (Post Baccalaureate) Course -

A pass in B.Pharm from an institution approved by the Pharmacy Council of India under section 12 of the Pharmacy Act:

Provided that there shall be reservation of seats for the students belonging to the Scheduled Castes, Scheduled Tribes and other Backward Classes in accordance with the instructions issued by the Central Government/State Government/Union Territory Administration as the case may be from time to time.

- 5. Number of admissions in the above said programmes shall be as prescribed by the Pharmacy Council of India from time to time and presently be restricted as below
 - i) Pharm.D. Programme 30 students.
 - ii) Pharm.D. (Post Baccalaureate) Programme 10 students.
- 6. Institutions running B.Pharm programme approved under section 12 of the Pharmacy Act, will only be permitted to run Pharm.D. programme. Pharm.D. (Post Baccalaureate) programme will be permitted only in those institutions which are permitted to run Pharm.D. programme.
- 7. Course of study. The course of study for Pharm.D. shall include the subjects as given in the Tables below. The number of hours in a week, devoted to each subject for its teaching in theory, practical and tutorial shall not be less than that noted against it in columns (3), (4) and (5) below.

TABLES

First Year:

S.No.	Name of Subject	No. of hours of Theory	No. of hours of Practical	No. of hours of Tutorial
(1)	(2)	(3)	(4)	(5)
1.1	Human Anatomy and Physiology	3	3	1
1.2	Pharmaceutics	2	3	1
1.3	Medicinal Biochemistry	3	3	1
1.4	Pharmaceutical Organic Chemistry	3	3	1
1.5	Pharmaceutical Inorganic Chemistry	2	3	1
1.6	Remedial Mathematics/ Biology	3	3*	1
	Total hours	16	18	6 = (40)

^{*} For Biology



Second Year:

S.No	Name of Subject	No. of hours of Theory	No. of hours of Practical	No. of hours of Tutorial
(1)	(2)	(3)	(4)	(5)
2.1	Pathophysiology	3	-	1
2.2	Pharmaceutical Microbiology	3	3	1
2.3	Pharmacognosy & Phytopharmaceuticals	3	3	1
2.4	Pharmacology-I	3	-	1
2.5	Community Pharmacy	2	-	1
2.6	Pharmacotherapeutics-I	3	3.	1
	Total Hours	17	9	6 = 32

Third Year:

S.No.	Name of Subject	No. of hours of Theory	No. of hours of Practical	No. of hours of Tutorial
(1)	(2)	(3)	(4)	(5)
3.1	Pharmacology-II	3	3	1
3.2	Pharmaceutical Analysis	3	3	1
3.3	Pharmacotherapeutics-II	3	3 ·	1
3.4	Pharmaceutical Jurisprudence	2	-	-
3.5	Medicinal Chemistry	3	3.	1
3.6	Pharmaceutical Formulations	.2	3:	1
	Total hours	16	15	5 = 36

Fourth Year:

S.No.	Name of Subject	No. of hours of Theory	No. of hours of Practical/ Hospital Posting	No. of hours of Tutorial
(1)	(2)	(3)	(4)	(5)
4.1	Pharmacotherapeutics-III	3	3	1
4.2	Hospital Pharmacy	2	3	1
4.3	Clinical Pharmacy	3	3	1
4.4	Biostatistics & Research Methodology	2	-	1
4.5	Biopharmaceutics & Pharmacokinetics	3	3.	1
4.6	Clinical Toxicology	2	-	1
	Total hours	15	12	6 = 33

Fifth Year:

S.No.	Name of Subject	No. of hours of Theory	No. of hours of Hospital posting*	No. of hours of Seminar
(1)	(2)	(3)	(4)	(5)
5.1	Clinical Research	3	-	1
5.2	Pharmacoepidemiology and Pharmacoeconomics	3	-	1
5.3	Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	2	-	1
5.4	Clerkship *	-	-	1
5.5	Project work (Six Months)	-	20	-
	Total hours	8	20	4 = 32

^{*} Attending ward rounds on daily basis.

Sixth Year:

Internship or residency training including postings in speciality units. Student should independently provide the clinical pharmacy services to the allotted wards.

- (i) Six months in General Medicine department, and
- (ii) Two months each in three other speciality departments
- 8. Syllabus. The syllabus for each subject of study in the said Tables shall be as specified in Appendix -A to these regulations.
- 9. Approval of the authority conducting the course of study. (1) No person, institution, society or university shall start and conduct Pharm.D or Pharm.D. (Post Baccalaureate) programme without the prior approval of the Pharmacy Council of India.
 - (2) Any person or pharmacy college for the purpose of obtaining permission under sub-section (1) of section 12 of the Pharmacy Act, shall submit a scheme as prescribed by the Pharmacy Council of India.
 - (3) The scheme referred to in sub-regulation (2) above, shall be in such form and contain such particulars and be preferred in such manner and be accompanied with such fee as may be prescribed:

Provided that the Pharmacy Council of India shall not approve any institution under these regulations unless it provides adequate arrangements for teaching in regard to building, accommodation, labs., equipments, teaching staff, non-teaching staff, etc., as specified in Appendix-B to these regulations.

