VIGNAN INSTITUTE OF PHARMACEUTICAL TECHNOLOGY

(Approved by PCI, AICTE, Affiliated to JNTUK & Accredited by NBA for B. Pharmacy)

ACADEMIC REGULATIONS

S. No.		Description	Page No
1		PCI Regulations (For Admitted batches: 2017 onwards)	<u>2–27</u>
2	B. Pharmacy	R16 Regulations (For Admitted batches: 2016 onwards)	<u>28-44</u>
3		R13 Regulations (For Admitted batches: 2013 onwards)	<u>45–58</u>
4	Pharm. D	R08 Regulations (For Admitted batches: 2007 onwards)	<u>59–83</u>
5	M. Pharmacy	PCI Regulations (FOR ADMITTED BATCHES :2018 ONWARDS)	<u>84–101</u>
6	ivi. I mai macy	R16 Regulations (For Admitted batches: 2016 onwards)	102–123

Pharmacy Council of India New Delhi

Rules & Syllabus for the Bachelor of Pharmacy (B. Pharm) Course

[Framed under Regulation 6, 7 & 8 of the Bachelor of Pharmacy (B. Pharm) course regulations 2014]





CHAPTER-I: REGULATIONS

1. Short Title and Commencement

These regulations shall be called as "The Revised Regulations for the B. Pharm. Degree Program (CBCS)of the Pharmacy Council of India, New Delhi". They shall come into effect from the Academic Year 2016-17. The regulations framed are subject to modifications from time to time by Pharmacy Council of India.

2. Minimum qualification for admission

2.1 First year B. Pharm:

Candidate shall have passed 10+2 examination conducted by the respective state/central government authorities recognized as equivalent to 10+2 examination by the Association of Indian Universities (AIU) with English as one of the subjects and Physics, Chemistry, Mathematics (P.C.M) and or Biology (P.C.B / P.C.M.B.) as optional subjects individually. Any other qualification approved by the Pharmacy Council of India as equivalent to any of the above examinations.

2.2. B. Pharm lateral entry (to third semester):

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

3. Duration of the program

The course of study for B.Pharm shall extend over a period of eight semesters (four academic years) and six semesters (three academic years) for lateral entry students. The curricula and syllabi for the program shall be prescribed from time to time by Pharmacy Council of India, New Delhi.

4. Medium of instruction and examinations

Medium of instruction and examination shall be in English.

5. Working days in each semester

Each semestershall consist of not less than 100 working days. The odd semesters shall be conducted from the month of June/July to November/December and the even semesters shall be conducted from December/January to May/June in every calendar year.

6. Attendance and progress

A candidate is required to put in at least 80% attendance in individual courses considering theory and practical separately. The candidate shall complete the prescribed course satisfactorily to be eligible to appear for the respective examinations.



7. Program/Course credit structure

As per the philosophy of Credit Based Semester System, certain quantum of academic work viz. theory classes, tutorial hours, practical classes, etc. are measured in terms of credits. On satisfactory completion of the courses, a candidate earns credits. The amount of credit associated with a course is dependent upon the number of hours of instruction per week in that course. Similarly, the credit associated with any of the other academic, co/extra-curricular activities is dependent upon the quantum of work expected to be put in for each of these activities per week.

7.1. Credit assignment

7.1.1. Theory and Laboratory courses

Courses are broadly classified as Theory and Practical. Theory courses consist of lecture (L) and /or tutorial (T) hours, and Practical (P) courses consist of hours spent in the laboratory. Credits (C) for a course is dependent on the number of hours of instruction per week in that course, and is obtained by using a multiplier of one (1) for lecture and tutorial hours, and a multiplier of half (1/2) for practical (laboratory) hours. Thus, for example, a theory course having three lectures and one tutorial per week throughout the semester carries a credit of 4. Similarly, a practical having four laboratory hours per week throughout semester carries a credit of 2.

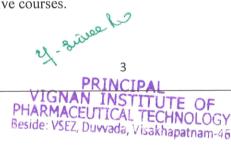
7.2. Minimum credit requirements

The minimum credit points required for award of a B. Pharm. degree is 208. These credits are divided into Theory courses, Tutorials, Practical, Practice School and Projectover the duration of eight semesters. The credits are distributed semester-wise as shown in Table IX. Courses generally progress in sequences, building competencies and their positioning indicates certain academic maturity on the part of the learners. Learners are expected to follow the semester-wise schedule of courses given in the syllabus.

The lateral entry students shall get 52 credit points transferred from their D. Pharm program. Such students shall take up additional remedial courses of 'Communication Skills' (Theory and Practical) and 'Computer Applications in Pharmacy' (Theory and Practical) equivalent to 3 and 4 credit points respectively, a total of 7 credit points to attain 59 credit points, the maximum of I and II semesters.

8. Academic work

A regular record of attendance both in Theory and Practical shall be maintained by the teaching staff of respective courses.



9. Course of study

The course of study for B. Pharm shall include Semester Wise Theory & Practical as given in Table - I to VIII. The number of hours to be devoted to each theory, tutorial and practical course in any semester shall not be less than that shown in Table - I to VIII.

Table-I: Course of study for semester I

Table-1. Course of study for semester 1							
Course code	Name of the course	No. of	Tuto	Credit			
	THE OF THE COURSE	hours	rial	points			
BP101T	Human Anatomy and Physiology I— Theory	3	1	4			
BP102T	Pharmaceutical Analysis I – Theory	3	1	4			
BP103T	Pharmaceutics I – Theory	3	1	4			
BP104T	Pharmaceutical Inorganic Chemistry – Theory	3	1	4			
BP105T	Communication skills – Theory *	2	-	2			
BP106RBT BP106RMT	Remedial Biology/ Remedial Mathematics – Theory*	2		2			
BP107P	Human Anatomy and Physiology – Practical	4	, in	2			
BP108P	Pharmaceutical Analysis I – Practical	4	- min	2			
BP109P	Pharmaceutics I – Practical	4	-	2			
BP110P	Pharmaceutical Inorganic Chemistry – Practical	4	pen	2			
BP111P	Communication skills – Practical*	2	ana .	1			
BP112RBP	Remedial Biology – Practical*	2		1			
#	Total	32/34 ^{\$} /36 [#]	4	27/29 ^{\$} /30 [#]			

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

^{*} Non University Examination (NUE)



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

Table-II: Course of study for semester II

Course Code	Name of the course	No. of hours	Tutorial	Credit points
BP201T	Human Anatomy and Physiology II – Theory	3	1	4
BP202T	Pharmaceutical Organic Chemistry I – Theory	3	1	4
BP203T	Biochemistry - Theory	3	1	4
BP204T	Pathophysiology – Theory	3	1	4
BP205T	Computer Applications in Pharmacy – Theory *	3	Aire	3
BP206T	Environmental sciences – Theory *	3	ein	3
BP207P	Human Anatomy and Physiology II –Practical	4	***	2
BP208P	Pharmaceutical Organic Chemistry I- Practical	4	tos	2
BP209P	Biochemistry – Practical			2
BP210P	BP210P Computer Applications in Pharmacy – Practical*			1
	Total	32	4	29

^{*}Non University Examination (NUE)

Table-III: Course of study for semester III

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP301T	Pharmaceutical Organic Chemistry II – Theory	3	1	4
BP302T	Physical Pharmaceutics I – Theory	3	1	4
BP303T	Pharmaceutical Microbiology - Theory	3	1	4
BP304T	Pharmaceutical Engineering – Theory	3	1	4
BP305P	Pharmaceutical Organic Chemistry II – Practical	4	and .	2
BP306P	Physical Pharmaceutics I – Practical	4	400	2
BP307P	Pharmaceutical Microbiology – Practical	4	MAN	2
BP 308P	Pharmaceutical Engineering – Practical	4	AND	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
BP401T	Pharmaceutical Organic Chemistry III- Theory	3	I	4
BP402T	Medicinal Chemistry I – Theory	3	1	4
BP403T	Physical Pharmaceutics II – Theory	3	1	4
BP404T	Pharmacology I – Theory	3	1	4
BP405T	Pharmacognosy and Phytochemistry I- Theory	3	1	4
BP406P	Medicinal Chemistry I – Practical	4	ém .	2
BP407P	Physical Pharmaceutics II – Practical	4		2
BP408P	Pharmacology I – Practical	4	#in	2
BP409P	BP409P Pharmacognosy and Phytochemistry I – Practical		ana	2
	Total	31	5	28

Table-V: Course of study for semester \boldsymbol{V}

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP501T	Medicinal Chemistry II – Theory	3	1	4
BP502T	Industrial PharmacyI— Theory	3	1	4
BP503T	Pharmacology II – Theory	3	1	4
BP504T	Pharmacognosy and Phytochemistry II- Theory	3	1	4
BP505T	Pharmaceutical Jurisprudence - Theory	3	1	4
BP506P	Industrial PharmacyI — Practical	4	**	2
BP507P	Pharmacology II – Practical	4	88	2
BP508P	Pharmacognosy and Phytochemistry II — Practical	4		2
	Total	27	5	26



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			-	2
BP706PS	BP706PS Practice School*		-	6
	Total	28	5	24

^{*} Non University Examination (NUE)

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				
BP804ET	Pharmaceutical Regulatory Science			
BP805ET	Pharmacovigilance		1+1=2	
BP806ET	Quality Control and Standardization of Herbals	3 + 3 =		4 + 4 =
BP807ET	Computer Aided Drug Design	6		8
BP808ET	Cell and Molecular Biology			
BP809ET	Cosmetic Science			
BP810ET	Experimental Pharmacology			
BP811ET				
BP812ET	Dietary Supplements and Nutraceuticals			
BP813PW	Project Work	12	64	6
	Total	24	4	22

Table-IX: Semester wise credits distribution

Semester	Credit Points
I	27/29 ^s /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 ^S /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 Mathematics / Physics / Chemistry at HSC and appearing for Remedial Biology course.



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

10. Program Committee

- 1. The B. Pharm. program shall have a Program Committee constituted by the Head of the institution in consultation with all the Heads of the departments.
- 2. The composition of the Program Committee shall be as follows:

A senior teacher shall be the Chairperson; One Teacher from each department handling B.Pharm courses; and four student representatives of the program (one from each academic year), nominated by the Head of the institution.

- 3. Duties of the Program Committee:
 - i. Periodically reviewing the progress of the classes.
 - Discussing the problems concerning curriculum, syllabus and the conduct of classes.
 - iii. Discussing with the course teachers on the nature and scope of assessment for the course and the same shall be announced to the students at the beginning of respective semesters.
 - iv. Communicating its recommendation to the Head of the institution on academic matters.
 - v. The Program Committee shall meet at least thrice in a semester preferably at the end of each Sessionalexam (Internal Assessment) and before the end semester exam.

11. Examinations/Assessments

The scheme for internal assessment and end semester examinations is given in Table -X.

11.1. End semester examinations

The End Semester Examinations for each theory and practical coursethrough semesters I to VIII shall beconducted by the university except for the subjects with asterix symbol (*) in table I and II for which examinations shall be conducted by the subject experts at college level and the marks/grades shall be submitted to the university.



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

Semester I

Course			Internal Assessment			End Semester Exams		Total	
code	Name of the course	Continuous Sessional Exams		Total	Marks	Duration	Marks		
		Mode	Marks	Duration	10	17411713	Duration		
BP101T	Human Anatomy and Physiology I– Theory	10	15	1 Hr	25	75	3 Hrs	100	
BP102T	Pharmaceutical Analysis I – Theory	10	15	1 Hr	25	75	3 Hrs	100	
BP103T	Pharmaceutics I - Theory	10	15	1 Hr	25	75	3 Hrs	100	
BP104T	Pharmaceutical Inorganic Chemistry – Theory	10	15	1 Hr	25	75	3 Hrs	100	
BP105T	Communication skills – Theory *	5	10	1 Hr	15	35	1.5 Hrs	50	
BP106RBT BP106RMT	Remedial Biology/ Mathematics – Theory*	5	10	1 Hr	15	3.5	1.5 Hrs	50	
BP107P	Human Anatomy and Physiology – Practical	5	10	4 Hrs	15	35	4 Hrs	50	
BP108P	Pharmaceutical Analysis I – Practical	5	10	4 Hrs	15	35	4 Hrs	50	
BP109P	Pharmaceutics I - Practical	5	10	4 Hrs	15	35	4 Hrs	50	
BP110P	Pharmaceutical Inorganic Chemistry – Practical	5	10	4 Hrs	15	35	4 Hrs	50	
BP111P	Communication skills – Practical*	5	5	2 Hrs	10	15	2 Hrs	25	
BP112RBP	Remedial Biology – Practical*	5	5	2 Hrs	10	15	2 Hrs	25	
	Total	70/75 ⁸ /80 [#]	115/125 ^S /130 [#]	23/24 ⁸ /26 [#] Hrs	185/200 ^S /210 [#]	490/525 ⁸ / 540"	31.5/33 ⁸ / 35" Hrs	675/725 ⁸ / 750"	

[&]quot;Applicable ONLY for the students studied Mathematics / Physics / Chemistry at HSC and appearing for Remedial Biology (RB)course.

10



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

^{*} Non University Examination (NUE)

Semester II

Course		Internal Assessment				End Seme	Total	
code	Name of the course	Continuous	Session	al Exams	Total	Marks	Duration	Marks
Come		Mode	Marks	Duration	Total	Warks	Duration	17121113
BP201T	Human Anatomy and Physiology II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP202T	Pharmaceutical Organic Chemistry I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP203T	Biochemistry - Theory	10	15	1 Hr	25	75	3 Hrs	100
BP204T	Pathophysiology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP205T	Computer Applications in Pharmacy – Theory*	10	15	1 Hr	25	50	2 Hrs	75
BP206T	Environmental sciences - Theory*	10	15	1 Hr	25	50	2 Hrs	75
BP207P	Human Anatomy and Physiology II –Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP208P	Pharmaceutical Organic Chemistry I— Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP209P	Biochemistry - Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP210P	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 college level shall conduct examinations

11



Semester III

Саниоа		Internal Assessment				End Seme	Total	
Course code	Name of the course	Continuous	Sessiona	ıl Exams	Total	Marks	Duration	Marks
code		Mode	Marks	Duration	Total	Marks	Duration	
BP301T	Pharmaceutical Organic Chemistry II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP302T	PhysicalPharmaceuticsI - Theory	10	1.5	1 Hr	25	75	3 Hrs	100
BP303T	Pharmaceutical Microbiology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP304T	Pharmaceutical Engineering – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP305P	Pharmaceutical Organic Chemistry II – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP306P	Physical Pharmaceutics I — Practical	5	10	4 Hr	15	35	4 Hrs	50
BP307P	Pharmaceutical Microbiology – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP308P	Pharmaceutical Engineering – Practical	5	10	4 Hr	15	35	4 Hrs	50
	Total	60	100	20	160	440	28Hrs	600

12



ey-simesto

Semester IV

			Internal Assessment			End Semester Exams		Total
Course code	Name of the course	Continuous Mode	Session: Marks	al Exams Duration	Total	Marks	Duration	Marks
BP401T	Pharmaceutical Organic Chemistry III– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP402T	Medicinal Chemistry I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP403T	Physical Pharmaceutics II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP404T	Pharmacology I - Theory	10	15	1 Hr	25	75	3 Hrs	100
BP405T	Pharmacognosy I - Theory	10	15	1 Hr	25	75	3 Hrs	100
BP406P	Medicinal Chemistry I – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP407P	Physical Pharmaceutics II — Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP408P	Pharmacology I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP409P	Pharmacognosy I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
	Total	70	115	21 Hrs	185	515	31 Hrs	700

13



et. Erimere les

Semester V

Course			Internal Assessment				End Semester Exams	
code	Name of the course	Continuous	Session	al Exams	Total	Marks	Duration	Total Marks
couc		Mode	Marks	Duration	Total	IVIAIIKS	Duration	
BP501T	Medicinal Chemistry II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP502T	Industrial Pharmacyl- Theory	10	15	1 Hr	25	75	3 Hrs	100
BP503T	Pharmacology II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP504T	Pharmacognosy II - Theory	10	15	1 Hr	25	75	3 Hrs	100
BP505T	Pharmaceutical Jurisprudence -	10	15	1 Hr	2.5	75	3 Hrs	100
BF3031	Theory	10	15	1 111	23	13	3 1118	100
BP506P	Industrial PharmacyI– Practical	5	10	4 Hr	15	35	4 Hrs	50
BP507P	Pharmacology II – Practical	5	10	4 Hr	15	3.5	4 Hrs	50
BP508P	Pharmacognosy II – Practical	5	10	4 Hr	15	35	4 Hrs	50
	Total	65	105	17 Hr	170	480	27 Hrs	650

14



Semester VI

Course			Internal As		End Semester Exams		Total Marks	
code	Name of the course	Continuous	us Sessional Exams		Total	Marks Duration		
		Mode	Marks	Duration	2 0 6 6 6 6	11247740	Buruton	
BP601T	Medicinal Chemistry III – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP602T	Pharmacology III – Theory	10	15	1 Hr	25	75	3 Hrs	100
ВР603Т	Herbal Drug Technology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP604T	Biopharmaceutics and Pharmacokinetics – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP605T	Pharmaceutical Biotechnology— Theory	10	15	1 Hr	25	75	3 Hrs	100
BP606T	Quality Assurance Theory	10	15	1 Hr	25	75	3 Hrs	1.00
BP607P	Medicinal chemistry III — Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP608P	Pharmacology III – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP609P	Herbal Drug Technology – Practical	5	10	4 Hrs	15	35	4 Hrs	50
	Total	75	120	18 Hrs	195	555	30 Hrs	750

15



ex-significants

Semester VII

Course	Name of the course	1	Internal Assessment			End Semester Exams		Total
code	Name of the course	Continuous Mode	Session Marks	al Exams Duration	Total	Marks	Duration	Marks
BP701T	Instrumental Methods of Analysis – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP702T	Industrial Pharmacy – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP703T	Pharmacy Practice - Theory	10	15	1 Hr	25	75	3 Hrs	100
BP704T	Novel Drug Delivery System – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP705 P	Instrumental Methods of Analysis - Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP706 PS	Practice School*	25		*	25	125	5 Hrs	150
	Total	70	70	8Hrs	140	460	21 Hrs	600