- 10. Examination. -(1) Every year there shall be an examination to examine the students.
 - (2) Each examination may be held twice every year. The first examination in a year shall be the annual examination and the second examination shall be supplementary examination.
 - (3) The examinations shall be of written and practical (including oral nature) carrying maximum marks for each part of a subject as indicated in Tables below:

TABLES

First Year examination:

S.No.	Name of Subject	Maximum marks for Theory			Maximum marks for Practicals			
		Examination	Sessional	Total	Examination	Sessional	Total	
1.1	Human Anatomy and Physiology	70	70 30	100	70	30	100	
1.2	Pharmaceutics	70	30	100	70	30	100	
1.3	Medicinal Biochemistry	70	30	100	70	30	100	
1.4	Pharmaceutical Organic Chemistry	70	30	100	70	30	100	
1.5	Pharmaceutical Inorganic Chemistry	70	30	100	70	30	100	
1.6	Remedial Mathematics/ Biology	70	30	100	70*	30*	100*	
				600			600 = 1200	

* for Biology.

All the Examining Authorities conducting Pharm.D & Pharm.D (Post Baccalaureate) examinations

Sub: Inclusion of Pharmacotherapeutics I & II in IV year for Pharm.D. (Post Baccalaureate) students.

Sir

This has a reference to the subject cited above. In this connection, I am directed to state that the subject of Pharmacotherapeutics I & II be included in the course of study and examination of IVth year for Pharm.D. (Post Baccalaureate) students. A copy of the Pharmacotherapeutics syllabus I & II is enclosed herewith for your ready reference and also available on Council's website "www.pci.nic.in".

Yours faithfully

Sd/-

(ARCHNA MUDGAL)
Registrar-cum-Secretary

PHARM. D. POST BACCALAUREATE PROGRAM

(Inclusion of Pharmacotherapeutics I & II subject in the fourth year of the program)

SYLLABUS FOR PHARMACOTHERAPEUTICS I & II (THEORY)

Theory: 3Hrs/week

• Etiopathogenesis and pharmacotherapy of diseases associated with following systems/ diseases.

1.	Cardiovascular system:	
1.	Hypertension, Congestive cardiac	
	failure, Angina Pectoris,	
	Myocardial infarction,	Total = 13 hrs
	Hyperlipidaemias ,	(3+2+2+2+2+2)
	Electrophysiology of heart and	
	Arrhythmias	
2.	Respiratory system: Introduction	
2.	to Pulmonary function test,	
	Asthma, Chronic obstructive	Total = 6
	airways disease, Drug induced	(1+2+2+1)
	pulmonary diseases	
3.	Endocrine system : Diabetes,	
] 3.	Thyroid diseases, Oral	Total = 8
	contraceptives, Hormone	(3+2+1+1+1)
	replacement therapy, Osteoporosis	(6 - 1 - 1)
4.	General prescribing guidelines	
	for	
	a. Paediatric patients	Total = 4hrs
	b. Geriatric patients	(1+1+2)
	c. Pregnancy and breast feeding	
5.	Ophthalmology: Glaucoma,	(2.1)
	Conjunctivitis- viral & bacterial	(3 hrs)
6.	Introduction to rational drug use	
	Definition, Role of pharmacist	Total = 2 hrs
	Essential drug concept Rational	(1+1)
	drug formulations	I Fra L
		- Amone of

7.	Infectious disease: Guidelines for the rational use of antibiotics and surgical Prophylaxis, Tuberculosis, Meningitis, Respiratory tract infections, Gastroenteritis, Endocarditis, Septicemia, Urinary tract infections, Protozoal infection- Malaria, HIV & Opportunistic infections, Fungal infections, Viral infections, Gonarrhoea and Syphillis	Total = 18 hrs. (2+1+1+2+1+1+1+2 +1+2+1+1+1+1)
8.	Musculoskeletal disorders Rheumatoid arthritis, Osteoarthritis,	Total = 6hrs.
	Gout, Spondylitis, Systemic lupus	ES CONTRACTOR AND
0	erythematosus.	
9.	Renal system	`Total = 05hrs.
	Acute Renal Failure, Chronic Renal	
	Failure, Renal Dialysis, Drug induced renal disorders	(2+1+1+1)
10.	Oncology: Basic principles of Cancer	
	therapy, General introduction to cancer	
	chemotherapeutic agents,	Total = 06 hrs.
	Chemotherapy of breast cancer,	(2+1+2+1)
	leukemia. Management of	
	chemotherapy nausea and emesis	
11.	Dermatology: Psoriasis, Scabies, Eczema, Impetigo	Total = 4hrs.

PHARMACOTHERAPEUTICS - I & II (PRACTICAL)

Practicals: 3 Hrs./Week

Practicals:

Hospital postings in various departments designed to complement the lectures by providing practical clinical discussion; attending ward rounds; follow up the progress and changes made in drug therapy in allotted patients; case presentation upon discharge. Students are required to maintain a record of cases presented and the same should be submitted at



the end of the course for evaluation. A minimum of 20 cases should be presented and recorded covering most common diseases.

Assignments:

Students are required to submit written assignments on the topics given to them. Topics allotted should cover recent developments in drug therapy of various diseases. A minimum of THREE assignments [1500 – 2000 words] should be submitted for evaluation.

Format of the assignment:

- 1. Minimum & Maximum number of pages.
- 2. Reference(s) shall be included at the end.
- 3. Assignment can be a combined presentation at the end of the academic year.
- 4. It shall be computer draft copy.
- 5. Name and signature of the student.
- 6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACEUTICS / PHARMACEUTICAL TECHNOLOGY)

COURSE STRUCTURE AND SYLLABUS Effective from Academic Year 2017-18 Admitted Batch

I Year - I Semester

Category	Course Title	Int.	Ext.	L	Р	С
		marks	marks			
Core Course I	Advanced Physical Pharmaceutics	25	75	4		4
Core Course II	Modern Pharmaceutics-I	25	75	4		4
Core Course III	Applied Biopharmaceutics and	25	75	4		4
	Pharmacokinetics					100 E
Core Elective I	1. Modern Pharmaceutical Analytical	25	75	4	-4	4
	Techniques			A		1
	2. Intellectual Property Rights		All parts			AF.
Open Elective I	Pharmacoepidemiology and	25	75	4	<u> </u>	4
	Pharmacoeconomics		11	4		
	Drug Regulatory Affairs	r As				
	Herbal Cosmetics Technology		Ag/			
	4. Pharmaceutical Validation					
	5. Pharmaceutical Management					
Laboratory I	Advanced physical Pharmaceutics Lab	25	75		6	3
Laboratory II	Applied Biopharmaceutics and	25	75		6	3
	Pharmacokinetics Lab					
Seminar I	Seminar	50			4	2
	Total Credits			20	16	28

I Year - II Semester

Category	Course Title	Int. marks	Ext. marks	L	Р	С
Core Course IV	Advanced Drug Delivery Systems	25	75	4		4
Core Course V	Industrial Pharmacy	25	75	4		4
Core Course VI	Modern Pharmaceutics-II	25	75	4		4
Core Elective II	Biostatistics And Research Methodology Stability of Drugs and Dosage Forms	25	75	4		4
Open Elective II	 Screening Methods in Pharmacology Nano Based Drug Delivery Systems Nutraceuticals Entrepreneurship management Clinical Research And Pharmacovigilance 	25	75	4		4
Laboratory III	Advanced Drug Delivery Systems Lab	25	75		6	3
Laboratory IV	Modern Pharmaceutics Lab	25	75		6	3
Seminar II	Seminar	50			4	2
Total Credits				20	16	28

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II Year - I Semester

Course Title	Int. marks	Ext. marks	L	Р	С
Comprehensive Viva-Voce		100			4
Project work Review I	50			24	12
Total Credits				24	16

II Year - II Semester

Course Title	Int.	Ext.	L	P	С
	marks	marks			
Project work Review II	50			8	4
Project Evaluation (Viva-Voce)		150		16	12
Total Credits	,			24	16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACEUTICAL ANALYSIS & QUALITY ASSURANCE) / (QUALITY ASSURANCE)

COURSE STRUCTURE AND SYLLABUS Effective from Academic Year 2017-18 Admitted Batch

I Year - I Semester

Category	Course Title	Int.	Ext.	L	Р	С
		marks	marks			
Core Course I	Advanced Pharmaceutical Analysis	25	75	4		4
Core Course II	Food Analysis	25	75	4		4
Core Course III	Modern Pharmaceutical Analytical Techniques	25	75	4		4
Core Elective I	Pharmaceutical Validation	25	75	4		4
	2. Intellectual Property Rights			1		j
Open Elective I	Drug Regulatory Affairs	25	75	4	-38	4
•	2. Pharmacoepidemiology and				gri	
	Pharmacoeconomics	and the second		18		
	3. Pharmaceutical Management	ATTEN E				
	4. Herbal Cosmetics Technology		Sign of the same o			
	5. Pharmaceutical Formulation Technology	1				
Laboratory I	Modern Pharmaceutical Analytical Techniques	25	75	-	-6	3
	Lab	3				
Laboratory II	Advanced Pharmaceutical Analysis Lab	25	75		6	3
Seminar I	Seminar	50			4	2
	Total Credits	-		20	16	28
I Year – II Seme	ster					
Category	Course Title	Int.	Ext.	L	P	C