* The subject experts at college level shall conduct examinations

16





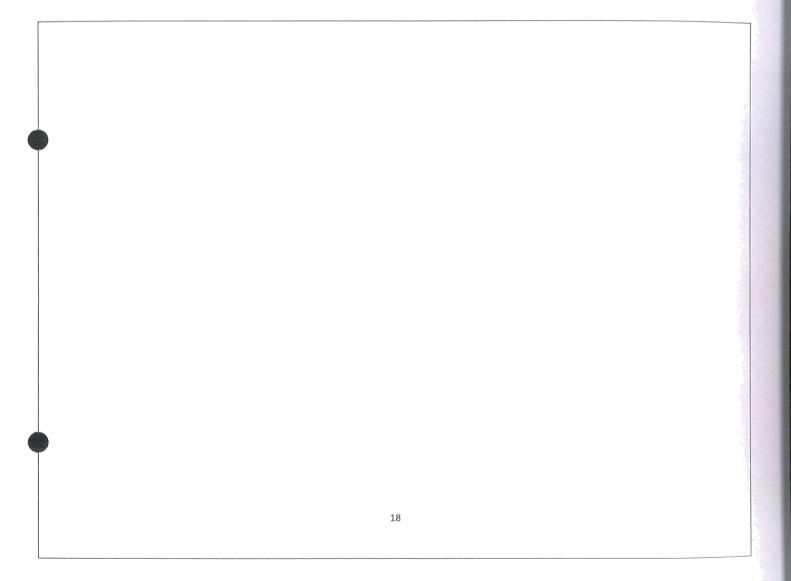
Semester VIII

Course			Internal As	sessment		End Semester Exams		Total
code	Name of the course	Continuous Mode	Session: Marks	al Exams Duration	Total	Marks	Duration	Marks
BP801T	Biostatistics and Research Methodology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP802T	Social and Preventive Pharmacy - Theory	10	15	1 Hr	25	75	3 Hrs	100
BP803ET	Pharmaceutical Marketing – Theory	10 + 10						
BP804ET	Pharmaceutical Regulatory Science – Theory							100 + 100 = 200
BP805ET	Pharmacovigilance - Theory						3 + 3 = 6 Hrs	
BP806ET	Quality Control and Standardization of Herbals — Theory			1+1=	25 + 25 =	75 + 75		
BP807ET	Computer Aided Drug Design – Theory	= 20	30	2 Hrs	50	= 150 I-Irs	FIIS	
BP808ET	Cell and Molecular Biology – Theory							
BP809ET	Cosmetic Science - Theory							
BP810ET	Experimental Pharmacology – Theory							
BP811ET	Advanced Instrumentation Techniques – Theory							
BP812PW	Project Work	-	-		-	150	4 Hrs	150

Total	40	60	4 Hrs	100	450	16 Hrs	550

17

PRINCIPAL VIGNAN INSTITUTE OF PHARMACEUTICAL TECHNOLOGY



11.2. Internal assessment: Continuous mode

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

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

Theory				
Criteria			Maximum Marks	
Attendance (Refer Table – XII)		4	2	
Academic activities (Average of any 3 activities e.g. quiz, assignment, open book test, field work, group discussion and seminar)		3	1.5	
Student – Teacher interaction			1.5	
Total		10	5	
Practical				
Attendance (Refer Table – XII)				
Based on Practical Records, Regular viva voce, etc.				
Total		5		

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

Percentage of Attendance	Theory	Practical					
95 - 100	4	2					
90 – 94	3	1.5					
85 – 89	2	1					
80 - 84	1	0.5					
Less than 80	0	0					

11.2.1. Sessional Exams

Two Sessional exams shall be conducted for each theory / practical course as per the schedule fixed by the college(s). The scheme of question paper for theory and practical Sessional examinations is given below. The average marks of two Sessional exams shall be computed for internal assessment as per the requirements given in tables -X.

Sessional exam shall be conducted for 30 marks for theory and shall be computed for 15 marks. Similarly Sessional exam for practical shall be conducted for 40 marks and shall be computed for 10 marks.

Question paper pattern for theory Sessional examinations

For subjects having University examination

I. Multiple Choice Questions (I	MCQs)	=	$10 \times 1 = 10$
OR			OR
Objective Type Questions (5	5 x 2)	===	$05 \times 2 = 10$
(Answer all the questions)			
I. Long Answers (Answer 1 ou	t of 2)	=	$1 \times 10 = 10$
II. Short Answers (Answer 2 or	ut of 3)	=	$2 \times 5 = 10$
			and now make make that most data mine make data make make make make make
	as a	Total =	30 marks



For subjects having Non University Examination

I. Long Answers (Answer 1 out of 2)		$1 \times 10 =$
II. Short Answers (Answer 4 out of 6)	=	$4 \times 5 =$

10 20

Question paper pattern for practical sessional examinations

I. Synopsis		=	10
II. Experiments		=	25
III. Viva voce		=	05
	Total	=	40 marks

12. Promotion and award of grades

A student shall be declared PASSand eligible for getting gradein a course of B.Pharm.program if he/she secures at least 50% marks in that particular course including internal assessment. For example, to be declared as PASS and to get grade, the student has to secure a minimum of 50 marks for the total of 100 including continuous mode of assessment and end semester theory examination and has to secure a minimum of 25 marks for the total 50 including internal assessment and end semester practical examination.

13. Carry forward of marks

In case a studentfails to secure the minimum 50% in any Theory or Practical course as specified in 12,then he/she shall reappear for the end semester examination of that course. However his/her marks of the Internal Assessmentshallbe carried overand he/she shall be entitled for grade obtained by him/her on passing.

14. Improvement of internal assessment

A studentshall have the opportunity to improvehis/her performance only oncein the Sessional exam component of the internal assessment. The re-conduct of the Sessional exam shall be completed before the commencement of next end semester theory examinations.

15. Re-examination of end semester examinations

Reexamination ofend semester examinationshall be conducted as per the schedule given in table XIII. The exact dates of examinations shall be notified from time to time.

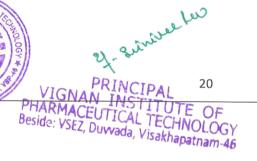


Table-XIII: Tentative schedule of end semester examinations

Semester	For Regular Candidates	For Failed Candidates
I, III, V and VII	November / December	May / June
II, IV, VI and VIII	May / June	November / December

Question paper pattern for end semester theory examinations

For 75 marks paper

- I. Multiple Choice Questions(MCQs) = $20 \times 1 = 20$ OR OR OR
 Objective Type Questions (10 x 2) = $10 \times 2 = 20$ (Answer all the questions)

 II. Long Answers (Answer 2 out of 3) = $2 \times 10 = 20$
- III. Short Answers (Answer 7 out of 9) $= 7 \times 5 = 35$

Total = 75 marks

For 50 marks paper

I. Long Answers (Answer 2 out of 3) = $2 \times 10 = 20$ II. Short Answers (Answer 6 out of 8) = $6 \times 5 = 30$

Total = 50 marks

For 35 marks paper

I. Long Answers (Answer 1 out of 2) = $1 \times 10 = 10$ II. Short Answers (Answer 5 out of 7) = $5 \times 5 = 25$

Total = 35 marks

Question paper pattern for end semester practical examinations

 I. Synopsis
 =
 5

 II. Experiments
 =
 25

 III. Viva voce
 =
 5

Total = 35 marks



16. Academic Progression:

No student shall be admitted to any examination unless he/she fulfills the norms given in 6. Academic progression rules are applicable as follows:

A student shall be eligible to carry forward all the courses of I, II and III semesters till the IV semester examinations. However, he/she shall not be eligible to attend the courses of V semester until all the courses of I and II semesters are successfully completed.

A student shall be eligible to carry forward all the courses of III, IV and V semesters till the VI semester examinations. However, he/she shall not be eligible to attend the courses of VII semester until all the courses of I, II, III and IV semesters are successfully completed.

A student shall be eligible to carry forward all the courses of V, VI and VII semesters till the VIII semester examinations. However, he/she shall not be eligible to get the course completion certificate until all the courses of I, II, III, IV, V and VI semesters are successfully completed.

A student shall be eligible to get his/her CGPA upon successful completion of the courses of I to VIII semesters within the stipulated time period as per the norms specified in 26.

A lateral entry student shall be eligible to carry forward all the courses of III, IV and V semesters till the VI semester examinations. However, he/she shall not be eligible to attend the courses of VII semester until all the courses of III and IV semesters are successfully completed.

A lateral entry student shall be eligible to carry forward all the courses of V, VI and VII semesters till the VIII semester examinations. However, he/she shall not be eligible to get the course completion certificate until all the courses of III, IV, V and VI semesters are successfully completed.

A lateral entry student shall be eligible to get his/her CGPA upon successful completion of the courses of III to VIII semesters within the stipulated time period as per the norms specified in 26.

Any student who has given more than 4 chances for successful completion of I / III semester courses and more than 3 chances for successful completion of II / IV semester courses shall be permitted to attend V / VII semester classes ONLY during the subsequent academic year as the case may be. In simpler terms there shall NOT be any ODD BATCH for any semester. , girwise les MACEUTIC

Beside: VSEZ, Duvvada, Visakhapatnam-46,

Note: Grade ABshould be considered as failed and treated as one head for deciding academic progression. Such rules are also applicable for those students who fail to register for examination(s) of any course in any semester.

17. Grading of performances

17.1. 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 - XII.

Table – XII: Letter grades and grade points equivalent to

Percentage of marks and performances

	z ci cominge or min	ks and periorman	
Percentage of Marks Obtained	Letter Grade	Grade Point	Performance
90.00 - 100	0	10	Outstanding
80.00 - 89.99	A	9	Excellent
70.00 – 79.99	В	8	Good
60.00 - 69.99	С	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 ABand a corresponding grade point of zero. He/she should reappear for the said evaluation/examination in due course.

18. 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 weighted average of the grade points obtained all the courses by the student during the semester. For example, if a student takes five courses(Theory/Practical) in a semester with credits C1, C2, C3, C4 and C5 and the student's grade points in these courses are G1, G2, G3, G4 and G5, respectively, and then students' SGPA is equal to:

$$SGPA = \begin{array}{c} C_1G_1 + C_2G_2 + C_3G_3 + C_4G_4 + C_5G_5 \\ \\ C_1 + C_2 + C_3 + C_4 + C_5 \end{array}$$

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 ABSgrade 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:

$$C_1G_1 + C_2G_2 + C_3G_3 + C_4*$$
 ZERO + C_5G_5
SGPA = $C_1 + C_2 + C_3 + C_4 + C_5$

19. Cumulative Grade Point Average (CGPA)

The CGPA is calculated with the SGPA of all the VIII semesters to two decimal points and is indicated in final grade report card/final transcript showing the grades of all VIII 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 passedby 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:

$$C_{1}S_{1} + C_{2}S_{2} + C_{3}S_{3} + C_{4}S_{4} + C_{5}S_{5} + C_{6}S_{6} + C_{7}S_{7} + C_{8}S_{8}$$

$$CGPA = C_{1} + C_{2} + C_{3} + C_{4} + C_{5} + C_{6} + C_{7} + C_{8}$$

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,....

20. 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

First Class = CGPA of 6.00 to 7.49

Second Class = CGPA of 5.00 to 5.99

21. Project work

All the students shall undertake a projectunder the supervision of a teacher and submit a report. The area of the project shall directly relate any one of the elective subject opted by the student in semester VIII. The project shall be carried out in group not exceeding 5 in number. The project report shall be submitted in triplicate (typed & bound copy not less than 25 pages).

The internal and external examiner appointed by the University shall evaluate the project at the time of the Practical examinations of other semester(s). Students shall be evaluated in groups for four hours (i.e., about half an hour for a group of five students). The projects shall be evaluated as per the criteria given below.



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:		4
Presentation of work		25 Marks
Communication skills		20 Marks
Question and answer skills		30 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.

75 Marks

Total

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 leveland grade point shall be awarded.

VIGNAN INS
PHARMACEUTICAL TECHNOLUC.
Beside: VSEZ, Duvvada, Visakhapatnam-46

24. Award of Ranks

Ranks and Medals shall be awarded on the basis of final CGPA. However, candidates who fail in one or more courses during the B.Pharm program shall not be eligible for award of ranks.Moreover, the candidates should have completed the B. Pharm program in minimum prescribed number of years, (four years) for the award of Ranks.

25. Award of degree

Candidates who fulfill the requirements mentioned above shall be eligible for award of degree during the ensuing convocation.

26. Duration for completion of the program of study

The duration for the completion of the program shall be fixed as double the actual duration of the program and the students have to pass within the said period, otherwise they have to get fresh Registration.

27. Re-admission after break of study

Candidate who seeks re-admission to the program after break of study has to get the approval from the university by paying a condonation fee.

No condonation is allowed for the candidate who has more than 2 years of break up period and he/she has to rejoin the program by paying the required fees.



ACADEMIC REGULATIONS COURSE STRUCTURE AND DETAILED SYLLABUS

B.PHARMACY

For

B.PHARMACY FOUR YEAR DEGREE COURSE

(Applicable for the batches admitted from 2016-17)





PAINCIPAL AN INSTITUTE OF

JAWAHARLAL NEHRUBTECHNOLOGY UNIVERSITY KAKINADA Visakhapatnam-46

KAKINADA - 533003, ANDHRA PRADESH, INDIA.

Academic Regulations (R16) for B. Pharm. (Regular)

Applicable for the students of B. Pharm. (Regular) from the Academic Year 2016-17 onwards

1. Award of B. Pharm. Degree:

A student will be declared eligible for the award of the B.Pharm Degree if he fulfils the following academic regulations:

- 1.1 Pursued a course of study for not less than four academic years and not more than eight academic years.
- 1.2 Register for all the 180 credits and secure all the 180 credits.

2. <u>Distribution and Weightage of Marks:</u>

- i. The performance of a student in each semester shall be evaluated subject wise with a maximum of 100 marks for theory and 75 marks for practical subject. The project work shall be evaluated for 200 marks.
- ii. For theory subjects the distribution shall be 30 marks for Internal Evaluation and 70 marks for the End-Examination.
- iii. For theory subjects, during the semester there shall be 2 tests. The weightage of Internal marks for 30 consists of Descriptive - 15, Assignment - 05 (Theory, Design, Analysis, Simulation, Algorithms, Drawing, etc. as the case may be) Objective -10 (Conducted at College level with 20 Multiple choice question with a weightage of ½ Mark each). The objective examination is for 20 minutes duration. The subjective examination is for 90 minutes duration conducted for 15 marks. Each subjective type test question paper shall contain 3 questions and all questions need to be answered. The Objective examination conducted for 10 marks and subjective examination conducted for 15 marks are to be added to the assignment marks of 5 for finalizing internal marks for 30. For award of Internal marks, 80% weightage for best mid and 20% weightage for the other mid. As the syllabus is framed for 6 units, the 1st mid examination (both Objective and Subjective) is conducted in 1-3 units and second test in 4-6 units of each subject in a semester.
- iv. The end semester examination is conducted covering the topics of all Units for 70 marks. Part A contains 7 mandator questions at Newscare from each unit (Brainstorming / Thought provoking / case study) each carrying 2 marks for a total of 14 marks.

- Part B has 6 questions (One from each Unit). The student has to answer 4 out of 6 questions in Part B and carries a weightage of 14 marks each.
- v. For practical subjects there shall be continuous evaluation during the semester for 25 internal marks and 50 end examination marks. Of the 25 marks for internal, 15 marks shall be awarded as follows: day to day work 10 and Record-5, and 10 marks to be awarded by conducting an internal laboratory test. The end examination shall be conducted by the teacher concerned and external examiner.
- vi. For the subject having design and / or drawing, (such as Engineering Graphics, Engineering Drawing, Machine Drawing) and estimation, the distribution shall be 30 marks for internal evaluation (20 marks for day to day work, and 10 marks for internal tests) and 70 marks for end examination. There shall be two internal tests in a Semester and the better of the two shall be considered for the award of marks for internal tests.
- vii. For the seminar, the student shall collect the information on a specialized topic and prepare a technical report, showing his understanding over the topic, and submit to the department, which shall be evaluated by the Departmental committee consisting of Head of the department, seminar supervisor and a senior faculty member. The seminar report shall be evaluated for 50 marks based on a PPT presentation with minimum 10 slides. There shall be no external examination for seminar.
- viii. Out of a total of 200 marks for the project work, 60 marks shall be for Internal Evaluation and 140 marks for the End Semester Examination. The End Semester Examination (Viva Voce) shall be conducted by the committee. The committee consists of an external examiner, Head of the Department and Supervisor of the Project. The evaluation of project work shall be conducted at the end of the IV year. The Internal Evaluation shall be on the basis of two seminars given by each student on the topic of his project and evaluated by an internal committee.
- ix. Laboratory marks and the internal marks awarded by the College are not final. The marks are subject to scrutiny and scaling by the University wherever felt desirable. The internal and laboratory marks awarded by the College will be referred to a Committee. The Committee shall arrive instructions factor and the marks will be scaled as per the scaling factor.

PHARMACEUTICAL TECHNOLOGY Beside: VSEZ, Duvvada, Visakhapatnam-46 The recommendations of the Committee are final and binding. The laboratory records and internal test papers shall be preserved in the respective departments as per the University norms and shall be produced to the Committees of the University as and when they ask for.

x. There shall be a Comprehensive Viva-Voce in IV year II semester. The Comprehensive Viva-Voce will be conducted by a Committee consisting of (i) Head of the Department (ii) two Senior Faculty members of the Department. The Comprehensive Viva-Voce is aimed to assess the students' understanding in various subjects he / she studied during the B.Pharm course of study. The Comprehensive Viva-Voce is valued for 100 marks by the Committee. There are no internal marks for the Comprehensive viva-voce.

3. Attendance Requirements:

- a. A student is eligible to write the University examinations if he acquires a minimum of 75% of attendance in aggregate of all the subjects.
- b. Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester may be granted by the College Academic Committee
- c. Shortage of Attendance below 65% in aggregate shall not be condoned.
- d. A student who is short of attendance in semester may seek readmission into that semester when offered within 4 weeks from the date of the commencement of class work.
- e. Students whose shortage of attendance is not condoned in any semester are not eligible to write their end semester examination of that class.
- f. A stipulated fee shall be payable towards condonation of shortage of attendance.
- g. A student will be promoted to the next semester if he satisfies the attendance requirement of the present semester and (ii) credits.
- h. If any candidate fulfills the attendance requirement in the present semester, he shall not be eligible for readmission into the same class.

4. Minimum Academic Requirements:

The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in item no. 3.



- i. A student shall be deemed to have satisfied the minimum academic requirements and earned the credits allotted to each theory or practical subject or project if he secures not less than 35% of marks in the end examination and a minimum of 40% of marks in the sum total of the internal evaluation and end examination taken together.
- ii. A student shall be promoted from first year to second year if he fulfills the minimum attendance requirement.
- iii. A student will be promoted from II year to III year if he fulfills the academic requirement of 40% of the credits up to II year I semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in II year II semester.
- iv. A student shall be promoted from III year to IV year only if he fulfils the academic requirements of 40% of the credits up to III year I semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in III year II semester.
- v. A student shall register and put up minimum attendance in all 180 credits and earn all the 180 credits. Marks obtained in all the 180 credits shall be considered for the calculation of percentage of marks.

5. Course pattern:

- 5.1 The entire course of study is for four academic years, all years on semester pattern.
- 5.2 A student, eligible to appear for the end semester examination in a subject, but absent from it or has failed in the end semester examination, may write the exam in that subject when conducted next.
- 5.3 When a student is detained for lack of credits/shortage of attendance, he may be re-admitted into the same semester / year in which he has been detained. However, the academic regulations under which he was first admitted, shall continues to be applicable to him.

6. Award of Class:

After a student has satisfied the requirements prescribed for the completion of the program and is eligible for the award of B. Pharm Degree he shall be placed in one of the following four classes:

ISTITUTE OF

PHARMACEUTICAL TECHNOLOGY Beside: VSEZ, Duwada, Visakhapatnam-46

Class Awarded	% of marks to be secured	
First Class with Distinction	70% and above	
First Class	Below 70 but not less than 60%	
Second Class	Below 60% but not less than 50%	
Pass Class	Below 50% but not less than 40%	
From the aggregate marks secured from 180 Credits.		

(The marks in internal evaluation and end examination shall be shown separately in the marks memorandum)

7. **Minimum Instruction Days:**

The minimum instruction for each semester shall be 90 clear instruction days.

8. WITHHOLDING OF RESULTS

If the student has not paid the dues, if any, to the university or if any case of indiscipline is pending against him, the result of the student will be withheld and he will not be allowed into the next semester. His degree will be withheld in such cases.

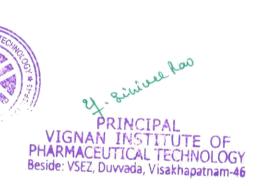
9. TRANSITORY REGULATIONS

- Discontinued or detained candidates are eligible for readmission as and when next offered.
- After the revision of the regulations, the students of the previous batches will be given two chances for passing in their failed subjects, one supplementary and the other regular. If the students cannot clear the subjects in the given two chances, they shall be given equivalent subjects as per the revised regulations which they have to pass in order to obtain the required number of credits.
- In case of transferred students from other Universities, the credits shall be transferred to JNTUK as per the academic regulations and course structure of the JNTUK.

10. General:

PHARMACEUTICAL TECHNOLOGY Where the words "he", "him" his contact of the regulations. they include "she", "her", "h

- 10.2 The academic regulation should be read as a whole for the purpose of any interpretation.
- 10.3 In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor is final.
- 10.4 The University may change or amend the academic regulations or syllabi at any time and the changes or amendments made shall be applicable to all the students with effect from the dates notified by the University.
- 10.5 The students seeking transfer to colleges affiliated to JNTUK from various other Universities/Institutions have to pass the failed subjects which are equivalent to the subjects of JNTUK, and also pass the subjects of JNTUK on their own without the right to sessional marks which the candidates have not studied at the earlier Institution.
- 10.6 The student shall undergo Industrial Training for 45 days or 200 hrs in a Pharmaceutical Industry at the end of III B.Pharm II Semester (or) IV B.Pharm II Semester and obtain the training certificate from the Industry for the purpose of registration as Pharmacist under Pharmacy Act, 1948 in the A.P State Pharmacy Council.



Academic Regulations (R16) for B.Pharm. (Lateral Entry Scheme)

Applicable for the students admitted into II year B. Pharm. (LES) from the Academic Year 2016-17 and onwards

- 1. The Students have to acquire 138 credits from II to IV year of B.Pharm program (regular) for the award of the degree.
- 2. Students, who fail to fulfil the requirement for the award of the degree in 6 Consecutive academic years from the year of admission, shall forfeit their seat.
- 3. The same attendance regulations are to be adopted as that of B.Pharm (Regular).

4. Promotion Rule:

A student shall be promoted from III year to IV year only if he fulfils the academic requirements of 40% of the credits up to III year I semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in III year II semester.

5. Award of Class:

After a student has satisfied the requirements prescribed for the completion of the program and is eligible for the award of B.Pharm Degree he shall be placed in one of the following four classes:

Class Awarded	% of marks to be secured	
First Class with	70% and above	From the
Distinction		aggregate marks
First Class	Below 70% but not less than 60%	secured from 138 Credits from II
Second Class	Below 60% but not less than 50%	year to IV year.
Pass Class	Below 50% but not less than 40%	



MALPRACTICES RULES

Disciplinary Action for / Improper Conduct in Examinations

	Nature of Malpractices / Improper conduct	Punishment
	If the candidate:	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, Cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that Semester/year. The Hall Ticket of the candidate is to be cancelled and sent to the University.
3.	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred and forfeits the seat. The performance of the original candidate who has been impersonated, shall be cancelled in all the subjects of the
VIGNAN INSTITUTE OF PHARMACEUTICAL TECHNOLOGY Beside: VSEZ, Duwada, Visakhapatnam-46		

The state of the s	
	examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
Refuses to obey the orders of the Chief Superintendent/Assistant — Superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer in charge or any person on duty in or outside the	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that
	uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks. Refuses to obey the orders of the Chief Superintendent/Assistant — Superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer in charge or any person outside the

	examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-incharge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the College campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	semester/year. The candidates also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.
7.	Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
8.	Possess any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat.
	VIGNAN INST PHARMACEUTICAL Beside: VSEZ, Duv, uga, V	PAL TTUTE OF TECHNOLOGY /isakhapatnam-46

9.	If student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat. Person (s) who do not belong to the College will be handed over to police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the candidate has appeared including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action to award suitable punishment.	

Malpractices identified by squad or special invigilators

- 1. Punishments to the candidates as per the above guidelines.
- 2. Punishment for institutions : (if the squad reports that the college is also involved in encouraging malpractices)
 - (i) A show cause notice shall be issued to the college.
 - (ii) Impose a suitable fine on the college.
 - (iii) Shifting the examination centre from the college to another college for a specific period of not less than one year.





JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA

KAKINADA-533003, Andhra Pradesh (India)
For Constituent Colleges and Affiliated Colleges of JNTUK

Ragging

Prohibition of ragging in educational institutions Act 26 of 1997

Salient Features

 \Longrightarrow

Ragging within or outside any educational institution is prohibited.

Ragging means doing an act which causes or is likely to cause Insult or Annoyance of Fear or Apprehension or Threat or Intimidation or outrage of modesty or Injury to a student

Imprisonment upto

Fine Upto

Teasing, Embarrassing & Humiliation

6 Months

Rs. 1,000/-

+

+

+

+

+

Assaulting or Using Criminal force or Criminal intimidation

Ord 1 Year

Rs. 2,000/-

Wrongfully restraining or confining or causing hurt 2 Years

Rs. 5,000/-

Causing gri evous hurt, kidnapping or Abducts or rape or committing unnatural offence

7 5 Years

Rs. 10,000/-

Causing death or abetting suicide

10 Months

Rs. 50,000/-

In Case of Emergency CALL TOLL FREE No.: 1800 - 425 - 1288

LET US MAKE JNTUK A RAGGING FREE UNIVERSITY





JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA

KAKINADA-533003, Andhra Pradesh (India)
For Constituent Colleges and Affiliated Colleges of JNTUK

Ragging

ABSOLUTELY NOT TO RAGGING

- 1. Ragging is prohibited as per Act 26 of A.P. Legislative Assembly, 1997.
- 2. Ragging entails heavy fines and/or imprisonment.
- 3. Ragging invokes suspension and dismissal from the College.
- 4. Outsiders are prohibited from entering the College and Hostel without permission.
- 5. Girl students must be in their hostel rooms by 7.00 p.m.
- 6. All the students must carry their Identity Cards and show them when demanded.
- 7. The Principal and the Wardens may visit the Hostels and inspect the rooms any time.



Jawaharlal Nehru Technological University Kakinada

For Constituent Colleges and Affiliated Colleges of INTUK

In Case of Emergency CALL TOLL FREE No. 118001-425 -1288

LET US MAKE JNTUK A RAGGING FREE UNIVERSITY

COURSE STRUCTURE

I Year – I SEMESTER

S. No.	Subject	Т	P	Credits
1	English	3 + 1		3
2	Remedial Mathematics/ Remedial	3/2 +		3/2
	Biology	1		
3	Human Anatomy & Physiology – I	3 + 1	3	
4	Dispensing Pharmacy & Ethics	3 + 1	, mak , mak	3
5	J Harmaccutical Organic Chemistry-1		3	
6 English Communications Skills Lab 3 2		2		
7	Remedial Biology Lab	A100 W100	2	0/1
8	Dispensing Pharmacy Lab	200 000	3	2
9	9 Pharmaceutical Organic Chemistry-I Lab		3	2
	Total Credits			21

I Year – II SEMESTER

S. No.	S. No. Subject T		P	Credits
1	Human Anatomy & Physiology – II	3+1	and and	3
2	Pharm. Inorganic Chemistry	3+1	***	3
3	Pharm. Organic Chemistry – II	3+1	MANN ANNO	3
4	Physical Pharmacy – I	3+1		3
5	Computer Applications & Biostatistics 3 + 1 3		3	
6 Human Anatomy & Physiology Lab 3 2		2		
7	Physical Pharmacy – I Lab	940 MIN	3	2
8	8 Computer Applications Lab		3	2
	Total Credits			21

II Year – I SEMESTER

S. No.	Subject	T	P	Credits
1	Pharmaceutical Unit Operations - I	3+1		3
2	Pharmacognosy - I	3+1	gest you	3
3	Physical Pharmacy - II	3+1	anta para	3
4	4 Pharmaceutical Microbiology 3+1		202 500	у 3
5	Environmental Science		MAN CORE	3
6	Pharmacognosy – I Lab	1074 Mass	3	2
7	Physical Pharmacy – II Lab	WIN 1879	3	2
8	Pharmaceutical Microbiology Lab	.000 000	3	2
	Total Credits		Singel	ALCONO.

II Year – II SEMESTER

S. No.	Subject	T	P	Credits
1	Pharmaceutical Unit Operations –II	3 +1		3
2	Pharmaceutical Analysis - I	3 +1		3
3	Pharmacognosy -II	3 +1		3
4	Medicinal chemistry - I	3 +1		3
5	Health Education & Pathophysiology	3 +1		3
6	Pharmaceutical Unit Operations Lab		3	2
7	Pharmaceutical Analysis – I Lab		3	2
8	Pharmacognosy –II Lab		3	2
	Total Credits			21

III Year – I SEMESTER

S. No.	Subject	T	P	Credits
1	Pharmaceutical Biochemistry	3+1	-	3
2	Medicinal Chemistry - II	3+1	_	3
3 Pharmaceutical Technology - I 3+1 -		3		
4	Pharmacology -I	3+1	_	3
5	Pharmaceutical Management	3+1	-	3
6	Pharmaceutical Biochemistry Lab		3	2
7	Pharmaceutical Technology-I Lab	-	3	2
8	8 Medicinal Chemistry Lab - 3		3	2
	Total Credits			21

III Year – II SEMESTER

S. No.	Subject	T	P	Credits
1	Pharmaceutical Technology -II	3 +1	-	4
2	Pharm. Biotechnology	3+1	-	4
3	Pharmacology - II	3+1		4
4	Medicinal Chemistry - III	3+1	-	4
5	Regulatory Affairs, IPR & Patents	3 +1	-	2
6	Pharmaceutical Technology –II Lab	-	3	2
7	Pharmacology Lab	-	3	<u>*</u> 2
8	8 Pharm. Biotechnology Lab		3	2
	Total Credits			24



PRINCIPAL
VIGNAN INSTITUTE OF
PHARMACEUTICAL TECHNOLOGY
Beside: VSEZ, Duvvada, Visakhapatnam-46

IV Year – I SEMESTER

S. No.	Subject	T	P	Credits
1	Pharmaceutical Analysis -II	3+1	4400	4
2	Bio assays & Toxicology	3+1	-	4
3	Chemistry of Natural Products	3+1	9000	4
4	Hospital & Community Pharmacy	3+1		4
5	Pharmaceutical Jurisprudence	3+1	-	3
6	Pharmaceutical Analysis – II Lab		3	2
7	Bio assays& Toxicology Lab	-	3	2
8	Chemistry of Natural Products		3	2
9	Project Commencement		***	прох
	Total Credits			25

IV Year – II SEMESTER

S. No.	Subject	Т	P	Credit s
1	Biopharmaceutics & 3+1 -		4	
2	Clinical Pharmacy Therapeutics		3	
3	Controlled release & Novel Drug Delivery Systems	3 +1	-	4
4	Quality Assurance, GMP, GLP	3+1	3	3
5	5 Biopharmaceutics & - 3 Pharmacokinetics Lab		2	
6	Project Work	**	-	4
7	Project Seminar	-	-	4
8	8 Comprehensive Viva		658	2
	Total Credits			26



VIGNAN INSTITUTE OF PHARMACEUTICAL TECHNOLOGY Beside: VSEZ, Duwada, Visakhapatnam-46

ACADEMIC REGULATIONS COURSE STRUCTURE AND DETAILED SYLLABUS

B.PHARMACY

For

B.PHARMACY FOUR YEAR DEGREE COURSE

(Applicable for the batches admitted from 2013-14)





PRINCIPAL
VIGNAN INSTITUTE OF
HARMACEUTICAL TECHNOLOGY

JAWAHARLAL NEHRU TECHNOLOGICHAPLINAM-4 UNIVERSITY KAKINADA

KAKINADA – 533003, ANDHRA PRADESH, INDIA.

Academic Regulations (R13) for B. Pharm. (Regular)

Applicable for the students of B. Pharm. (Regular) from the Academic Year 2013-14 onwards

1. Award of B. Pharm. Degree:

A student will be declared eligible for the award of the B.Pharm Degree if he fulfils the following academic regulations:

- 1.1 Pursued a course of study for not less than four academic years and not more than eight academic years.
- 1.2 Register for all the 180 credits and secure all the 180 credits.

2. <u>Distribution and Weightage of Marks:</u>

- i. The performance of a student in each semester shall be evaluated subject wise with a maximum of 100 marks for theory and 75 marks for practical subject. The project work shall be evaluated for 200 marks.
- ii. For theory subjects the distribution shall be 30 marks for Internal Evaluation and 70 marks for the End-Examination.
- For theory subjects, during the semester there shall be 2 tests. The iii. weightage of Internal marks for 30 consists of Descriptive - 15. Assignment - 05 (Theory, Design, Analysis, Simulation, Algorithms, Drawing, etc. as the case may be) Objective -10 (Conducted at College level with 20 Multiple choice question with a weightage of ½ Mark each). The objective examination is for 20 minutes duration. The subjective examination is for 90 minutes duration conducted for 15 marks. Each subjective type test question paper shall contain 3 questions and all questions need to be answered. The Objective examination conducted for 10 marks and subjective examination conducted for 15 marks are to be added to the assignment marks of 5 for finalizing internal marks for 30. The best of the two tests will be taken for internal marks. As the syllabus is framed for 6 units, the 1st mid examination (both Objective and Subjective) is conducted in 1-3 units and second test in 4-6 units of each subject in a semester.
- iv. The end semester examination is conducted covering the topics of all Units for 70 marks. Part A contains a mandatory question (Brainstorming / Thought provoking / case study) for 22 marks. Part B

has 6 questions (One from each Unit). The student has to answer 3 out of 6 questions in Part – B and carries a weightage of 16 marks each.

- v. For practical subjects there shall be continuous evaluation during the semester for 25 internal marks and 50 end examination marks. Of the 25 marks for internal, 15 marks shall be awarded as follows: day to day work 10 and Record-5, and 10 marks to be awarded by conducting an internal laboratory test. The end examination shall be conducted by the teacher concerned and external examiner.
- vi. For the subject having design and / or drawing, (such as Engineering Graphics, Engineering Drawing, Machine Drawing) and estimation, the distribution shall be 30 marks for internal evaluation (20 marks for day to day work, and 10 marks for internal tests) and 70 marks for end examination. There shall be two internal tests in a Semester and the better of the two shall be considered for the award of marks for internal tests.
- vii. For the seminar, the student shall collect the information on a specialized topic and prepare a technical report, showing his understanding over the topic, and submit to the department, which shall be evaluated by the Departmental committee consisting of Head of the department, seminar supervisor and a senior faculty member. The seminar report shall be evaluated for 50 marks. There shall be no external examination for seminar.
- viii. Out of a total of 200 marks for the project work, 60 marks shall be for Internal Evaluation and 140 marks for the End Semester Examination. The End Semester Examination (Viva Voce) shall be conducted by the committee. The committee consists of an external examiner, Head of the Department and Supervisor of the Project. The evaluation of project work shall be conducted at the end of the IV year. The Internal Evaluation shall be on the basis of two seminars given by each student on the topic of his project and evaluated by an internal committee.
- ix. Laboratory marks and the internal marks awarded by the College are not final. The marks are subject to scrutiny and scaling by the University wherever felt desirable. The internal and laboratory marks awarded by VIGNAN Ithe College will be referred to a Committee. The Committee shall arrive PHARMACEUTATA Scaling factor and the marks will be scaled as per the scaling factor. Beside: VSEZ, Duwada, Visakhapatnam-46

The recommendations of the Committee are final and binding. The laboratory records and internal test papers shall be preserved in the respective departments as per the University norms and shall be produced to the Committees of the University as and when they ask for.

x. There shall be a Comprehensive Viva-Voce in IV year II semester. The Comprehensive Viva-Voce will be conducted by a Committee consisting of (i) Head of the Department (ii) two Senior Faculty members of the Department. The Comprehensive Viva-Voce is aimed to assess the students' understanding in various subjects he / she studied during the B.Pharm course of study. The Comprehensive Viva-Voce is valued for 100 marks by the Committee. There are no internal marks for the Comprehensive viva-voce.

3. Attendance Requirements:

- a. A student is eligible to write the University examinations if he acquires a minimum of 75% of attendance in aggregate of all the subjects.
- b. Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester may be granted by the College Academic Committee
- c. Shortage of Attendance below 65% in aggregate shall not be condoned.
- d. A student who is short of attendance in semester may seek readmission into that semester when offered within 4 weeks from the date of the commencement of class work.
- e. Students whose shortage of attendance is not condoned in any semester are not eligible to write their end semester examination of that class.
- f. A stipulated fee shall be payable towards condonation of shortage of attendance.
- g. A student will be promoted to the next semester if he satisfies the attendance requirement of the present semester and (ii) credits.
- h. If any candidate fulfills the attendance requirement in the present semester, he shall not be eligible for readmission into the same class.