I Year - II Semester

Category	Course Title	Int.	Ext.	L	Р	С
40	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	marks	marks			
Core Course IV	Advanced Instrumental Analysis	25	75	4		4
Core Course V	Quality Control and Quality Assurance	25	75	4		4
Core Course VI	Modern Bio analytical Techniques	25	75	4		4
Core Elective II	Biostatistics And Research Methodology	25	75	4		4
	2. Spectral Analysis					
Open Elective II	Screening Methods in Pharmacology	25	75	4		4
The second second	2. Stability of Drugs and Dosage Forms	-	91			
	3. Entrepreneurship management					
	 Nano Based Drug Delivery Systems 					
	Herbal & Cosmetics Analysis					
Laboratory III	Advanced Instrumental Analysis Lab	25	75	-	6	4
Laboratory IV	Quality Control and Quality Assurance Lab	25	75		6	2
Seminar II	Seminar			-	4	2
	Total Credits			20	16	28

II Year - I Semester

Course Title	Int. marks	Ext. marks	L	Р	С
Comprehensive Viva-Voce	-	100			4
Project work Review I	50			24	12
Total Credits				24	16

II Year - II Semester

Course Title	Int. marks	Ext. marks	L	Р	С
Project work Review II	50			8	4
Project Evaluation (Viva-Voce)		150		16	12
Total Credits				24	16

RIA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACEUTICAL MANAGEMENT AND REGULATORY AFFAIRS)

COURSE STRUCTURE AND SYLLABUS Effective from Academic Year 2017-18 Admitted Batch

I Year - I Semester

Category	Course Title	Int. marks	Ext. marks	L	Р	С
Core Course I	Pharmaceutical Management – I (General and	25	75	4		4
	Personnel)					
Core Course II	Drug Regulatory Affairs	25	75	4		4
Core Course III	Modern Pharmaceutical Analytical Techniques	25	75	4		4
Core Elective I	Total Quality Management	25	75	4	-/	4
	2. Intellectual Property Rights			人名	. 8	e j
Open Elective I	Pharmacoepidemiology and	25	75	4	4-1	4
1.5	Pharmacoeconomics			1	6	
	2. Herbal Cosmetics Technology		173 %	d Sp		
	3. Phytochemistry	- ASIA				
	4. Pharmaceutical Formulation Technology	A	Part 1			
	5. Pharmaceutical Validation					
Laboratory I	Modern Pharmaceutical Analytical Techniques	25	75		6	3
	Lab	1 %				
Laboratory II	Pharmaceutical Management Lab	25	75		6	3
Seminar I	ninar I Seminar				4	2
	Total Credits			20	16	28

I Year - II Semester

Category	y Course Title		Ext. marks	L	Р	С
Core Course IV	Pharmaceutical Management –II (Production, Marketing, Finance and Project)	marks 25	75	4		4
Core Course V	Analytical Method Validation and Copyrights and Trademarks	25	75	4		4
Core Course VI	Pharmaceutical Market Research and Analysis	25	75	4		4
Core Elective II	Biostatistics And Research Methodology Stability of Drugs and Dosage Forms	25	75	4		4
Open Elective II	 Screening Methods in Pharmacology Nano Based Drug Delivery Systems Nutraceuticals Advanced Drug Delivery Systems Clinical Research and Pharmacovigilance 	25	75	4		4
Laboratory III	Analytical Method Validation Lab	25	75		6	3
Laboratory IV	Pharmaceutical Market Research and Analysis Lab		75		6	3
Seminar II	Seminar	50			4	2
Total Credits				20	16	28

II Year - I Semester

Course Title	Int.	Ext.	L	Р	С
	marks	marks			
Comprehensive Viva-Voce		100			4
Project work Review II	100			24	12
Total Credits	100	100		24	16

II Year - II Semester

Course Title	Int.	Ext.	L	Р	С
	marks	marks			-
Project work Review III	100			8	4
Project Evaluation (Viva-Voce)		100		16	12
Total Credits	100	100		24	16

\$ For Project review I, please refer 7.9 in R17 Academic Regulations

GEETHANJALI COLLEGE OF PHARMACY

Cheeryal (V), Keesara (M), Medchal (D)

Dt: 1/08/2018

CIRCULAR

Subject: College Academic Committee meeting for the A.Y.2018-19- Reg.

The College Academic Committee meeting is scheduled on 13/06/2018 at 3.00 P.M in Board room. All Board members are requested to attend the same.