4. Minimum Academic Requirements:

The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in item no. 3.

Beside: VSEZ, Duwada, Visakhapatnam-46

- i. A student shall be deemed to have satisfied the minimum academic requirements and earned the credits allotted to each theory or practical subject or project if he secures not less than 35% of marks in the end examination and a minimum of 40% of marks in the sum total of the internal evaluation and end examination taken together.
- ii. A student shall be promoted from first year to second year if he fulfills the minimum attendance requirement.
- iii. A student will be promoted from II year to III year if he fulfills the academic requirement of 40% of the credits up to II year I semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in II year II semester.
- iv. A student shall be promoted from III year to IV year only if he fulfils the academic requirements of 40% of the credits up to III year I semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in III year II semester.
- v. A student shall register and put up minimum attendance in all 180 credits and earn all the 180 credits. Marks obtained in all the 180 credits shall be considered for the calculation of percentage of marks.

5. Course pattern:

- 5.1 The entire course of study is for four academic years, all years on semester pattern.
- 5.2 A student, eligible to appear for the end semester examination in a subject, but absent from it or has failed in the end semester examination, may write the exam in that subject when conducted next.
- 5.3 When a student is detained for lack of credits/shortage of attendance, he may be re-admitted into the same semester / year in which he has been detained. However, the academic regulations under which he was first admitted, shall continues to be applicable to him.

6. Award of Class:

After a student has satisfied the requirement opprescribed for the completion of the programidand respectively less for the award of B. Pharm Degree he shall be placed in one of the following four classes:

Class Awarded	% of marks to be secured		
First Class with Distinction	70% and above		
First Class	Below 70 but not less than 60%		
Second Class	Below 60% but not less than 50%		
Pass Class	Below 50% but not less than 40%		
From the aggregate marks secured from 180 Credits.			

(The marks in internal evaluation and end examination shall be shown separately in the marks memorandum)

7. Minimum Instruction Days:

The minimum instruction for each semester shall be 90 clear instruction days.

8. WITHHOLDING OF RESULTS

If the student has not paid the dues, if any, to the university or if any case of indiscipline is pending against him, the result of the student will be withheld and he will not be allowed into the next semester. His degree will be withheld in such cases.

9. TRANSITORY REGULATIONS

- 9.1 Discontinued or detained candidates are eligible for readmission as and when next offered.
- 9.2 After the revision of the regulations, the students of the previous batches will be given two chances for passing in their failed subjects, one supplementary and the other regular. If the students cannot clear the subjects in the given two chances, they shall be given equivalent subjects as per the revised regulations which they have to pass in order to obtain the required number of credits.
- 9.3 In case of transferred students from other Universities, the credits shall be transferred to JNTUK as per the academic regulations and course structure of the JNTUK.

10. General:

Where the words "he", "him", Vhist Ancette in Ithe free flations, they include "she", "her", "here solde: VSEZ, Duwada, Visakhapatnam 46

- 10.2 The academic regulation should be read as a whole for the purpose of any interpretation.
- 10.3 In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor is final.
- 10.4 The University may change or amend the academic regulations or syllabi at any time and the changes or amendments made shall be applicable to all the students with effect from the dates notified by the University.
- 10.5 The students seeking transfer to colleges affiliated to JNTUK from various other Universities/Institutions have to pass the failed subjects which are equivalent to the subjects of JNTUK, and also pass the subjects of JNTUK on their own without the right to sessional marks which the candidates have not studied at the earlier Institution.

PRINCIPAL
VIGNAN INSTITUTE OF
PHARMACEUTICAL TECHNOLOGY
Beside: VSEZ, Duwada, Visakhapatnam-46



Academic Regulations (R13) for B. Pharm. (Lateral Entry Scheme)

Applicable for the students admitted into II year B. Pharm. (LES) from the Academic Year 2014-15 and onwards

- 1. The Students have to acquire 138 credits from II to IV year of B.Pharm program (regular) for the award of the degree.
- 2. Students, who fail to fulfil the requirement for the award of the degree in 6 Consecutive academic years from the year of admission, shall forfeit their seat.
- 3. The same attendance regulations are to be adopted as that of B.Pharm (Regular).

4. Promotion Rule:

A student shall be promoted from III year to IV year only if he fulfils the academic requirements of 40% of the credits up to III year I semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in III year II semester.

5. Award of Class:

After a student has satisfied the requirements prescribed for the completion of the program and is eligible for the award of B.Pharm Degree he shall be placed in one of the following four classes:

Class Awarded	% of marks to be secured	
First Class with Distinction		
First Class	Below 70% but not less than 60%	secured from 138 Credits from II
Second Class	Class Below 60% but not less than 50%	
Pass Class	Below 50% but not less than 40%	, ,





MALPRACTICES RULES

Disciplinary Action for / Improper Conduct in Examinations

	Nature of Malpractices / Improper conduct	Punishment					
	If the candidate:						
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, Cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.					
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.					
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that Semester/year. The Hall Ticket of the candidate is to be cancelled and sent to the University.					
3.	Impersonates any other candidate in connection with the examination. PRINCIPAL VIGNAN INSTITUTE OF PHARMACEUTICAL TECHNOLOGY PHARMACEUTICAL TECHNOL	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred and forfeits the seat. The performance of the original candidate who has been impersonated, shall be cancelled in all the subjects of the					

		examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance that subject. PRINCIPAL
6.	Refuses to obey the orders of the Chief Superintendent/Assistant Bes Superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the	the case of students of the cone deapon we deliber 7 pshalla, beach expelled 6 from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that

semester/year. The candidates also examination hall of any injury to his person or to any of his relations are debarred and forfeit their seats. whether by words, either spoken or In case of outsiders, they will be written or by signs or by visible handed over to the police and a representation, assaults the officer-inpolice case is registered against charge, or any person on duty in or them. outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the College campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination. Expulsion from the examination Leaves the exam hall taking away answer script or intentionally tears of cancellation and performance in that subject and all the script or any part thereof inside or outside the examination hall. the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for remaining examinations of 7. subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. Possess any lethal weapon or firearm Expulsion from the examination in the examination hall. and cancellation of performance in that subject and all other subjects the candidate has already appeared including practical 8. examinations and project work and shall not be permitted for remaining examinations of PHARMACEUTICAL TECHNOL subjects of that semester/year. The Beside: VSEZ, Duvvada, Visakhapatn candidate is also debarred and forfeits the seat.

9.	If student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat. Person (s) who do not belong to the College will be handed over to police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the candidate has appeared including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action to award suitable punishment.	

Malpractices identified by squad or special invigilators

- 1. Punishments to the candidates as per the above guidelines.
- 2. Punishment for institutions : (if the squad reports that the college is also involved in encouraging malpractices)
 - (i) A show cause notice shall be issued to the college.
 - (ii) Impose a suitable fine on the college.
 - (iii) Shifting the examination centre from the college to another college for a specific period of not less than one year.





JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA

KAKINADA-533003, Andhra Pradesh (India) For Constituent Colleges and Affiliated Colleges of JNTUK



Prohibition of ragging in educational institutions Act 26 of 1997

Salient Features

Ragging within or outside any educational institution is prohibited.

Ragging means doing an act which causes or is likely to cause Insult or Annoyance of Fear or Apprehension or Threat or Intimidation or outrage of modesty or Injury to a student

Imprisonment upto

Fine Upto

Teasing, Embarrassing & Humiliation

6 Months

+

+

+

+

Rs. 1,000/-

Assaulting or Using Criminal force or Criminal intimidation

1 Year

Rs. 2,000/-

Wrongfully restraining or confining or causing hurt

2 Years

Rs. 5,000/-

Causing grievous hurt, kidnapping or Abducts or rape or committing unnatural offence

5 Years

Rs. 10,000/-

Causing death or abetting suicide

10 Months

Rs. 50,000/-

In Case of Emergency CALL TOLL FREE No.: 1800 - 425 - 1288

LET US MAKE INTUK A RAGGING FREE UNIVERSITY

VIGNAN INSTITUTE OF PHARMACEUTICAL TECHNOLOGY Beside: VSEZ, Duvvada, Visakhapatnam-46





JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA

KAKINADA-533003, Andhra Pradesh (India) For Constituent Colleges and Affiliated Colleges of JNTUK



ABSOLUTELY NOT TO RAGGING

- 1. Ragging is prohibited as per Act 26 of A.P. Legislative Assembly, 1997.
- 2. Ragging entails heavy fines and/or imprisonment.
- 3. Ragging invokes suspension and dismissal from the College.
- 4. Outsiders are prohibited from entering the College and Hostel without permission.
- 5. Girl students must be in their hostel rooms by 7.00 p.m.
- 6. All the students must carry their Identity Cards and show them when demanded.
- 7. The Principal and the Wardens may visit the Hostels and inspect the rooms any time.



Jawaharlal Nehru Technological University Kakinada

For Constituent Colleges and Affiliated Colleges of JNTUK

In Case of Emergency CALL TOUGHREEIN6.T. 1800 - 425 - 1288

LET US MAKE JNTUK A RAGGING FREE UNIVERSITY

[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.



PRINCIPAL
VIGNAN INSTITUTE OF
PHARMACEUTICAL TECHNOLOGY
Beside: VSEZ, Duvvada, Visakhapatnam-46



साप्ताहिक/WEEKLY

प्राधिकार से प्रकाशित PUBLISHED BY AUTHORITY

ਲਂ∘ 19] No. 19] नई दिल्ली, शनिवार, मई 10—मई 16, 2008 (वैशाख 20, 1930)

NEW DELHI, SATURDAY, MAY 10-MAY 16, 2008 (VAISAKHA 20, 1930)

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके। (Separate paging is given to this Part in order that it may be filed as a separate compilation)

> भाग III—खण्ड 4 [PART III—SECTION 4]

[सांविधिक निकायों द्वारा जारी की गई विविध अधिसूचनाएं जिसमें कि आदेश, विज्ञापन और सूचनाएं सम्मिलित हैं] [Miscellaneous Notifications including Notifications, Orders, Advertisements and Notices issued by Statutory Bodies]

भारतीय रिजर्व बैंक

मुंबई-400001, दिनांक 9 अप्रैल 2008

सदर्भ: बैंपविवि. सं. आईबीडी.-14241/23.13.048/2007-08--भारतीय रिज़र्व बैंक अधिनियम, 1934 (1934 का 2) की धारा 42 की उप-धारा (6) के खण्ड (ग) के अनुसरण में भारतीय रिज़र्व बैंक इसके द्वारा निदेश देता है कि उक्त अधिनियम की दूसरी अनुसूची में निम्नलिखित परिवर्तन किये जाएं:--

''अरब बांगलादेश बैंक लिमिटेड'' शब्दों के स्थान पर '' एबी ब्रैंक लिमिटेड'' शब्द होंगे।

PRINCIPAL
VIGNAN INSTITUTE OF
PHARMACEUTICAL TECHNOLOGY
Beside: VSEZ, Duvvada, Visakhapatnam-46

आनन्द सिन्हा कार्यपालक निदेशक

CHAPTER-II

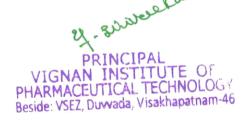
- 3. Duration of the course.
 - a) Pharm.D: The duration of the course shall be six academic years (five years of study and one year of internship or residency) full time with each academic year spread over a period of not less than two hundred working days. The period of six years duration is divided 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	1010	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	entr	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	, man	444
3.5	Medicinal Chemistry	3	3	1
3.6	Pharmaceutical Formulations	2	3	1
	Total hours	16	15	5 = 36



PRINCIPAL
VIGNAN INSTITUTE OF
PHARMACEUTICAL TECHNOLOGY
Beside: VSEZ, Duwada, Visakhapatnam-46

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	and the second s	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	ann ann	1
5.2	Pharmacoepidemiology and Pharmacoeconomics	3	50	1
5.3	Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	2	NA	1
5.4	Clerkship *	-	**	1
5.5	Project work (Six Months)	-	20	
	Total hours	8	20	4 = 32

^{*} Attending ward rounds on daily basis.



PRINCIPAL
VIGNAN INSTITUTE OF
PHARMACEUTICAL TECHNOLOGY
Beside: VSEZ, Duvvada, Visakhapatnam-46

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	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 = 12

* for Biology.

Second Year examination:

S.No.	Name of Subject	Maximu	Maximum marks for Theory			Maximum marks for Practicals		
		Examination	Sessional	Total	Examination	Sessional	Total	
2.1	Pathophysiology	70	30	100	•	e ·	**	
2.2	Pharmaceutical Microbiology	70	30	100	70	30	100	
2.3	Pharmacognosy & Phytopharmaceuticals	70	30	100	70	30	100	
2.4	Pharmacology-I	70	30	100	-	-		
2.5	Community Pharmacy	70	30	100	-	**	-	
2.6	Pharmacotherapeutics-I	70	30	100	70	30	100	
				600			300 = 900	

Third Year examination:

S.No.	Name of Subject	Maximum marks for Theory			Maximum marks for Practicals		
		Examination	Sessional	Total	Examination	Sessional	Total
3.1	Pharmacology-II	70	30	100	70	30	100
3.2	Pharmaceutical Analysis	70	30	100	70	30	100
3.3	Pharmacotherapeutics-II	70	30	100	70	30	100
3.4	Pharmaceutical Jurisprudence	70	30	100			94
3.5	Medicinal Chemistry	70	30	100	70	30	100
3.6	Pharmaceutical Formulations	70	30	100	70	30	100
				600			500 = 1100

Fourth Year examination:

S.No.	Name of Subject	Maximum marks for Theory		Maximur	Maximum marks for Practicals		
		Examination	Sessional	Total	Examination	Sessional	Total
4.1	Pharmacotherapeutics-III	70	30	100	70	30	100
4.2	Hospital Pharmacy	70	30	100	70	30	100
4.3	Clinical Pharmacy	70	30	100	70	30	100
4.4	Biostatistics & Research Methodology	70	30	100	**	440	**
4.5	Biopharmaceutics & Pharmacokinetics	70	30	100	70	30	100
4.6	Clinical Toxicology	70	30	100	-	-	-
				600			400 = 100



Fifth Year examination:

S.No.	Name of Subject	Maximum marks for Theory		Maximum marks for Practicals			
		Examination	Sessional	Total	Examination	Sessional	Total
5.1	Clinical Research	70	30	100	**		M4
5.2	Pharmacoepidemiology and Pharmacoeconomics	70	30	100	**	**	Naga .
5.3	Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	70	30	100	a	-	200
5.4	Clerkship *	**		-	70	30	100
5.5	Project work (Six Months)	**	-		100**	-	100
				300			200 = 50

^{*} Attending ward rounds on daily basis.

70 marks - Thesis work

- 11. Eligibility for appearing Examination.— Only such students who produce certificate from the Head of the Institution in which he or she has undergone the Pharm.D. or as the case may be, the Pharm.D. (Post Baccalaureate) course, in proof of his or her having regularly and satisfactorily undergone the course of study by attending not less than 80% of the classes held both in theory and in practical separately in each subject shall be eligible for appearing at examination.
- 12. Mode of examinations.— (1) Theory examination shall be of three hours and practical examination shall be of four hours duration.
 - (2) A Student who fails in theory or practical examination of a subject shall re-appear both in theory and practical of the same subject.
 - (3) Practical examination shall also consist of a viva -voce (Oral) examination.
 - (4) Clerkship examination Oral examination shall be conducted after the completion of clerkship of students. An external and an internal examiner will evaluate the student. Students may be asked to present the allotted medical cases followed by discussion. Students' capabilities in delivering clinical pharmacy services, pharmaceutical care planning and knowledge of therapeutics shall be assessed.
- 13. Award of sessional marks and maintenance of records.— (1) A regular record of both theory and practical class work and examinations conducted in an institution imparting training for Pharm.D. or as the case may be, Pharm.D. (Post Baccalaureate) course, shall be maintained for each student in the institution and 30 marks for each theory and 30 marks for each practical subject shall be allotted as sessional.
 - (2) There shall be at least two periodic sessional examinations during each academic year and the highest aggregate of any two performances shall form the basis of calculating sessional marks.
 - (3) The sessional marks in practicals shall be allotted on the following basis:-
 - (i) Actual performance in the sessional examination

(20 marks);

(ii) Day to day assessment in the practical class work, promptiness wive-voce record maintenance, etc.

(10 marks).



^{** 30} marks - viva-voce (oral)

- 14. Minimum marks for passing examination.— A student shall not be declared to have passed examination unless he or she secures at least 50% marks in each of the subjects separately in the theory examinations, including sessional marks and at least 50% marks in each of the practical examinations including sessional marks. The students securing 60% marks or above in aggregate in all subjects in a single attempt at the Pharm.D. or as the case may be, Pharm. D. (Post Baccalaureate) course examination shall be declared to have passed in first class. Students securing 75% marks or above in any subject or subjects shall be declared to have passed with distinction in the subject or those subjects provided he or she passes in all the subjects in a single attempt.
- 15. Eligibility for promotion to next year.— All students who have appeared for all the subjects and passed the first year annual examination are eligible for promotion to the second year and, so on. However, failure in more than two subjects shall debar him or her from promotion to the next year classes.
- 16. Internship.— (1) Internship is a phase of training wherein a student is expected to conduct actual practice of pharmacy and health care and acquires skills under the supervision so that he or she may become capable of functioning independently.
 - (2) Every student has to undergo one year internship as per Appendix-C to these regulations.
- 17. Approval of examinations.— Examinations mentioned in regulations 10 to 12 and 14 shall be held by the examining authority hereinafter referred to as the university, which shall be approved by the Pharmacy Council of India under sub-section (2) of section 12 of the Pharmacy Act, 1948. Such approval shall be granted only if the examining authority concerned fulfills the conditions as specified in Appendix–D to these regulations.
- 18. Certificate of passing examination.— Every student who has passed the examinations for the Pharm.D. (Doctor of Pharmacy) or Pharm.D. (Post Baccalaureate) (Doctor of Pharmacy) as the case may be, shall be granted a certificate by the examining authority.



APPENDIX-B

(See regulation 9) CONDITIONS TO BE FULFILLED BY THE ACADEMIC TRAINING INSTITUTION

- 1) Any authority or institution in India applying to the Pharmacy Council of India for approval of courses of study for Pharm.D. and Pharm.D. (Post Baccalaureate) under sub-section (1) of section 12 of the Pharmacy Act, 1948 shall comply with the infrastructural facilities as prescribed by the Pharmacy Council of India from time to
- 2) Pharm.D. and Pharm.D. (Post Baccalaureate) programmes shall be conducted only in those institutions which
 - a) are approved by the Pharmacy Council of India for B.Pharm course as provided under section 12 of the Pharmacy Act, 1948;
 - b) have 300 bedded hospital attached to it.

(i) Hospital Details

- 1. Institution with their own hospital of minimum 300 beds.
- Teaching hospital recognised by the Medical Council of India or University, or a Government hospital not below the level of district headquarter hospital with 300 beds with clearly defined Memorandum of Understanding including housing pharmacy practice department with minimum carpet area of 30 square feet per student along with consent to provide the professional manpower to support the programme.
- 3. Corporate type hospital with minimum 300 beds with clearly defined Memorandum of Understanding including housing pharmacy practice department with minimum carpet area of 30 square feet per student along with consent to provide the professional manpower to support the programme.
- 4. Number of institutions which can be attached to one hospital shall be restricted by the student pharmacist to bed ratio of 1:10.

(ii) Speciality

- a) Tertiary care hospitals are desirable
- b) Medicine[compulsory], and any three specialization of the following
 - 1. Surgery
 - 2. Pediatrics
 - 3. Gynecology and obstetrics
 - 4. Psychiatry
 - 5. Skin and VD
 - 6. Orthopedics

(iii)Location of the Hospital

VIGNAN INSTITUTE OF Within the same limits of Copposation Total unicipality Campus with Medical Faculty involvement as adjunct Pacting, Visakhapatnam-46

3) TEACHING STAFF REQUIREMENT

- i) Staff Pattern: All faculty shall be full time. However part time perceptors in hospital shall be allowed.
- ii) Subject wise specialisation of the Teaching Staff:

S.No.	Subject	Specialisation required		
1.	Pharmacy Practice	M.Pharm in Pharmacy Practice or Pharmacology or Pharmaceutics.		
2.	Human Anatomy &	M.Pharm in Pharmacology or Pharmacy		
	Physiology	practice		
3.	Pharmaceutics	M.Pharm in Pharmaceutics		
	(Dispensing & General Pharmacy)			
4.	Pharmacognosy-I	M.Pharm in Pharmacognosy		
5.	Pharmaceutical Organic Chemistry-I	M.Pharm in Pharmaceutical chemistry or Pharmaceutical Analysis or Quality assurance or Bulk Drug		
6.	Pharmaceutical Inorganic Chemistry	M.Pharm in Pharmaceutical chemistry or Pharmaceutical Analysis or Quality assurance or Bulk Drug		
7.	Pharmaceutical	M.Pharm in Pharmaceutics or		
0	microbiology	Pharmaceutical Biotechnology		
8.	Pathophysiology	M.Pharm Pharmacy practice or Pharmacology		
9.	Applied Biochemistry &	M.Pharm in Pharmacology or Pharmacy		
'	Clinical Chemistry	practice or Pharmaceutical chemistry		
10.	Pharmacology-I	M.Pharm in Pharmacology or Pharmacy practice		
11.	Pharmaceutical Jurisprudence	M.Pharm in Pharmaceutics		
12.	Pharmacology-II	M.Pharm in Pharmacology or Pharmacy practice		
13.	Pharmaceutical Dosage Forms	M.Pharm in Pharmaceutics or Industrial Pharmacy		
14.	Pharmacotherapeutics –I, II and III	M.Pharm Pharmacy practice or Pharmacology		
15.	Community Pharmacy	M.Pharm in Pharmacy practice or Pharmacology or Pharmaceutics		
16.	Hospital Pharmacy	M.Pharm in Pharmacy practice or Pharmacology or Pharmaceutics		
17.	Clinical Pharmacy	M.Pharm in Pharmacy practice		
18.	Computer Science or Computer Application in pharmacy	MCA		
19.	Mathematics	M.Sc. (Maths)		



iii) Teaching Staff:

Department/Division	Name of the post	No.
Department of Pharmaceutics	Professor	1
	Asst. Professor	1
	Lecturer	2
Department of Pharmaceutical	Professor	1
Chemistry	Asst. Professor	1
(Including Pharmaceutical	Lecturer	3
Analysis)		
Department of Pharmacology	Professor	1
	Asst. Professor	1
	Lecturer	2
Department of Pharmacognosy	Professor	1
	Asst. Professor	1
	Lecturer	1
Department of Pharmacy	Professor	1
Practice	Asst. Professor	2
	Lecturer	3

iv) Prescribed qualifications and experience for Professor, Assistant Professor, Lecturer and others:

Sl. No.	CADRE	QUALIFICATIONS	EXPERIENCE
1.	Lecturer	i) Basic degree in pharmacy (B.Pharm).	No minimum requirement.
		ii) Registration as a pharmacist under the Pharmacy Act.	
		iii) First Class Master's degree in appropriate branch of specialization in Pharmacy (M.Pharm)	
2.	Assistant Professor	i) Basic degree in pharmacy (B.Pharm).ii) Registration as a pharmacist under the Pharmacy Act.	Three years experience in Teaching or Research at the level of Lecturer or equivalent.
		iii) Master's degree in appropriate branch of specialization in Pharmacy (M.Pharm)	p
			MARMACEUT

		iv) Ph.D. degree (with First Class degree either at Bachelor's or Master's level) in the appropriate branch of specialization in Pharmacy.			
3.	Professor	i) Basic degree in pharmacy (B.Pharm).ii) Registration as a	i) Ten years experience in Teaching or Research.		
		pharmacist under the Pharmacy Act.	ii) Out of which five years must be as Assistant Professor.		
		iii) Master's degree in appropriate branch of specialization in Pharmacy (M.Pharm).			
W. Carrell	of the later of th	iv) Ph.D. degree (with first Class either at Bachelor's or Master's level) in appropriate branch of specialization in Pharmacy.			
4.	Director or Principal	i) Basic degree in pharmacy (B.Pharm).	i) Fifteen years experience in Teaching or Research.		
	or Head of institute	ii) Registration as a pharmacist under the Pharmacy Act.	ii) Out of which five years must be as Professor or above in Pharmacy.		
		iii) Master's degree in appropriate branch of specialization in Pharmacy (M.Pharm)	Desirable: Administrative experience in responsible position.		
		iv) Ph.D. degree (with first Class degree either at Bachelor's or Master's level in the appropriate branch of specialization in Pharmacy.	The maximum age for holding the post shall be 65 years.		

Note: If a class or division is not awarded at Master's level, a minimum of 60% marks in aggregate or equivalent cumulative grade point average shall be considered equivalent to first class or division, as the case may be.



v) Workload of Faculty:

Professor – 8 hrs. per week

Assistant Professor – 12 hrs. per week

Lecturers - 16 hrs. per week

vi) Training of Pharmacy Practice Faculty:

a) Teaching staff will be trained as per the module prescribed by the Central Council.

b) Duration of training

Minimum 3 months.

c) Training sites

Institutions running pharmacy practice or

Programmes for atleast five years.

d) Trainer

- Professor or Assistant Professor with

minimum of five years of clinical pharmacy

teaching and practice experience.

4) NON-TEACHING STAFF:

Sl.No.	Designation	Required (Minimum)	Required Qualification
1	Laboratory Technician	1 for each Dept	D. Pharm
2	Laboratory Assistants or Laboratory Attenders	1 for each Lab (minimum)	SSLC
3	Office Superintendent	1	Degree
4	Accountant	1	Degree
5	Store keeper	1	D.Pharm or a Bachelor degree recognized by a University or institution.
6	Computer Data Operator	1	BCA or Graduate with Computer Course
7	Office Staff I	1	Degree
8	Office Staff II	2	Degree
9	Peon	2	SSLC
10	Cleaning personnel	Adequate	do se de
11	Gardener	Adequate	900 MM MM

5) ACCOMMODATION:

Suitable and sufficient accommodation with adequate ventilation, lighting and other hygienic conditions should be provided to the rooms for Principal or the Head of the department, office, class rooms, library, staff, staff common room, students common room, museum, laboratories, stores, etc.

At least two lecture halls along with eight laboratories as specified below should be provided for: —

1.	Pharmaceutics and Pharmacokinetics Lab	-	2
2.	Life Science (Pharmacology, Physiology, Pathophysiology)		2
3.	Phytochemistry or Pharmaceutical Chemistry		2
4.	Pharmacy Practice	**	2
		-	
		Total =	8

In addition to the laboratories, balance room, aseptic room or cabinet, animal house and a machine room shall also be provided.

Floor area of the laboratory should not be less than 30 square feet per student required to work in the laboratory at any given time subject to a minimum of 750 square feet.

Laboratories should be fitted and constructed in a manner that these can be kept reasonably clean. Gas and water fittings, shelves, fuming cupboards be provided wherever necessary.

6. EQUIPMENT AND APPARATUS:

Department wise list of minimum equipments

A. DEPARTMENT OF PHARMACOLOGY:

Name	Minimum required Nos.
Microscopes	15
Haemocytometer with Micropipettes	20
Sahli's haemocytometer	20
Hutchinson's spirometer	01
Spygmomanometer	05
Stethoscope	05
Permanent Slides for various tissues	One pair of each tissue
	Organs and endocrine glands
	One slide of each organ system
Models for various organs	One model of each organ system
Specimen for various organs and	One model for each organ
systems	system
Skeleton and bones	One set of skeleton and one
	spare bone
	Microscopes Haemocytometer with Micropipettes Sahli's haemocytometer Hutchinson's spirometer Spygmomanometer Stethoscope Permanent Slides for various tissues Models for various organs Specimen for various organs and systems



Models 12 Muscle electrodes 13 Lucas moist chamber 14 Myographic lever 15 Stimulator 16 Centrifuge 17 Digital Balance 18 Physical /Chemical Balance 19 Sherrington's Kymograph Machine or Polyrite 20 Sherrington Drum 21 Perspex bath assembly (single unit) 22 Aerators 23 Computer with LCD 24 Software packages for experiment 25 Standard graphs of various drugs O1 O1 O1 O1 O1 O1 O1 O1 O1 O	
13 Lucas moist chamber 14 Myographic lever 15 Stimulator 16 Centrifuge 17 Digital Balance 18 Physical /Chemical Balance 19 Sherrington's Kymograph Machine or Polyrite 20 Sherrington Drum 21 Perspex bath assembly (single unit) 22 Aerators 10 23 Computer with LCD 24 Software packages for experiment 20 In Myographic In	
14 Myographic lever 01 15 Stimulator 01 16 Centrifuge 01 17 Digital Balance 01 18 Physical /Chemical Balance 01 19 Sherrington's Kymograph Machine or Polyrite 10 20 Sherrington Drum 10 21 Perspex bath assembly (single unit) 10 22 Aerators 10 23 Computer with LCD 01 24 Software packages for experiment 01	
15 Stimulator 01 16 Centrifuge 01 17 Digital Balance 01 18 Physical /Chemical Balance 01 19 Sherrington's Kymograph Machine or Polyrite 10 20 Sherrington Drum 10 21 Perspex bath assembly (single unit) 10 22 Aerators 10 23 Computer with LCD 01 24 Software packages for experiment 01	
16 Centrifuge 01 17 Digital Balance 01 18 Physical /Chemical Balance 01 19 Sherrington's Kymograph Machine or Polyrite 10 20 Sherrington Drum 10 21 Perspex bath assembly (single unit) 10 22 Aerators 10 23 Computer with LCD 01 24 Software packages for experiment 01	
17Digital Balance0118Physical /Chemical Balance0119Sherrington's Kymograph Machine or Polyrite1020Sherrington Drum1021Perspex bath assembly (single unit)1022Aerators1023Computer with LCD0124Software packages for experiment01	
18Physical /Chemical Balance0119Sherrington's Kymograph Machine or Polyrite1020Sherrington Drum1021Perspex bath assembly (single unit)1022Aerators1023Computer with LCD0124Software packages for experiment01	
19 Sherrington's Kymograph Machine or Polyrite 20 Sherrington Drum 21 Perspex bath assembly (single unit) 22 Aerators 23 Computer with LCD 24 Software packages for experiment 10 10 10 10 10 10 10 10 10 10 10 10 10	
Polyrite 20 Sherrington Drum 10 21 Perspex bath assembly (single unit) 10 22 Aerators 10 23 Computer with LCD 24 Software packages for experiment 01	
20Sherrington Drum1021Perspex bath assembly (single unit)1022Aerators1023Computer with LCD0124Software packages for experiment01	
21Perspex bath assembly (single unit)1022Aerators1023Computer with LCD0124Software packages for experiment01	
22Aerators1023Computer with LCD0124Software packages for experiment01	
23 Computer with LCD 01 24 Software packages for experiment 01	
24 Software packages for experiment 01	
25 Standard graphs of various drugs Adequate number	
Statistical Braphis of Various diags	
26 Actophotometer 01	
27 Rotarod 01	
28 Pole climbing apparatus 01	
29 Analgesiometer (Eddy's hot plate and 01	
radiant heat methods)	
30 Convulsiometer 01	
31 Plethysmograph 01	
32 Digital pH meter 01	

S.No	Name	Minimum required Nos.
1	Folin-Wu tubes	60
2	Dissection Tray and Boards	10
3	Haemostatic artery forceps	10
4	Hypodermic syringes and needles of size 15,24,26G	10
5	Levers, cannulae	20

NOTE: Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and department.

B. DEPARTMENT OF PHARMACOGNOSY:

S.No.	Name	Minimum required Nos.
1	Microscope with stage micrometer	15
2	Digital Balance	02
3	Autoclave	02



Hot air oven	02
B.O.D.incubator	01
Refrigerator	01
Laminar air flow	01
Colony counter	02
Zone reader	01
Digital pH meter	01
Sterility testing unit	01
Camera Lucida	15
Eye piece micrometer	15
Incinerator	01
Moisture balance	01
Heating mantle	15
Flourimeter	01
Vacuum pump	02
Micropipettes (Single and multi	02
channeled)	
Micro Centrifuge	01
Projection Microscope	01
	Refrigerator Laminar air flow Colony counter Zone reader Digital pH meter Sterility testing unit Camera Lucida Eye piece micrometer Incinerator Moisture balance Heating mantle Flourimeter Vacuum pump Micropipettes (Single and multi channeled) Micro Centrifuge

S.No.	Name	Minimum required Nos.
1	Reflux flask with condenser	20
2	Water bath	20
3	Clavengers apparatus	10
4	Soxhlet apparatus	10
6	TLC chamber and sprayer	10
7	Distillation unit	01

NOTE: Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and department.

C. DEPARTMENT OF PHARMACEUTICAL CHEMISTRY:

Name	Minimum required Nos.
Hot plates	05
Oven	03
Refrigerator	01
Analytical Balances for demonstration	05
Digital balance 10mg sensitivity	10
Digital Balance (1mg sensitivity)	01
Suction pumps	06
Muffle Furnace	01
	Hot plates Oven Refrigerator Analytical Balances for demonstration Digital balance 10mg sensitivity Digital Balance (1mg sensitivity) Suction pumps



9	Mechanical Stirrers	10
10	Magnetic Stirrers with Thermostat	10
11	Vacuum Pump	01
12	Digital pH meter	01
13	Microwave Oven	02

S.No.	Name	Minimum required Nos.
1	Distillation Unit	02
2	Reflux flask and condenser single necked	20
3	Reflux flask and condenser double/ triple necked	20
4	Burettes	40
5	Arsenic Limit Test Apparatus	20
6	Nesslers Cylinders	40

NOTE: Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and department.

D. DEPARTMENT OF PHARMACEUTICS:

S.No	Name	Minimum required Nos.
1	Mechanical stirrers	10
2	Homogenizer	05
3	Digital balance	05
4	Microscopes	05
5	Stage and eye piece micrometers	05
6	Brookfield's viscometer	01
7	Tray dryer	01
8	Ball mill	01
9	Sieve shaker with sieve set	01
10	Double cone blender	01
11	Propeller type mechanical agitator	05
12	Autoclave	01
13	Steam distillation still	01
14	Vacuum Pump	01
15	Standard sieves, sieve no. 8, 10,	10 sets
	12,22,24, 44, 66, 80	, i
16	Tablet punching machine	01
17	Capsule filling machine	01
18	Ampoule washing machine	01
19	Ampoule filling and sealing machine	01

0.0	To the thirty of the total control of the total con	0.1
20	Tablet disintegration test apparatus IP	01
21	Tablet dissolution test apparatus IP	01
22	Monsanto's hardness tester	01
23	Pfizer type hardness tester	01
24	Friability test apparatus	01
25	Clarity test apparatus	01
26	Ointment filling machine	01
27	Collapsible tube crimping machine	01
28	Tablet coating pan	01
29	Magnetic stirrer, 500ml and 1 liter	05 EACH
	capacity with speed control	10
30	Digital pH meter	01
31	All purpose equipment with all	01
	accessories	
32	Aseptic Cabinet	01
33	BOD Incubator	02
34	Bottle washing Machine	01
35	Bottle Sealing Machine	01
36	Bulk Density Apparatus	02
37	Conical Percolator (glass/copper/	10
	stainless steel)	
38	Capsule Counter	02
39	Energy meter	02
40	Hot Plate	02
41	Humidity Control Oven	01
42	Liquid Filling Machine	01
43	Mechanical stirrer with speed regulator	02
44	Precision Melting point Apparatus	01
45	Distillation Unit	01

S.No	Name	Minimum required Nos.
1	Ostwald's viscometer	15
2	Stalagmometer	15
3	Desiccator*	05
4	Suppository moulds	20
5	Buchner Funnels (Small, medium,	05 each
	large)	
6	Filtration assembly	01
7	Permeability Cups	05
8	Andreason's Pipette	03
9	Lipstick moulds	10

NOTE: Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and department.

VIGNAN INSTITUTE COMPARMACEUTICAL TECHNOLO //
Beside: VSEZ, Duwada, Visakhapatnam-46

E. DEPARTMENT OF PHARMACEUTICAL BIOTECHNOLOGY:

S.No.	Name	Minimum required Nos.
1	Orbital shaker incubator	01
2	Lyophilizer (Desirable)	01
3	Gel Electrophoresis	01
	(Vertical and Horizontal)	
4	Phase contrast/Trinocular Microscope	01
5	Refrigerated Centrifuge	01
6	Fermenters of different capacity	01
	(Desirable)	
7	Tissue culture station	01
8	Laminar airflow unit	01
9	Diagnostic kits to identify infectious	01
	agents	
10	Rheometer	01
11	Viscometer	01
12	Micropipettes (single and multi	01 each
	channeled)	
13	Sonicator	01
14	Respinometer	01
15	BOD Incubator	01
16	Paper Electrophoresis Unit	01
17	Micro Centrifuge	01
18	Incubator water bath	01
19	Autoclave	01
20	Refrigerator	01
21	Filtration Assembly	01
22	Digital pH meter	01

NOTE: Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and department.