AGENDA POINTS

- Consideration of the important communications, policy decisions received from the University, State Government, AICTE/PCI, etc., from time to time.
- To pass the annual budget of the College (including clearance of all University dues).
- To monitor the students Performance and faculty development programs
- To discuss about experiential learning courses in B.Pharmacy, Pharm D, Pharm D(PB) and M. Pharmacy programmes
- To approve the increase/reduction of intake, courses, new and closure.
- Approval of performance appraisal of faculty.
- To monitor and advice for Industry Institute Interactions.
- To monitor the steps taken for Students Training and Placement Activities.

GEETHANJALI COLLEGE OF PHARMACY

Cheeryal (V), Keesara (M), Medchal (D)

Date: 01/08/2018

College Academic Committee (CAC) Minutes of Meeting

Ref: GCPK/CAC/MOM/04

Date and time of the meeting: 01/08/2018 at 3.00 P.M.

The 4 meeting of the College Academic Committee (CAC) of GCPK was held on 1st Aug 2018 at Board Room, GCPK. The meeting was chaired by Dr. M. Ravi Kumar, Principal and Chair Person, CAC, GCPK. The list of members who attended the meeting was enclosed.

The meeting commenced with a word of welcome by Dr. M. Ravi Kumar, Principal and Chair Person. All agendas were placed before the board to discuss and take action.

1. Agenda: Curriculum Revision & Academic Regulation.

Resolution:

The Chairperson reported that the references or opinions on the revised curriculum were received from Jawaharlal Nehru Technological University Hyderabad and the same is to be followed by the college. The member incharge discussed about the academic calendars given by the university and college for all the years and batch wise are to be implemented and followed accordingly.

2. Agenda: Training and Placement Cell

Resolution:

The chair person suggested to conductance of guest lectures, workshops, seminars, industrial visits & educational tours for students. He also proposed a team for organizing campus placement drives and off – campus interviews.

3. Agenda: Discussion regarding the upcoming National Conference Dravyaka in the college.

Resolution:

The chair person discussed about 9th National Conference DRAVYAKA which was planned to be conducted in the month of March 2018 but it will be rescheduled to November 2018. The chair person suggested the active participation of all faculty and student members.

4. Agenda: Discussion about National Pharmacy Week held in November.

Resolution:

The chair person discussed about 57th National pharmacy week to be held on 14-11-2018 to 24-11-2018.

The chair person proposed a rally in cheeryal village and informed to all faculty members and students to participate and make it a grand success.

5. Agenda: Discussion about experiential learning courses in B.Pharmacy, Pharm D, Pharm D (PB) and M. Pharmacy programmes

The chair person person discussed about experiential learning courses in B.Pharmacy, Pharm D, Pharm D (PB) and M. Pharmacy programmes. The members approved and the list of courses are enclosed in Annexure A

6. Agenda: Discussion regarding Awards for classes and students:

Resolution:

Chair person proposed to give prize/appreciation certificate for academic toppers. The chair person informed all faculty members to encourage and motivate students to participate actively in academics/extracurricular activities.

7. Agenda: Discussion regarding UGC Approval.

Resolution:

The member secretary discussed regarding the approval of UGC 2f (12b).

CHAIR PERSON

Members Present:

Date: 01/08/2018

S.No.	Name	Designation	Nature	Signature
1	Dr. M. Ravi Kumar	Professor & Principal	Coordinator	Lower of
2	Dr. M. Sriniva s	HOD, Pharmaceutical Chemistry	Member Incharge	Africa .
3	Dr. B. Battacharya	HOD, Pharmacology	Member	Biblisty
4	Dr. T. Mangila	HOD, Pharmaceutics	Member	W.X
5	Dr. Bharat Bhashan Mohapatra	HOD, Pharmacognosy	Member	Broky Bu-
6	Dr. R. Sivakumar	Incharge, Exam branch	Member	Carlo
7	Dr. B. Rambabu	HOD, PharmD	Member	ABSENT

GEETHANJALI COLLEGE OF PHARMACY

Approved by AICTE, PCI New Delhi, Permanently Affiliated to JNTUH Recognized Under UGC Section 2F & 12B of UGC Act, 1956, by DSIR-SIRO Cheeryal (V), Keesara (M), Medchal-Malkajgiri Dist., Telangana State- 501301

ANNEXURE-A

The following courses that include experiential learning through project work and field work (Industry Training) for B. Pharmacy (Program Code: Z51R; JNTUH Regulation: R15) are approved by the College Academic Committee for the Academic Year 2018-19.

			N.
S.No.	Year of Study	Name of the Course	Course Code
1		Dispensing and General Pharmacy	R1002
2		Pharm. Inorganic Chemistry	R1003
3		Pharmaceutical Organic Chemistry-I	R1004
4		Anatomy, Physiology and Health Education	R1005
5	I Year	Dispensing and General Pharmacy Lab	R10052
6	1 I ear	Pharm. Inorganic Chemistry Lab	R10053
7	-	Pharmaceutical Organic Chemistry-I Lab	R10054
8		Anatomy, Physiology and Health Education Lab	R10055
9		Pharmaceutical Unit Operations- I	R3007
10		Pharmaceutical Organic Chemistry - II	R3008
11	1	Statistical Methods and Computer Applications	R3009
12	1	Physical Pharmacy – I	R3010
13		Anatomy, Physiology and Pathophysiology	R3011
14	1	Pharmaceutical Organic Chemistry-II Lab	R30057
15		Statistical Methods and Computer Applications	R30058
16		Physical Pharmacy – I Lab	R30059
17	II Year	Anatomy, Physiology & Pathophysiology-Lab	R30060
18	1	Pharmaceutical Unit Operations -II	R40012
19		Pharmaceutical Biochemistry	R40013
20	1	Pharmacognosy-I	R40014
21	1	Physical Pharmacy-II	R40015
22		Pharmaceutical Unit Operations- II Lab	R40061
23		Pharmaceutical Biochemistry Lab	R40062
24		Pharmacognosy-I Lab	R40063
25	1	Physical Pharmacy-II Lab	R40064
26		Pharmaceutical Analysis-I	R50017
27	1	Pharmaceutical Microbiology	R50018
28	- III Year	Pharmacognosy-II	R50019
29		Pharmaceutical Technology-I	R50020
30		Pharmacology-I	R50021
31		Pharmaceutical Analysis-I Lab	R50065



32		Pharmaceutical Microbiology Lab	R50066
33		pharmacognosy- II lab	R50067
34		Pharmaceutical Technology-I Lab	R50068
35		Medicinal Chemistry-I	R60022
36		Pharmaceutical Technology-II	R60023
37		Pharmacology-II	R60024
38		Chemistry of Natural Products	R60025
39		Medicinal Chemistry-I Lab	R60070
40		Pharmaceutical Technology-II Lab	R60071
41		Pharmacology-II Lab	R60072
42		Chemistry of Natural Products Lab	R60073
43		Pharmacognosy-III	R70027
44		Biopharmaceutics & Pharmacokinetics	R70028
45		Pharmacology-III	R70029
46		Medicinal Chemistry-II	R70030
47		Seminar/Industrial Visit	R70074
48		Pharmacognosy-III Lab	R70075
49		Biopharmaceutics & Pharmacokinetics Lab	R70076
50		Pharmacology-III Lab	R70077
51		Medicinal Chemistry-II Lab	R70078
52	IV Year	Novel Drug Delivery Systems & Regulatory Affairs	R80032
53		Pharmaceutical Biotechnology	R80033
54		Pharmaceutical Analysis – II	R80034
55		Clinical Pharmacy Practice	R80036
56		Project Work & Comprehensive Viva	R80079
57		Novel Drug Delivery Systems & Regulatory Affairs Lab	R80080
58		Pharmaceutical Biotechnology Lab	R80081
59		Pharmaceutical Analysis – II Lab	R80082



The following courses that include experiential learning through internship for Pharm. D (Program Code: Z51T; JNTUH Regulation: R08) are approved by the College Academic Committee for the Academic Year 2018-19.

S.No.	Year of Study	Name of the Course	Course Code
1		Human Anatomy & Physiology	PD.C11
2		Pharmaceutics	PD.C12
3		Medicinal Biochemistry	PD.C13
4		Pharmaceutical Organic Chemistry	PD.C14
5	I Year	Pharmacueitcal Inorganic Chemistry	PD.C15
6	1 Tear	Human Anatomy & Physiology Lab	PD.C19
7		Pharmaceutics Lab	PD.C110
8		Medicinal Biochemistry Lab	PD.C111
9		Pharmaceutical Organic Chemistry Lab	PD.C112
10		Pharmacueitcal Inorganic Chemistry Lab	PD.C113
11		Pathophysiology	PD.C21
12		Pharmaceutical Microbiology	PD.C22
13		Pharmacognosy & Phyto Pharmaceuticals	PD.C23
14		Pharmacology-I	PD.C24
15	II Voor	Community Pharmacy	PD.C25
16	II Year	Pharmacotherapeutics-I	PD.C26
17		Pharmaceutical Microbiology Lab	PD.C27
18		Pharmacognosy & Phyto Pharmaceuticals Lab	PD.C28
19		Pharmacotherapeutics-I Lab	PD.C29
20		Pharmacology-I Lab	PD.C210
21		Pharmacology-II	PD.C31
22		Pharmaceutical Analysis	PD.C32
23		Pharmacotherapeutics-II	PD.C33
24		Medicinal Chemistry	PD.C35
25	III Year	Pharmaceutical Formulations	PD.C36
26	III I ear	Pharmacology -II Lab	PD.C37
27		Pharmaceutical Analysis Lab	PD.C38
28		Pharmacotherapeutics-II Lab	PD.C39
29		Medicinal Chemistry Lab	PD.C310
30		Pharmaceutical Formulations Lab	PD.C311
31		Pharmacotherapeutics-III	PD.C41
32		Hospital Pharmacy	PD.C42
33		Clinical Pharmacy	PD.C43
34	IV Year	Biostastics & Research Methodology	PD.C44
35		Biopharmaceutics & Pharmacokinetics	PD.C45
36		Clinical Toxicology	PD.C46
37		Pharmacotherapeutics-III Lab	PD.C47
38		Hospital Pharmacy Lab	PD.C48