F. DEPARTMENT OF PHARMACY PRACTICE:

Equipment:

S.No.	Name	Minimum required Nos.
1	Colorimeter	2
2	Microscope	Adequate
3	Permanent slides (skin, kidney,	Adequate
	pancreas, smooth muscle, liver etc.,)	
4	Watch glass	Adequate
5	Centrifuge	1
6	Biochemical reagents for analysis of	Adequate
	normal and pathological constituents in	
	urine and blood facilities	
7	Filtration equipment	2
8	Filling Machine	1
9 ON SAM	Sealing Machine	- 2 1

10	Autoclave sterilizer	1
11	Membrane filter	1 Unit
12	Sintered glass funnel with complete	Adequate
	filtering assemble	
13	Small disposable membrane filter for	Adequate
	IV admixture filtration	
14	Laminar air flow bench	1
15	Vacuum pump	1
16	Oven	1
17	Surgical dressing	Adequate
18	Incubator	1
19	PH meter	1
20	Disintegration test apparatus	1
21	Hardness tester	1
22	Centrifuge	1
23	Magnetic stirrer	1
24	Thermostatic bath	1

NOTE:

- 1. Computers and Internet connection (Broadband), six computers for students with internet and staff computers as required.
- 2. Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and the department.

G. CENTRAL INSTRUMENTATION ROOM:

Name	Minimum required Nos.
Colorimeter	01
Digital pH meter	01
UV- Visible Spectrophotometer	01
Flourimeter	01
Digital Balance (1mg sensitivity)	01
Nephelo Turbidity meter	01
Flame Photometer	01
Potentiometer	01
Conductivity meter	01
Fourier Transform Infra Red	01
Spectrometer (Desirable)	
HPLC	01
HPTLC (Desirable)	01
Atomic Absorption and Emission	01
spectrophotometer (Desirable)	
Biochemistry Analyzer (Desirable)	01
Carbon, Hydrogen, Nitrogen Analyzer	01 +
(Desirable)	
Deep Freezer (Desirable)	01
Ion-Exchange	01
Lyophilizer (Désirable)	01
	Colorimeter Digital pH meter UV- Visible Spectrophotometer Flourimeter Digital Balance (1mg sensitivity) Nephelo Turbidity meter Flame Photometer Potentiometer Conductivity meter Fourier Transform Infra Red Spectrometer (Desirable) HPLC HPTLC (Desirable) Atomic Absorption and Emission spectrophotometer (Desirable) Biochemistry Analyzer (Desirable) Carbon, Hydrogen, Nitrogen Analyzer (Desirable) Deep Freezer (Desirable)

APPENDIX-C

(See regulation 16) INTERNSHIP

1) SPECIFIC OBJECTIVES:

- i) to provide patient care in cooperation with patients, prescribers, and other members of an interprofessional health care team based upon sound therapeutic principles and evidence-based data, taking into account relevant legal, ethical, social cultural, economic, and professional issues, emerging technologies, and evolving biomedical, pharmaceutical, social or behavioral or administrative, and clinical sciences that may impact therapeutic outcomes.
- ii) to manage and use resources of the health care system, in cooperation with patients, prescribers, other health care providers, and administrative and supportive personnel, to promote health; to provide, assess, and coordinate safe, accurate, and time-sensitive medication distribution; and to improve therapeutic outcomes of medication use.
- iii) to promote health improvement, wellness, and disease prevention in co-operation with patients, communities, at-risk population, and other members of an interprofessional team of health care providers.
- iv) to demonstrate skills in monitoring of the National Health Programmes and schemes, oriented to provide preventive and promotive health care services to the community.
- v) to develop leadership qualities to function effectively as a member of the health care team organised to deliver the health and family welfare services in existing socio-economic, political and cultural environment.
- vi) to communicate effectively with patients and the community.

2) OTHER DETAILS:

- i) All parts of the internship shall be done, as far as possible, in institutions in India. In case of any difficulties, the matter may be referred to the Pharmacy Council of India to be considered on merits.
- ii) Where an intern is posted to district hospital for training, there shall be a committee consisting of representatives of the college or university, and the district hospital administration, who shall regulate the training of such trainee. For such trainee a certificate of satisfactory completion of training shall be obtained from the relevant administrative authorities which shall be countersigned by the Principal or Dean of College.



iii) Every candidate shall be required, after passing the final Pharm.D. or Pharm.D. (Post Baccalaureate) examination as the case may be to undergo compulsory rotational internship to the satisfaction of the College authorities and University concerned for a period of twelve months so as to be eligible for the award of the degree of Pharm.D. or Pharm.D. (Post Baccalaureate) as the case may be.

3. ASSESSMENT OF INTERNSHIP:

- i) The intern shall maintain a record of work which is to be verified and certified by the preceptor (teacher practioner) under whom he works. Apart from scrutiny of the record of work, assessment and evaluation of training shall be undertaken by an objective approach using situation tests in knowledge, skills and attitude during and at the end of the training. Based on the record of work and date of evaluation, the Dean or Principal shall issue certificate of satisfactory completion of training, following which the university shall award the degree or declare him eligible for it.
- ii) Satisfactory completion of internship shall be determined on the basis of the following:-
 - (1) Proficiency of knowledge required for each case management SCORE 0-5
 - (2) The competency in skills expected for providing Clinical Pharmacy Services SCORE 0-5
 - (3) Responsibility, punctuality, work up of case, involvement in patient care SC

SCORE 0-5

- (4) Ability to work in a team (Behavior with other healthcare professionals including medical doctors, nursing staff and colleagues). SCORE 0-5
- (5) Initiative, participation in discussions, research aptitude. SCORE 0-5

Poor	Fair	Below Average	Average	Above Average	Excellent
0	1	2	3	4	5

A Score of less than 3 in any of above items will represent unsatisfactory completion of internship.

APPENDIX-D

(See regulation 17) CONDITIONS TO BE FULFILLED BY THE EXAMINING AUTHORITY

- 1. The Examining Authority shall be a statutory Indian University constituted by the Central Government/State Government/Union Territory Administration. It shall ensure that discipline and decorum of the examinations are strictly observed at the examination centers.
- 2. It shall permit the Inspector or Inspectors of the Pharmacy Council of India to visit and inspect the examinations.
- 3. It shall provide:-
 - (a) adequate rooms with necessary furniture for holding written examinations;
 - (b) well-equipped laboratories for holding practical examinations;
 - (c) an adequate number of qualified and responsible examiners and staff to conduct and invigilate the examinations; and
 - (d) such other facilities as may be necessary for efficient and proper conduct of examinations.
- 4. It shall, if so required by a candidate, furnish the statement of marks secured by a candidate in the examinations after payment of prescribed fee, if any, to the Examining Authority.
- 5. It shall appoint examiners whose qualifications should be similar to those of the teachers in the respective subjects as shown in Appendix–B.
- 6. In pursuance of sub-section (3) of section 12 of the Pharmacy Act, 1948, the Examining Authority shall communicate to the Secretary, Pharmacy Council of India, not less than six weeks in advance the dates fixed for examinations, the time-table for such examinations, so as to enable the Council to arrange for inspection of the examinations.
- 7. The Examining Authority shall ensure that examiners for conducting examination for Pharm.D. and Pharm.D. (Post Baccalaureate) programmes shall be persons possessing pharmacy qualification and are actually involved in the teaching of the Pharm.D. and Pharm.D. (Post Baccalaureate) programmes in an approved institution.

PRINCIPAL
VIGNAN INSTITUTE
PHARMACEUTICAL TECHNOL
Beside: VSEZ, Duvvada, Visakhapatnam-46

(ARCHNA MUDGAL) Registrar-cum-Secretary Pharmacy Council of India New Delhi – 110002

2016

THE MASTER OF PHARMACY (M. PHARM.)
COURSE REGULATION 2014

(Based on Notification in the Gazette of India No. 362, Dated December 11, 2014)

SCHEME AND SYLLABUS



PHARMACY COUNCIL OF INDIA

Combined Council's Building, Kotla Road, Aiwan-E-Ghalib Marg, New Delhi-110 002. Website : www.poi.nic.





असाधारण

EXTRAORDINARY

भाग ॥ -- खण्म 4

PART III - Section 4

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

TL 3621

नई दिल्ली, बुहरमतिवार, दिसम्बर 11, 2014/अग्रहायण 20, 1936

No. 3621

NEW DELIH, THURSDAY, DECEMBER 11, 2014/AGRAHAYANA 20, 1936

PHARMACY COUNCIL OF INDIA NOTIFICATION

New Deshi, the 10th December, 2014

The Master of Pharmacy (M.Pharm) Course Regulations, 2014

No. 14-1266 2014-PCE—In exercise of the powers conferred by Sections 10 and 18 of the Pharmacy Act, 1948 (8 of 1948), the Pharmacy Cannell of India, with the approval of the Central Covernment hereby makes the following regulations; namely—



CHAPTER -I: REGULATIONS

1. Short Title and Commencement

These regulations shall be called as "The Revised Regulations for the Master of Pharmacy (M. Pharm.) Degree Program-Credit Based Semester System (CBSS) of the Pharmacy Council of India, New Delhi". They shall come into effect from the Academic Year 2016-17. The regulations framed are subject to modifications from time to time by the authorities of the university.

2. Minimum qualification for admission

A Pass in the following examinations

- a) B. Pharm Degree examination of an Indian university established by law in India from an institution approved by Pharmacy Council of India and has scored not less than 55% of the maximum marks (aggregate of 4years of B.Pharm.)
- b) Every student, selected for admission to post graduate pharmacy program in any PCI approved institution should have obtained registration with the State Pharmacy Council or should obtain the same within one month from the date of his/her admission, failing which the admission of the candidate shall becancelled.

Note: It is mandatory to submit a migration certificate obtained from the respective university where the candidate had passed his/her qualifying degree (B.Pharm.)

3. Duration of the program

The program of study for M.Pharm shall extend over a period of four semesters (two academic years). The curricula and syllabi for the program shall be prescribed from time to time by Phamacy Council of India, New Delhi.

4. Medium of instruction and examinations

Medium of instruction and examination shall be in English.

5. Working days in each semester

Each semester shall consist of not lessthan 100 working days. The odd semesters shall be conduted from the month of June/July to November. December and the even semesters shall be conducted from the month of December/January to May/June in every calendar year.

6. Attendance and progress

- A student shall be eligible to write University examinations if he acquires a minimum of 75% of attendance in aggregate of all the subjects/courses, and with minimum 50% in each and every course including practicals.
- Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester shall be granted by the College Academic Committee.
- Shortage of Attendance below 65% in aggregate shall not be condoned and not eligible to write their end semester examination of that class.
- Students whose shortage of attendance is not condoned in any semester are not eligible to write their end semester examination of that class.
- A prescribed fee shall be payable towards Condonation of shortage of attendance.
- A student shall not be promoted to the next semester unless, he satisfies the attendance requirement of the present semester, as applicable. They may seek readmission into that semester when offered next. If any candidate fulfills the



attendance requirement in the present semester, he shall not be eligible for readmission into the same class.

7. Program/Course credit structure

As per the philosophy of Credit Based Semester System, certain quantum of academic work viz. theory classes, practical classes, seminars, assignments, etc. are measured in terms of credits. On satisfactory completion of the courses, a candidate earns credits. The amount of credit associated with a course is dependent upon the number of hours of instruction per week in that course. Similarly the credit associated with any of the other academic, co/extra-curricular activities is dependent upon the quantum of work expected to be put in for each of these activities per week/ per activity.

7.1. Credit assignment

7.1.1. Theory and Laboratory courses

Courses are broadly classified as Theory and Practical. Theory courses consist of lecture (L) and Practical (P) courses consist of hours spent in the laboratory. Credits (C) for a course is dependent on the number of hours of instruction per week in that course, and is obtained by using a multiplier of one (1) for lecture and a multiplier of half (1/2) for practical (laboratory) hours. Thus, for example, a theory course having four lectures per week throughout the semester carries a credit of 4. Similarly, a practical having four laboratory hours per week throughout semester carries a credit of 2.

The contact hours of seminars, assignments and research work shall be treated as that of practical courses for the purpose of calculating credits i.e., the contact hours shall be multiplied by 1/2. Similarly, the contact hours of journal club, research work presentations and discussions with the supervisor shall be considered as theory course and multiplied by 1.

7.2. Minimum credit requirements

The minimum credit points required for the award of M.Pharm. degree is 95. However based on the credit points earned by the students under the head of co-curricular activities, a student shall earn a maximum of 100 credit points. These credits are divided into Theory courses, Practical, Seminars, Assignments, Research work, Discussions with the supervisor, Journal club and Co-Curricular activities over the duration of four semesters. The credits are distributed semester-wise as shown in Table 14. Courses generally progress in sequence, building competencies and their positioning indicates certain academic maturity on the part of the learners. Learners are expected to follow the semester-wise schedule of courses given in the syllabus.

8. Academic work

A regular record of attendance both in Theory, Practical, Seminar, Assignment, Journal club, Discussion with the supervisor, Research work presentation and Dissertation shall be maintained by the department/ teaching staff of respective courses.

M.Pharm I & II Semester Practicals:

- The individual student of the respective specialization need to carry out at least 75% of the practical prescribed in the syllabus.
- Based and depending upon the software available with the institute the practical can be designed.
- Some experiments have to be carried out only by Demonstration. Students are advised to know the Principle and Protocol of the experiment.





9. Course of study

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

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

S. No.	Specialization	Code
1.	Pharmaceutics	MPH
2.	Industrial Pharmacy	MIP
3.	Pharmaceutical Chemistry	MPC
4.	Pharmaceutical Analysis	MPA
5.	Pharmaceutical Quality Assurance	MQA
6.	Pharmaceutical Regulatory Affairs	MRA
7.	Pharmaceutical Biotechnology	MPB
8.	Pharmacy Practice	MPP
9.	Pharmacology	MPL
10.	Pharmacognosy	MPG
	1	

The course of study for M.Pharm specializations shall include Semester wise Theory & Practical as given in Table -2 to 11. The number of hours to be devoted to each theory and practical course in any semester shall not be less than that shown in Table -2 to 11.



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

Course Code	Course	Credit Hours	Credit Points	Hrs./ wk	Marks
	Seme	ester 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
MPH105PA	Pharmaceutics Practical I	6	3	6	75
MPH105PB	Pharmaceutical Practical	6	3	6	75
-	Seminar/Assignment	7	4	7	100
	Total	35	26	35	650
	Seme	ster II			
MPH201T	Molecular Pharmaceutics (Nano Technology and Targeted DDS) (NTDS)	4	4	4	100
MPH202T	Advanced Biopharmaceutics & Pharmacokinetics	4	4	4	100
MPH203T	Computer Aided Drug Development	4	4	4	100
MPH204T	Formulation Development of Pharmaceutical and Cosmetic Products	4	4	4	100
MPH205PA	Pharmaceutics Practical	6	3	6	75
MPH205PB	Pharmaceutics Practical	6	3	6	75
	Seminar/Assignment	7	4	7	100
	Total	35	26	35CEUTIC	650

Table – 5: Course of study for M. Pharm. (Pharmaceutical Analysis)

Course Code	Course	Credit Hours	Credit Points	Hrs./wk	Marks
	Semes	ster I		Anthony PARTH	
MPA101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPA102T	Advanced Pharmaceutical Analysis	4	4	4	100
MPA103T	Pharmaceutical Validation	4	4	4	100
MPA104T	Food Analysis	4	4	4	100
MPA105PA	Pharmaceutical Analysis Practical I	6	3	6	75
MPA105PB	Pharmaceutical Analysis Practical II	6	3	6	75
	Seminar/Assignment	7	4	7	100
	Total	35	26	35	650
	Semes	ter II			
MPA201T	Advanced Instrumental Analysis	4	4	4	100
MPA202T	ModernBio-Analytical Techniques	4	4	4	100
MPA203T	Quality Control and Quality Assurance	4	4	4	100
MPA204T	Herbal and Cosmetic Analysis	4	4	4	100
MPA205PA	Pharmaceutical Analysis Practical III	6	3	6	75
MPA205PB	Pharmaceutical Analysis Practical IV	6	3	6	75
5	Seminar/Assignment	7	4	7	100
	Total	35	26	35	650



Table – 10: Course of study for (Pharmacology)

Course Code	Course Of Study	Credit Hours	Credit Points	Hrs./wk	Marks
	Seme	sterl			Sign Lipsey
MPL101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPL102T	AdvancedPharmacology-I	4	4	4	100
MPL103T	Pharmacological and Toxicological Screening Methods-I	4	4	4	100
MPL104T	Cellular and Molecular Pharmacology	4	4	4	100
MPL105PA	Pharmacology Practical I	6	3	6	75
MPL105PB	Pharmacology Practical II	6	3	6	75
	Seminar/Assignment	7	4	7	100
Professional participation of the control of the co	Total	35	26	35	650
	Semes	ster II			
MPL201T	Advanced Pharmacology II	4	4	4	100
MPL202T	Pharmacological and Toxicological Screening Methods-II	4	4	4	100
MPL203T	Principles of Drug Discovery	4	4	4	100
MPL204T	Clinical Research and Pharmacovigilance	4	4	4	100
MPL205PA	Pharmacology Practical III	6	3	6	75
MPL205PB	Pharmacology Practical IV	6	3	6	75
- 10 mg - 10 m	Seminar/Assignment	7	4	7	100
	Total	35	26	35	650
	RAMACEUTICA CONTRACTOR OF THE PROPERTY OF THE	4. Ridio	on rescent		

16

Table–12: 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	
_	Journalclub	1	1	
	Discussion / Presentation (Proposal Presentation)	2	2	
-	Research Work	28	14	
	Total	35	21	

^{*} Non University Exam

Table–13: Course of study for M.Pharm. IV Semester (Common for All Specializations)

Course Code	COLLEGO		Credit Points
	JournalClub	1	1
	Research Work	31	16
	Discussion/FinalPresentation	3	3
Total		35	20

Table – 14: Semester wise credits distribution

Semester	Credit Points 26
	. 26
₩ .	21
IV	20
Co-curricular Activities (Attending Conference, Scientific Presentationsand Other Scholarly Activities)	Minimum=02 Maximum=07*
Total Credit Points	Minimum=95 Maximum=100*

^{*}Credit Points for Co-curricular Activities



Table – 15: 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 Programs (related to the specialization of the student)	01
Participation in international Level Seminar/Conference/Workshop/Symposium/ Training Programs (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	01
Research / Review Publication in International Journals	02

Note: International Conference: Held outside India; International Journal: The Editorial Board Outside India

*The credit points assigned for extra curricular 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.