39		Clinical Pharmacy Lab	PD.C49
40		Biopharmaceutics & Pharmacokinetics Lab	PD.C410
41		Clinical Research	PD.C51
42		Pharmacoepidemology & Pharmacoeconomics	PD.C52
43	V Year	Clinical Pharmacokinetics & Pharmacotherapeutic	
	V I car	Drug Monitoring	PD.C53
44		Clerkship	PD.C54
45		Project Work	PD.C55
46	VI Year	Internship	PD.C61



Geethanjali College of Pharmacy Cheeryal(V), Keesata(M), meacharDist.T.S. 5613a1. The following courses that include experiential learning through internship for Pharm. D (PB) (Program Code: Z55T; JNTUH Regulation: R08) are approved by the College Academic Committee for the Academic Year 2018-19.

S.No.	Year of Study	Name of the Course	Course Code
1		Pharmacotherapeutics-III	PD.C41
2		Hospital Pharmacy	PD.C42
3		Clinical Pharmacy	PD.C43
4		Biostastics & Research Methodology	PD.C44
5	I Year	Biopharmaceutics & Pharmacokinetics	PD.C45
6		Clinical Toxicology	PD.C46
7		Pharmacotherapeutics-III Lab	PD.C47
8		Hospital Pharmacy Lab	PD.C48
9		Clinical Pharmacy Lab	PD.C49
10		Biopharmaceutics & Pharmacokinetics Lab	PD.C410
11		Pharmacotherapeutics I&II	PD.C411
12		Pharmacotherapeutics I&II LAB	PD.C412
13		Clinical Research	PD.C51
14		Pharmacoepidemology & Pharmacoeconomics	PD.C52
15	II Year	Clinical Pharmacokinetics &	
16		Pharmacotherapeutic Drug Monitoring	PD.C53
16		Clerkship	PD.C54
17		Project Work	PD.C55
18	III Year	Internship	PD.C61

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Genthanial Caberra of Pharmacy theeryal(V), decidate, nectual dist. T.S. 501301. The following courses that include experiential learning through Project work for M. Pharm-Pharmaceutics (Program Code: Z51S03; JNTUH Regulation: R17) are approved by the College Academic Committee for the Academic Year 2018-19.

			I
S.No.	Year of Study	Name of the Course	Course Code
1		Advanced Physical Pharmaceutics	MPT.C111
2		Modern Pharmaceutics-I	MPT.C112
3		Applied Biopharmaceutics and Pharmacokinetics	MPT.C113
4		Modern Pharmaceutical Analytical Techniques	MPT.C114
5		Intellectual Property Rights	MPT.C115
6		Pharmacoepidemiology And Pharmacoeconomics	MPT.C116
7		Drug Regulatory Affairs	MPT.C117
8		Herbal Cosmetics Technology	MPT.C118
9		. Pharmaceutical Validation	MPT.C119
10		Pharmaceutical Management	MPT.C120
11		Advanced Physical Pharmaceutics Lab	MPT.C121
12		Applied Biopharmaceutics and Pharmacokinetics Lab	MPT.C122
13	I Year	Seminar	MPT.C123
14	1 Tear	Advanced Drug Delivery Systems	MPT.C121
15		Industrial Pharmacy	MPT.C122
16		Modern Pharmaceutics-II	MPT.C123
17		Biostatistics and Research Methodology	MPT.C124
18		Stability of Drugs and Dosage Forms	MPT.C125
19		Screening Methods in Pharmacology	MPT.C126
20		Nano Based Drug Delivery Systems	MPT.C127
21		Nutraceuticals	MPT.C128
22		Entrepreneurship Management	MPT.C129
23		Clinical Research and Pharmacovigilance	MPT.C130
24		Advanced Drug Delivery Systems Lab	MPT.C131
25		Modern Pharmaceutics Lab	MPT.C132
26		Seminar	MPT.C133
27		Comprehensive Viva-Voce	MPT.C211
28		Project Work Review II	MPT.C212
29		Project Work Review III	MPT.C211
30	II Year	Project Evaluation (Viva-Voce)	MPT.C212



The following courses that include experiential learning through Project work for M. Pharm-Pharmaceutical Regulatory Affairs (Program Code: Z51S13; JNTUH Regulation: R17) are approved by the College Academic Committee for the Academic Year 2018-19.