One Research/Review publication is necessary for all M.Pharm students before the completion of IV Semester. The Research/Review article need to be published/acceptance in UGC care list journals or any other reputed journals.

10. Program Committee

The M. Pharm. programme shall have a Programme Committee constituted by the Head of the Institution in consultation with all the Heads of thedepartments.

The composition of the Programme Committee shall be as follows:

A teacher at the cadre of Professor shall be the Chairperson; One Teacher from each M.Pharm specialization and four student representatives (two from each academic year), nominated by the Head of the institution.

Duties of the Programme Committee:

Periodically reviewing the progress of the classes.

Discussing the problems concerning curriculum, syllabus and the conduct of classes.

Discussing with the course teachers on the nature and scope of assessment for the course and the same shall be announced to the students at the beginning of respective semesters.

- l. Communicating its recommendation to the Head of the Institution on academic matters.
- 2 The Programme Committee shall meet at least twice in a semester preferably at the end of each sessional exam and before the end semesterexam.

11. Examinations/Assessments

The schemes for internal assessment and end semester examinations are given from Table-16.

11.1. End semester examinations

The End Semester Examinations for each theory and practical course through semesters I to IV shall be conducted by the respective university except for the subject with asterix symbol (*) for which examinations shall be conducted by the subject experts at college level and the marks/grades shall be submitted to the university.

Tables – 16: Schemes for internal assessments and end semester (Pharmaceutics- MPH)

		I	nternal As	ssessment		End Semester Exams		
Course Code	Course	Continues	Session	nal Exams			Durati	Tota Mark
		Mode	Marks	Duration	Total	Marks	75 3Hr 75 3Hr 75 3Hr 75 3Hr 75 3Hr 76 3Hr 77 3Hr 78 3Hr 79 3Hr 70 3Hr	
		SEME	STERI					
MPH101T	Modern Pharmaceutical Analytical Techniques	10	15	1Hr	25	75	3Hr	100
МРН102Т	Drug Delivery Systems	10	15	1Hr	25	75	3Hr	100
MPH103T	Modern Pharmaceutics	10	15	1Hr	25	75	3Hr	100
MPH104T	Regulatory Affairs	10	15	1Hr	25	75	3Hr	100
MPH105PA	Pharmaceutics Practical I	10	15	3Hr	25	50	3Hr	75
МРН105РВ	Pharmaceutics Practical II	10	15	3Hr	25	50	3Hr	75
	Seminar/Assignment	-	-	-	-	-	-	100
		Total						650
		SEME	STER II	and more the American survey of terminal concerning placement	activa angeros at the angeros	nadama manggi kapanan Art kahasat perana neber	kallud och Pathalisia en inklinkeren kis i mut per son d	Ваничность рёсненнінай бийнес
МРН201Т	Molecular Pharmaceutics (Nano Tech and Targeted DDS) (NTDS)	10	15	1Hr	25	75	3Hr	100
МРН202Т	Advanced Biopharmaceutics & Pharmacokinetics	10	15	1Hr	25	75	3Hr	100
МРН203Т	Computer Aided Drug Development	10	15	1Hr	25	75	3Hr	100
МРН204Т	Formulation Development of Pharmaceutical and Cosmetic Products	10	15	1Hr	25	75	3Hr	100
МРН205РА	Pharmaceutics Practical I	10	15	3Hr	25	50	3Hr	75
МРН205РВ	Pharmaceutics Practical I	10	15	3Hr	25	50	3Hr	75
	Seminar/Assignment						•	100
		Total	Accession	A CONTRACTOR OF THE PARTY OF TH		alaman managa	I	650



Tables-19: Schemes for internal assessments and end semester (Pharmaceutical Analysis-MPA)

		In	ernal Ass	essment		End Semester Exams		
Course Code	Course	Continues	Session	nal Exams				Tota Mark
		Mode	Marks	Duration	Total	Marks	Duration	1
		SEMI	STER I					
MPA101T	Modern Pharmaceutical Analytical Techniques	10	15	1 Hr	25	75	3Hr	100
MPA102T	Advanced Pharmaceutical Analysis	10	15	1Hr	25	75	3Hr	100
MPA103T	Pharmaceutical Validation	10	15	1Hr	25	75	3Hr	100
MPA104T	Food Analysis	10	15	1Hr	25	75	3Hr	100
MPA105PA	Pharmaceutical Analysis Practical I	10	15	3Hr	25	50	3Hr	75
MPA105PB	Pharmaceutical Analysis Practical II	10	15	3Hr	25	50	3Hr	75
	Seminar/Assignment	-	bis .	-	44	•	-	100
		Total						650
		SEME	STER II					iinik kidalinulu soosi oo kida aga umaa sa
MPA201T	Advanced Instrumental Analysis	10	15	1Hr	25	75	3Hr	100
MPA202T	Modern Bio-Analytical Techniques	10	15	1Hr	25	75	3Hr	100
мра203Т	Quality Control and Quality Assurance	10	15	1Hr	25	75	3Hr	100
MPA204T	Herbal and Cosmetic Analysis	10	15	1Hr	25	75	3Hr	100
MPA205PA	Pharmaceutical Analysis Practical III	10	15	3Hr	25	50	3Hr	75
MPA205PB	Pharmaceutical Analysis Practical IV	10	15	3Hr	25	50	3Hr	75
	Seminar/Assignment		•	5	<u>.</u>	-	**************************************	100
	PON CHACEUTI.	Total	AND DESCRIPTION OF THE PARTY OF)		650
	THE WAD A PURIL TO	1001008/A	23 V	IGNAN RMACEU de: VSEZ, DI	NCIP INSTI ITCAL Wada, V	TUTE (ECHNO isakhapat	OF LOGY nam-46	solven alemo, commençõe com empres a a dos um mobiles de commenções a commenções a commenções a commenções a c

		In	ternal Ass	sessment		End Semester Exams		Total Marks
Course Code	Course	Continues	Sessional Exams		Total	Marks	Duration	
		Mode	Marks	Duration				
		SEME	STER I					
MPL101T	Modern Pharmaceutical Analytical Techniques	10	15	1Hr	25	75	3Hr	100
MPL102T	Advanced Pharmacology - I	10	15	1Hr	25	75	3Hr	100
MPL103T	Pharmacology and Toxicology Screening methods- I	10	15	1Hr	25	75	3Hr	100
MPL104T	Cellular and Molecular Pharmacology	10	15	1Hr	25	75	3Hr	100
MPL105PA	Pharmacology Practical I	10	15	3Hr	25	50	3Hr	75
MPL105PB	Pharmacology Practical II	10	15	3Hr	25	50	3Hr	75
	Seminar/Assignment	-	800	-	-	**	and .	100
		Total						650
		SEME	STER II					
MPL201T	Advanced Pharmacology - II	10	15	1Hr	25	75	3Hr	100
MPL202T	Pharmacology and Toxicology Screening methods- II	10	15	1Hr	25	75	3Hr	100
MPL203T	Principles of Drug Discovery	10	15	1Hr	25	75	3Hr	100
MPL204T	Clinical Research and Pharmacovigilance	10	15	1 Hr	25	75	3Hr	100
MPL205PA	Pharmacology Practical III	10	15	3Hr	25	50	3Hr	75
MPL205PB	Pharmacology Practical IV	10	15	3Hr	25	50	3Hr	75
	Seminar/Assignment		1.			# 		100
		Market Substitute of the Subst	The specifical states					

Tables-26: Schemes for internal assessments and end semester examinations (Semester III& IV)

			Internal Assessment			End S	Semester Exams	
Course Course	Conti	Sessional Conti Exams				Market Maria	Tota Mark	
		nuous Mode	Mark s	Durati on	Tot al	Mark s	Durati on	
		SE	EMESTE	R III				
MRM30 1T	Research Methodology and Biostatistics*	10	15	1 Hr	25	75	3 Hrs	100
	Journal club				25	•	The County of 190	25
-	Discussion / Presentation (Proposal Presentation)	-	-	•	50			50
	Research work					350	1 Hr	350
		Т	otal					525
		SE	MESTE	RIV				
	Journal club		•		25	•	ng at man-manganin na mangang ang at mangang at mangang at mangang at mangang at mangang at mangang at mangang Ng	25
-	Discussion / Presentation (Proposal Presentation)	•	•	·	75	•		75
No.	Research work and Colloquium		*	•		400	1 Hr	400
		T	otal					500

*Non University Examination

- The subject 'Research Methodology and Biostatistics (MRM 301T)' in III Semester has to be conducted by respective institute with paper setting followed by evaluation.

- The award of marks to be uploaded in JNTUK portal.

Note: The answer scripts, question paper and attendance sheet need to be packed and kept under the institution safely.

11.2. Internal assessment: Continuous mode

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

Table – 27: Scheme for awarding internal assessment: Continuous mode

Theory	
Criteria	Maximum Marks
Attendance (Refer Table – 28)	8
Student - Teacher interaction	2
Total	10
Practical	
Attendance (Refer Table – 28)	5
Based on Practical Records, Regular viva voce, etc.	5
Total	10

Table – 28: Guidelines for the allotment of marks for attendance

Percentage of Attendance	Theory	Practical
95 – 100	8	5
90 – 94	6	3.75
85 - 89	4	2.5
80 -84	2	1.25

Allocation of marks for attendance will be considered on the basis of individual student's punctuality, regularity, attentiveness, conduct and submission of assignments.

11.2.1. Sessional Exams

Two sessional exams shall be conducted for each theory/practical course as per the schedule fixed by the college(s). The scheme of question paper for theory and practical sessional examinations is given in the table. The average marks of two sessional exams shall be computed for internal assessment as per the requirements given in tables.

12. Promotion and award of grades

A student shall be declared PASS and eligible for getting grade in a course of M.Pharm. programme if he/she secures atleast 50% marks in that particular course including internal assessment.

13. Carry forward of marks

In case a student fails to secure the minimum 50% in any Theory or Practical course as specified in 12, then he/she shall reappear for the end semester examination of that course. However his/her marks of the Internal Assessment shall be carried over and he/she shall be entitled for grade obtained by him/her on passing.

14. Improvement of internal assessment

A student shall have the opportunity to improve his/her performance only once in the sessional exam component of the internal assessment. The re-conduct of the sessional exam shall be completed before the commencement of next end semester theory examinations.

15. Reexamination of end semester examinations

Revaluation/recounting/challenging valuation as per the University norms is acceptable within stipulated time period. This process is also applicable for all previous batches joined under PCI regulations.

Table – 29: Tentative schedule of end semester examinations

Semester	For Regular Candidates	For Failed Candidates
I and III	November / December	As per University norms
II and IV	May / June	As per University norms

16. Allowed to keep terms (ATKT):

No student shall be admitted to any examination unless he/she fulfills the norms given in 6. ATKT rules are applicable as follows:

A student shall be eligible to carry forward all the courses of I and II semesters till the III semester examinations. However, he/she shall not be eligible to attend the courses of IV semester until all the courses of I, II and III semesters are successfully completed.

A student shall be eligible to get his/her CGPA upon successful completion of the courses of I to IV semesters within the stipulated time period as per the norms.

Note: Grade AB should be considered as failed and treated as one head for deciding ATKT. Such rules are also applicable for those students who fail to register for examination(s) of any course in any semester.

17. Grading of performances

17.1. Letter grades and grade pointsallocations:

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 -30.

Table-30: Letter grades and grade points equivalent to Percentage of marks and performances.

Percentage of Marks Obtained	Letter Grade	Grade Point	Performance
90.00 - 100	0	10	Outstanding
80.00 - 89.99	A	9	Excellent
70.00 - 79.99	В	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.

18. 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 weighted average of the grade points obtained in all the courses by the student during the semester. For example, if a student takes five courses (Theory Practical) in a semester with credits C1, C2, C3 and C4 and the student's grade points in these courses are G1, G2, G3 and G4 Theory and then students' SGPA is equal to:

$$C_{1}G_{1} + C_{2}G_{2} + C_{3}G_{3} + C_{4}G_{4}$$

$$SGPA = C_{1} + C_{2} + C_{3} + C_{4}$$

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 For ABS grade in course 4, the SGPA shall then be computed as:

$$C_1G_1 + C_2G_2 + C_3G_3 + C_4* ZERO$$

 $C_1 + C_2 + C_3 + C_4$

19. 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 status incase 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:

$$CGPA = \frac{C_1S_1 + C_2S_2 + C_3S_3 + C_4S_4}{C_1 + C_2 + C_3 + C_4}$$

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,....

20. 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

First Class = CGPA of 6.00 to 7.49

Second Class = CGPA of 5.00 to 5.99

21. Project work

All the students shall under take a project under the supervision of a teacher in Semester III to IV and submit a report. 4 copies of the project report shall be submitted (typed & bound copy not less than 75 pages).

The internal and external examiner appointed by the University shall evaluate the project at the time of the Practical examinations of other semester(s). The projects shall be evaluated as per the criteria given below.

M.Pharm III Semester (research work)

- The M.Pharm III Semester for conduct of research work will be evaluated by the external examiner with rich experience and Doctorate holder. Depending upon the number of students in each specialization examiner should be appointed.



III Semester

Presentation	100	100 Marks
Depth of Research Work	-	100 Marks
Literature Survey	-	75 Marks
Communications skills	-	75 Marks
Total	_	350 Marks

IV Semester

Project Thesis	and .	200 Marks
Power point Presentation	***	100 Marks
Viva Voce & Queries	***	100 Marks
Total	***	400 Marks

22. Award of Ranks

Ranks and Medals shall be awarded on the basis of final CGPA. However, candidates whofail in one or more courses during the M.Pharm program shall not be eligible for award of ranks. Moreover, the candidates should have completed the M. Pharm program in minimum prescribed number of years, (two years) for the award of Ranks.

23. Award of degree

Candidates who fulfill the requirements mentioned above shall be eligible for award of degree during the ensuing convocation.

24. Duration for completion of the program of study

The duration for the completion of the program shall be fixed as double the actual duration of the program and the students have to pass within the said period, otherwise they have to get fresh Registration.

25. Revaluation/ Retotaling of answer papers

Revaluation/recounting/challenging valuation as per the University norms is acceptable within stipulated time period. This process is also applicable for all previous batches joined under PCI regulations.

26. Re-admission after break of study

Candidate who seeks re-admission to the program after break of study has to get the approval from the university by paying a condonation fee.





Email: dapjntuk@gmail.com

Phone: Off: +0884-2300991 Fax:+0884-2340545

JAWAHARLAL NEHRU TECHNOLOĞICAL UNIVERSITY : KAKINADA (Established by Andhra Pradesh Act No.30 of 2008)

Kakinada - 533 003, Andhra Pradesh (India)

ACADEMIC REGULATIONS R16 FOR M. Pharmacy (REGULAR) DEGREE COURSE

Applicable for the students of M.Pharmacy (Regular) Course from the Academic Year 2016-17 onwards

The M.Pharmacy Degree of Jawaharlal Nehru Technological University Kakinada shall be conferred on candidates who are admitted to the program and who fulfil all the requirements for the award of the Degree.

1.0 ELIGIBILITY FOR ADMISSIONS

Admission to the above program shall be made subject to eligibility, qualification and specialization as prescribed by the University from time to time.

Admissions shall be made on the basis of merit/rank obtained by the candidates at the qualifying Entrance Test conducted by the University or on the basis of any other order of merit as approved by the University, subject to reservations as laid down by the Govt. from time to time.

2.0 AWARD OF M. Pharmacy DEGREE

- 2.1 A student shall be declared eligible for the award of the M. Pharmacy Degree, if he pursues a course of study in not less than two and not more than four academic years.
- 2.2 The student shall register for all 80 credits and secure all the 80 credits.
- 2.3 The minimum instruction days in each semester are 90.

3.0. COURSES OF STUDY

The following specializations are offered at present for the M. Pharmacy course of study.

- 1. Pharmaceutical Analysis
- 2. Pharmaceutical Analysis & O A
- 3. Pharmaceutical Analysis & QC
- 4. Pharmaceutical Chemistry
- 5. Pharmaceutical Management & Regulatory Affairs
- 6. Pharmaceutical Technology
- 7. Pharmaceutics



- 8. Pharmacognosy
- 9. Pharmacology
- 10. Pharmacology & Toxicology
- 11. Pharmacy Practices
- 12. Quality Assurance & Regulatory Affairs

and any other course as approved by AICTE/ University from time to time.

4.0 ATTENDANCE

- 4.1 A student shall be eligible to write University examinations if he acquires a minimum of 75% of attendance in aggregate of all the subjects.
- 4.2 Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester shall be granted by the College Academic Committee.
- 4.3 Shortage of Attendance below 65% in aggregate shall not be condoned.
- 4.4 Students whose shortage of attendance is not condoned in any semester are not eligible to write their end semester examination of that class.
- 4.5 A prescribed fee shall be payable towards condonation of shortage of attendance.
- 4.6 A student shall not be promoted to the next semester unless he satisfies the attendance requirement of the present semester, as applicable. They may seek readmission into that semester when offered next. If any candidate fulfills the attendance requirement in the present semester, he shall not be eligible for readmission into the same class.

5.0 EVALUATION

The performance of the candidate in each semester shall be evaluated subject-wise, with a maximum of 100 marks for theory and 100 marks for practicals, on the basis of Internal Evaluation and End Semester Examination.

- For the theory subjects 60 marks shall be awarded based on the performance in the End Semester Examination and 40 marks shall be awarded based on the Internal Evaluation. The internal evaluation shall be made based on the average of the marks secured in the two Mid Term-Examinations conducted-one in the middle of the Semester and the other immediately after the completion of instruction. Each mid term examination shall be conducted for a total duration of 120 minutes with 4 questions (without choice) each question for 10 marks. End semester examination is conducted for 60 marks for 5 questions to be answered out of 8 questions.
- For practical subjects, 60 marks shall be awarded based on the performance in the End 5.2 Semester Examinations and 40 marks shall be awarded based on the day-to-day performance as Internal Marks.
- (a). For Ist & IInd semesters Seminar 100 marks are allotted for each, which shall be awarded based on the performance of the student on the selected advanced topic which is subdivided as follows.

Marks for assignment - 20 Marks for Power Point Presentation - 60 Marks for viva voce (Orals) - 20 - 100 Total marks

For each Seminar there will be only internal evaluation of 100 marks. A candidate has to secure a minimum of 50% of marks to be declared successful.