S.No.	Year of Study	Name of the Course	Course Code
1	J	Pharmaceutical management -I	
		(general & personnel)	MP.C111
2		Drug Regulatory Affairs	MP.C112
3		Modern Pharmaceutical analytical	
		techniques	MP.C113
4		Total Quality Management	MP.C114
5		Intellectual Property Rights	MP.C115
6		Pharmacoepidemiology And	1,11,10110
		Pharmacoeconomics	MP.C116
7		Herbal Cosmetics Technology	MP.C117
8		Phytochemistry	MP.C118
9		Pharmaceutical Formulation	1.11.0110
10		Technology	MP.C119
10		Pharmaceutical Validation	MP.C120
11		Modern Pharmaceutical	
		Analytical Techniques Lab	MP.C121
12		Pharmaceutical Management Lab	MP.C122
13		Seminar	MP.C123
14		Pharmaceutical Managemnt -II	
	I Year	(PRODUCTION, MARKETING	
		& FINANCE)	MP.C124
15		Analytical Method Validation	
		and copyrights	
1.5		and trademarks	MP.C125
16		Pharmaceutical Market research	
1.7		and Analysis	MP.C126
17		Biostatistics and Research) (D) (107
18		Methodology	MP.C127
10		Stability of Drugs and Dosage forms	MD C120
19		Screening Methods in	MP.C128
		Pharmacology	MP.C129
20		Nano Based Drug Delivery	WII .C129
0.03883		Systems	MP.C130
21		Neutraceuticals	MP.C131
22		Advanced drug delivery systems	MP.C132
23		Clnical Research and	WII .C132
		Pharmacovigilance	MP.C133
24		Analytical Method Validation	MP.C134
25		Pharmaceutical Market research	MP.C135
		i narmaceuticai wiaiket ieseafeli	WIF.C133



Chec jatty, keasara(M, Heachel Dist. T.S.-Su. .).

		and Analysis Lab	
26		Seminar	MP.C136
27		Comprehensive Viva-Voce	MP.C221
28		Project Work Review II	MP.C222
29		Project Work Review III	MP.C221
30	II Year	Project Evaluation (Viva-Voce)	MPC222

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PRINCIPAL

Geethaniali College of Pharmacy
Cheeryal(V), Keesara, M., Medicina Justi, T.S.: 501301.

The following courses that include experiential learning through Project work for M. Pharm-Pharmaceutical Analysis (Program Code: Z51S12; JNTUH Regulation: R17) are approved by the College Academic Committee for the Academic Year 2018-19.

			Course
S.No.	Year of Study	Name of the Course	Course Code
1	V	Advanced Pharmaceutical Analysis	MPA.C111
2		Food Analysis	MPA.C112
3		Modern Pharmaceutical Analytical Techniques	MPA.C113
4		Pharmaceutical Validation	MPA.C114
5		Intellectual Property Rights	MPA.C115
6		Drug Regulatory Affairs	MPA.C116
7		Pharmacoepidemiology And Pharmacoeconomics	MPA.C117
8		Pharmaceutical Management	MPA.C119
9		Herbal Cosmetics Technology	MPA.C120
10		Pharmaceutical Formulation Technology	MPA.C121
11		Modern Pharmaceutical Analytical Techniques Lab	MPA.C121
12		Advanced Pharmaceutical Analysis Lab	MPA.C121
13	I Year	Seminar	MPA.C122
14	Tical	Advanced Instrumental Analysis	MPA.C121
15		Quality Control and Quality Assurance	MPA.C122
16		Modern Bio Analytical Techniques	MPA.C123
17		Biostatistics and Research Methodology	MPA.C123
18		Spectral Analysis	MPA.C125
19		Screening Methods in Pharmacology	MPA.C126
20		Stability of Drugs and Dosage Forms	MPA.C127
21		Entrepreneurship Management	MPA.C128
22		Nano Based Drug Delivery Systems	MPA.C129
23	-	Herbal & Cosmetics Analysis	MPA.C130
24		Advanced Instrumental Analysis Lab	MPA.C131
25		Quality Control and Quality Assurance Lab	MPA.C132
26		Seminar	MPA.C133
27	*	Comprehensive Viva-Voce	MPA.C221
28		Project Work Review II	MPA.C222
29		Project Work Review III	MPA.C221
30	II Year	Project Evaluation (Viva-Voce)	MPA.C222