(b) There shall be two seminar presentations during III semester and IV semester. For Project seminar-I, a student under the supervision of a faculty member, shall collect the literature on a topic, critically review the literature and submit it to the department in a

Beside: VSEZ, Duwada, Visakhapatnam-46

PHARMACEUTICAL

report form on the proposed project work with Aims & Objectives and shall make an oral presentation before the Project Review Committee consisting of Head of the Department, Supervisor and two other senior faculty members of the department. For Project seminar-II, a student shall submit a report on the completed project work and shall make an oral presentation before the Project Review Committee. For each Seminar there will be only internal evaluation of 50 marks. A candidate has to secure a minimum of 50% of marks to be declared successful.

- 5.4 A candidate shall be deemed to have secured the minimum academic requirement in a subject if he secures a minimum of 40% of marks in the End semester Examination and a minimum aggregate of 50% of the total marks in the End Semester Examination and Internal Evaluation taken together.
- 5.5 In case the candidate does not secure the minimum academic requirement in any subject (as specified in 5.4) he has to reappear for the End semester Examination in that subject. A candidate shall be given one chance to re-register for each subject provided the internal marks secured by a candidate are less than 50% and has failed in the end examination. In such a case, the candidate must re-register for the subject(s) and secure the required minimum attendance. The candidate's attendance in the re-registered subject(s) shall be calculated separately to decide upon his eligibility for writing the end examination in those subject(s). In the event of the student taking another chance, his internal marks and end examination marks obtained in the previous attempt stand cancelled. For re-registration the candidates have to apply to the University through the college by paying the requisite fees and get approval from the University before the start of the semester in which re-registration is required.
- 5.6 In case the candidate secures less than the required attendance in any re registered subject (s), he shall not be permitted to write the End Examination in that subject. He shall again re-register the subject when next offered.
- 5.7 Laboratory examination for M.Pharm courses must be conducted with two Examiners, one of them being the Laboratory Class Teacher or teacher of the respective college and the second examiner shall be appointed by the university from the panel of examiners submitted by the respective college.

6.0 EVALUATION OF PROJECT/DISSERTATION WORK

Every candidate shall be required to submit a thesis or dissertation on a topic approved by the Project Review Committee.

- 6.1 A Project Review Committee (PRC) shall be constituted with Head of the Department and two other senior faculty members.
- 6.2 Registration of Project Work: A candidate is permitted to register for the project work after satisfying the attendance requirement of all the subjects, both theory and practical.
- 6.3 After satisfying 6.2, a candidate has to submit, in consultation with his project supervisor, the title, objective and plan of action of his project work for approval. The student can initiate the Project work, only after obtaining the approval from the Project Review Committee (PRC).
- 6.4 If a candidate wishes to change his supervisor or topic of the project, he can do so with the approval of the Project Review Committee (PRC). However, the Project Review Committee (PRC) shall examine whether or not the change of topic/supervisor leads to a major change of his initial plans of project proposal. If yes, his date of registration for the project work starts from the date of change of Supervisor or topic as the case may be.

6.5 A candidate shall submit his status report in two stages at least with a gap of 3 months between them.

104

- 6.6 The work on the project shall be initiated at the beginning of the II year and the duration of the project is two semesters. A candidate is permitted to submit Project Thesis only after successful completion of theory and practical course with the approval of PRC not earlier than 40 weeks from the date of registration of the project work. The candidate has to pass all the theory and practical subjects before submission of the Thesis.
- 6.7 Three copies of the Project Thesis certified by the supervisor shall be submitted to the College/School/Institute.
- 6.8 The thesis shall be adjudicated by one examiner selected by the University. For this, the Principal of the College shall submit a panel of 5 examiners, eminent in that field, with the help of the guide concerned and head of the department.
- 6.9 If the report of the examiner is not favourable, the candidate shall revise and resubmit the Thesis, in the time frame as decided by the PRC. If the report of the examiner is unfavorable again, the thesis shall be summarily rejected. The candidate has to reregister for the project and complete the project within the stipulated time after taking the approval from the University.
- 6.10 If the report of the examiner is favourable, Viva-Voce examination shall be conducted by a board consisting of the Supervisor, Head of the Department and the examiner who adjudicated the Thesis. The Board shall jointly report the candidate's work as one of the following:
 - A. Excellent
 - B. Good
 - C. Satisfactory
 - D. Unsatisfactory

The Head of the Department shall coordinate and make arrangements for the conduct of Viva-Voce examination.

6.11 If the report of the Viva-Voce is unsatisfactory, the candidate shall retake the Viva-Voce examination only after three months. If he fails to get a satisfactory report at the second Viva-Voce examination, the candidate has to re-register for the project and complete the project within the stipulated time after taking the approval from the University.

7.0 AWARD OF DEGREE AND CLASS

After a student has satisfied the requirements prescribed for the completion of the program and is eligible for the award of M. Pharmacy Degree, he shall be placed in one of the following three classes:

Class Awarded	% of marks to be secured
First Class with Distinction	70% and above (Without any Supplementary Appearance)
First Class	Below 70% but not less than 60% 70% and above (With any Supplementary Appearance)
Second Class	Below 60% but not less than 50%

The marks in internal evaluation and end examination shall be shown separately in the memorandum of marks.

8.0 WITHHOLDING OF RESULTS

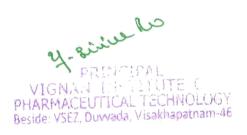
If the student has not paid the dues, if any, to the university or if any case of indiscipline is pending against him, the result of the student will be withheld. His degree will be withheld in such cases.

9.0 TRANSITORY REGULATIONS (for R13)

- 9.1 Discontinued or detained candidates are eligible for re-admission into same or equivalent subjects at a time as and when offered.
- 9.2 The candidate who fails in any subject will be given two chances to pass the same subject; otherwise, he has to identify an equivalent subject as per R16 academic regulations.

10. GENERAL

- 10.1 Wherever the words "he", "him", "his", occur in the regulations, they include "she", "her", "hers".
- 10.2 The academic regulation should be read as a whole for the purpose of any interpretation.
- 10.3 In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor is final.
- 10.4 The University may change or amend the academic regulations or syllabi at any time and the changes or amendments made shall be applicable to all the students with effect from the dates notified by the University.





MALPRACTICES RULES

DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

	Nature of Malpractices/Improper conduct	Punishment
	If the candidate:	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, Cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that Semester/year. The Hall Ticket of the candidate is to be cancelled and sent to the University.
3.	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred and forfeits the

		seat. The performance of the original candidate who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.	
4.	Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.	
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.	
6.	Refuses to obey the orders of the Chief Superintendent/Assistant — Superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out,	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of	
VIGNAA TE OF PHARMACEUTICAL TECHNOLOGY Beside: VSEZ, Duwada, Visakhapatnam-46			

that semester/year. The candidates also are or threatens the officer-in charge or debarred and forfeit their seats. In case of any person on duty in or outside the outsiders, they will be handed over to the examination hall of any injury to his police and a police case is registered person or to any of his relations whether by words, either spoken or against them. written or by signs or by visible representation, assaults the officerin-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the College campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination. Leaves the exam hall taking away Expulsion from the examination hall and answer script or intentionally tears of cancellation of performance in that subject and all the other subjects the candidate has the script or any part thereof inside or outside the examination hall. already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. Possess any lethal weapon or firearm Expulsion from the examination hall and in the examination hall. cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also

7.

8.

		debarred and forfeits the seat.
9.	If student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat.
		Person(s) who do not belong to the College will be handed over to police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the candidate has appeared including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action to award suitable punishment.	

Malpractices identified by squad or special invigilators

1. Punishments to the candidates as per the above guidelines.

2. Punishment for institutions: (if the squad reports that the college is also involved in

encouraging malpractices)

PHARMACEUTICAL TELHNOLOGYY Beside: VSEZ, Duvvada, Visakhapatnam-46

A show cause notice shall be issued to the college. (i)

(ii)

Impose a suitable fine on the college.

Shifting the examination centre from the college to another college for a (iii) specific period of not less than one year.

VIGNAN INSTITUTE OF PHARMACEUTICAL TECHNOLOGY Beside: VSEZ, Duvvada, Visakhapatnam-46



M.PHARMACY

PHARMACEUTICS

I SEMESTER

Paper 101 - Modern Analytical Techniques
Paper 102 - Research Methodologies
Paper 103 - Biopharmaceutics & Pharmacokinetics
Paper 104 - Advanced Physical Pharmaceutics
Paper 105 - Biopharmaceutics & Pharmacokinetics - LAB
Paper 106 - Advanced Physical Pharmaceutics - LAB
Paper 107 - Seminar

II SEMESTER

Paper 201 - Advanced Pharmaceutical Technology
Paper 202 - Advances In Drug Delivery Systems
Paper 203 - Industrial Pharmacy
Paper 204 - Drug Regulatory Affairs
Paper 205 - Advanced Pharmaceutical Technology - LAB
Paper 206 - Advances In Drug Delivery Systems - LAB
Paper 207 - Seminar

III SEMESTER

Paper 301 - Project Seminar-I (On the proposed project work with aims and objectives)
- 50 Marks
Paper 302 - Project work - I

IV SEMESTER

Paper 401 - Project Seminar-II (On the experimentation and results of the project work) – 50 Marks
Paper 402 - Project work - II



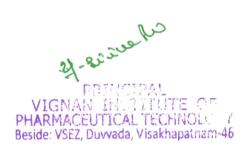


SCHEME OF INSTRUCTIONS AND EVALUATION

PHARMACEUTICS

FIRST SEMESTER

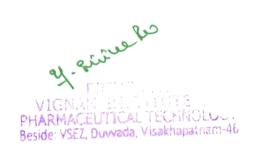
		Evaluation / Marks					
Paper No.	Title of the Paper	The	eory	Prac	etical	Total	Credits
		Mid Examination	University End Examination	Mid Examination	University End Examination		
Paper – 101	Modern Analytical Techniques	40	60			100	3
Paper – 102	Research Methodologies	40	60			100	3
Paper - 103	Biopharmaceutics & Pharcokinetics	40	60			100	3
Paper - 104	Advanced Physical Pharmaceutics	40	60			100	3
Paper – 105	Biopharmaceutics & Pharcokinetics			40	60	100	2
Paper – 106	Advanced Physical Pharmaceutics			40	60	100	2
Paper – 107	Seminar					100	2
	TOTAL					700	18





SECOND SEMESTER

		Evaluation / Marks					
Paper No.	Title of the Paper	The	eory	Prac	Total	Credits	
		Mid Examination	University End Examination	Mid Examination	University End Examination		
Paper – 201	Advanced Pharmaceutical Technology	40	60			100	3
Paper -202	Advances in Drug Delivery Systems	40	60			100	3
Paper – 203	Industrial Pharmacy	40	60			100	3
Paper – 204	Drug Regulatory affairs	40	60			100	3
Paper – 205	Advanced Pharmaceutical Technology			40	60	100	2
Paper – 206	Advances in Drug Delivery Systems			40	60	100	2
Paper – 207	Seminar					100	2
	TOTAL					700	18





THIRD AND FOURTH SEMESTERS

Paper No.	III Semester	Total	Credits
Paper - 301	Project Seminar – I (On the proposed project work with aims and objectives)	50	2
Paper - 302	Project work - I	and pair new tent	20
	Total	50	22

Paper No.	IV Semester	Total	Credits ***
Paper - 401	Project Seminar – II (On the Completed project work)	50	2
Paper - 402	Project work - II	M 64 40	20
	TOTAL MARKS	50	22
	GRAND TOTAL FOR THE COURSE	1500	80

ey- sime ho

PRINCIPAL
VIGNAN INSTITUTE OF
PHARMACEUTICAL TECHNOLOGY
Beside: VSEZ, Duvyada, Visakhapatnam-46



M.PHARMACY

PHARMACEUTICAL ANALYSIS AND QUALITY ASSURANCE

I SEMESTER

aper 101 - Modern Amarytical rechniques	Paper 101	-	Modern Analytical Techniques
---	-----------	---	------------------------------

Paper 102 - Research Methodologies

Paper 103 - Advanced Pharmaceutical Analysis - I

Paper 104 - Chromatographic and Other Special techniques
Paper 105 - Advanced Pharmaceutical Analysis-I - LAB

Paper 106 - Chromatographic and Other Special techniques - LAB

Paper 107 - Seminar

II SEMESTER

Paper 201 - Advanced Pharmaceutical Analysis - II

Paper 202 - Phytopharmaceutical and Biological Analysis
Paper 203 - Quality Assurance of Pharmaceuticals – I

Paper 204 - Drug Regulatory Affairs

Paper 205 - Advanced Pharmaceutical Analysis - II - LAB

Paper 206 - Phytopharmaceutical and Biological Analysis - LAB

Paper 207 - Seminar

III SEMESTER

Paper 301 - Project Seminar-I (On the proposed project work with aims and

objectives) - 50 Marks

Paper 302 - Project work - I

IV SEMESTER

Paper 401 - Project Seminar-II (On the experimentation and results of the

project work) - 50 Marks

Beside: VSEZ, Duwada, Visakhapatnam-46

Paper 402 - Project work - II

A MOLAPUOL VS. 45

SCHEME OF INSTRUCTIONS AND EVALUATION

PHARMACEUTICAL ANALYSIS AND QUALITY ASSURANCE

FIRST SEMESTER

		Evaluation / Marks					
Paper No.	Title of the Paper	Theory		Practical		Total	Credits
		Mid Examination	University End Examination	Mid Examination	University End Examination		
Paper - 101	Modern Analytical Techniques	40	60			100	3
Paper – 102	Research Methodologies	40	60			100	3
Paper - 101	Advanced Pharmaceutical Analysis-I	40	60			100	3
Paper - 102	Chromatographic and Other Special Techniques	40	60			100	3
Paper – 104	Advanced Pharmaceutical Analysis-I Practical			40	60	100	2
Paper – 105	Chromatographic and Other Special Techniques Practical			40	60	100	2
Paper – 106	Seminar					100	2
	TOTAL					700	18





SECOND SEMESTER

		Evaluation / Marks					
Paper No.	Title of the Paper	Theory		Practical		Total	Credits
		Mid Examination	University End Examination	Mid Examination	University End Examination		
Paper – 201	Advanced Pharmaceutical Analysis-II	40	60			100	3
Paper -202	Phytopharmaceutical and Biological Analysis	40	60			100	3
Paper – 203	Quality Assurance of Pharmaceuticals-I	40	60			100	3
Paper – 204	Drug Regulatory affairs	40	60			100	3
Paper – 205	Advanced Pharmaceutical Analysis-II Practical			40	60	100	2
Paper - 206	Phytopharmaceutical and Biological Analysis Practical			40	60	100	2
Paper – 207	Seminar					100	2
	TOTAL					700	18





THIRD AND FOURTH SEMESTERS

Paper No.	III Semester	Total	Credits ***
Paper - 301	Project Seminar – I (On the proposed project work with aims and objectives)	50	2
Paper - 302	Project work - I		20
	Total	50	22

Paper No.	IV Semester	Total	Credits ***
Paper - 401	Project Seminar – II (On the Completed project work)	50	2
Paper - 402	Project work - II	No. 500 NO.	20
	TOTAL MARKS	50	22
	GRAND TOTAL FOR THE COURSE	1500	80

PRINCIPAL
VIGNAN INSTITUTE OF
PHARMACEUTICAL TECHNOLOGY
Beside: VSEZ, Duvvada, Visakhapatnam-46



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA SYLLABUS for M.PHARMACY

PHARMACOLOGY

I SEMESTER

Paper 101 - Modern Analytical Techniques

Paper 102 - Research Methodologies

Paper 103 - Systemic Pharmacology

Paper 104 - Pharmacokinetics and Drug Metabolism

Paper 105 - Systemic Pharmacology - LAB

Paper 106 - Pharmacokinetics and Drug Metabolism - LAB

Paper 107 - Seminar

II SEMESTER

Paper 201 - Advanced Pharmacology

Paper 202 - Pathophysiology and Pharmacotherapeutics

Paper 203 - Bioassays & Pharmacological Screening Methods

Paper 204 - Drug Regulatory Affairs

Paper 205 - Pathophysiology and Pharmacotherapeutics - LAB

Paper 206 - Bioassays & Pharmacological Screening Methods - LAB

Paper 207 - Seminar

III SEMESTER

Paper 301 - Project Seminar-I (On the proposed project work with aims and

objectives) - 50 Marks

Paper 302 - Project work - I

IV SEMESTER

Paper 401 - Project Seminar-II (On the experimentation and results of the

project work) – 50 Marks

Paper 402 - Project work - II





SCHEME OF INSTRUCTIONS AND EVALUATION

PHARMACOLOGY

FIRST SEMESTER

		Evaluation / Marks					
Paper No.	Title of the Paper	Theory		Practical		Total	Credits
140.		Mid Examination	University End Examination	Mid Examination	University End Examination		
Paper – 101	Modern Analytical Techniques	40	60			100	3
Paper – 102	Research Methodologies	40	60			100	3
Paper - 103	Systemic Pharmacology	40	60			100	3
Paper - 104	Pharmacokinetics and drug Metabolism	40	60			100	3
Paper - 105	Systemic Pharmacology – Practical			40	60	100	2
Paper - 106	Pharmacokinetics and drug Metabolism - Practical			40	60	100	2
Paper - 107	Seminar					100	2
	TOTAL					700	18





SECOND SEMESTER

		Evaluation / Marks					
Paper No.	Title of the Paper	Theory		Practical		Total	Credits
140.		Mid Examination	University End Examination	Mid Examination	University End Examination		
Paper – 201	Advanced Pharmacology	40	60			100	3
Paper -202	Pathophysiology and Pharmacotherapeutics	40	60			100	3
Paper – 203	Bioassays and Pharmacological Screening Methods	40	60			100	3
Paper – 204	Drug Regulatory affairs	40	60			100	3
Paper – 205	Pathophysiology and Pharmacotherapeutics – Practical			40	60	100	2
Paper – 206	Bioassays and Pharmacological Screening Methods - Practical			40	60	100	2
Paper – 207	Seminar					100	2
	TOTAL					700	18





THIRD AND FOURTH SEMESTERS

Paper No.	III Semester	Total	Credits
Paper - 301	Project Seminar – I (On the proposed project work with aims and objectives)	50	2
Paper - 302	Project work - I	and that the	20
	Total	50	22

Paper No.	IV Semester	Total	Credits ***
Paper - 401	Project Seminar – II (On the Completed project work)	50	2
Paper - 402	Project work - II	W 49 H	20
	TOTAL MARKS	50	22
	GRAND TOTAL FOR THE COURSE	1500	80

PRINCIPAL
VIGNAN INSTITUTE OF
PHARMACEUTICAL TECHNOLOCY
Beside: VSEZ, Duwada, Visakhapatnam-46

