

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

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SYLLABUS | R13 B.PHARMACY



VIJAYA INSTITUTE
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU VIJAYAWADA 52° 108

ACADEMIC REGULATIONS COURSE STRUCTURE AND DETAILED SYLLABUS

B.PHARMACY

For

B.PHARMACY FOUR YEAR DEGREE COURSE

(Applicable for the batches admitted from 2013-14)



JAWAHARLAL NEHRU TECHNOLOGICAL 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>

- 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.
- 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.
- 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 ternal and laboratory marks awarded by the College will be the committee. The Committee shall arrive at a scaling factor and the marks will be scaled as per the scaling factor.

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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.
- 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:

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

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- 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 wild in the limit of the award of B. Pharm Degree he shall be placed in one of the following four classes:

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and above w 70 but not less than 60%
v 70 but not less than 60%
70 out not less than 0070
w 60% but not less than 50%
v 50% but not less than 40%

(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:

10.1 Where the words "he", "him", "his", occur in the regulations, they include "he" "hers". "hers".

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- 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.



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COURSE STRUCTURE

I Year - I SEMESTER

S. No.	Subject	TP		Credits
1	English	3+1		3
2	Remedial Mathematics/ Remedial Biology	3/2 +		3/2
3	Human Anatomy & Physiology - I	3 + 1		3
4	Dispensing Pharmacy & Ethics	3 + 1		3
5	Pharmaceutical Organic Chemistry-I	3 + 1		3
6	English Communications Skills Lab		3	2
7	Remedial Biology Lab		2	0/1
8	Dispensing Pharmacy Lab		3	2
9	Pharmaceutical Organic Chemistry-I Lab		3	2
	Total Credits			21

I Year - II SEMESTER

S. No.	Subject	T	P	Credits
1	Human Anatomy & Physiology – II	3+1		3
2	Pharm. Inorganic Chemistry	3+1		3
3	Pharm. Organic Chemistry – II	3+1		3
4	Physical Pharmacy – I	3+1		3
5	Computer Applications & Biostatistics	3+1		3
6	Human Anatomy & Physiology Lab		3	2
7	Physical Pharmacy – I Lab		3	2
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		3
3	Physical Pharmacy - II	3+1		3
4	Pharmaceutical Microbiology	3+1		3
5	Environmental Science	3+1		3
6	Pharmacognosy – I Lab		3	2
7	Physical Pharmacon acenticator		3	2
8	Pharmaceutica Ph		3	2
	Total Enedits EPACU &			121

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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	Medicinal Chemistry Lab	-	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	2	
8	Pharm. Biotechnology Lab	-	3	2	
	Total Credits			24	



IV Year - I SEMESTER

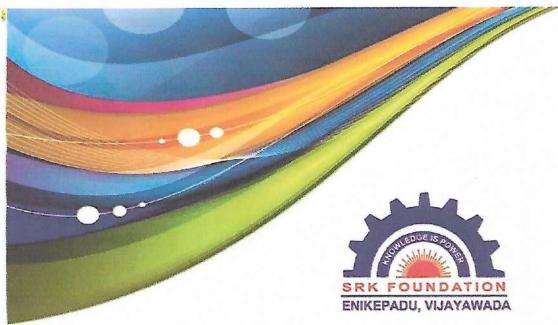
S. No.	Subject	T	P	Credits
1	Pharmaceutical Analysis -II	3+1	-	4
2	Bio assays & Toxicology	3 +1	-	4
3	Chemistry of Natural Products	3 +1	-	4
4	Hospital & Community Pharmacy	3 +1	-	4
5	Pharmaceutical Jurisprudence	3+1	-	3
6	Pharmaceutical Analysis – II Lab	-	3	2
7	Bio assays& Toxicology Lab	-	3	2
8	Chemistry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

IV Year - II SEMESTER

C N	Cubins	Т	P	Credit
S. No.	Subject	1	1	S
1	Biopharmaceutics & Pharmacokinetics	3 +1	-	4
2	Clinical Pharmacy, Therapeutics & Pharmacovigilance	3+1	· =	3
3	Controlled release & Novel Drug Delivery Systems	3 +1	:: - -	4
4	Quality Assurance, GMP, GLP	3 +1	3	3
5	Biopharmaceutics & Pharmacokinetics Lab	-	3	2
6	Project Work	_	•	4
7	Project Seminar	-	-	4
8	Comprehensive Viva	14	-	2
	Total Credits			26







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COURSE STRUCTURE AND SYLLABUS

For

B. PHARMACY

(Applicable for batches admitted from 2016-2017)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA KAKINADA - 533 003, Andhra Pradesh, India



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I Year I Semester

S. No.	Sub Code	Subject	L	T	P	Credits
1	PHR16111	English	4	1	-	3
2	PHR16112	Remedial Mathematics / Remedial Biology	4	-	-	0
3	PHR16113	Human Anatomy & Physiology - I	4	1	-	3
4	PHR16114	General & Dispensing Pharmacy	4	1	-	3
5	PHR16115	Pharmaceutical Organic Chemistry-I	4	1	-	3
6	PHR16116	English Communications Skills Lab	-	-	3	2
7	PHR16117	Remedial Biology Lab	-	-	2	0
8	PHR16118	General & Dispensing Pharmacy Lab	-	-	3	2
9	PHR16119	Pharmaceutical Organic Chemistry-I Lab	-	-	3	2
		Total	20	4	11	18

I Year II Semester

S. No.	Sub Code	Subject	L	T	P	Credits
1	PHR16121	Human Anatomy & Physiology - II	4	1	-	3
2	PHR16122	Pharm. Inorganic Chemistry	4	1	-	3
3	PHR16123	Pharm. Organic Chemistry – II	4	1	-	3
4	PHR16124	Physical Pharmacy – I	4	1	-	3
5	PHR16125	Computer Applications & Biostatistics	4	1	-	3
6	PHR16126	Human Anatomy & Physiology Lab	-	-	3	2
7	PHR16127	Physical Pharmacy – I Lab	-	-	3	2
8	PHR16128	Computer Applications Lab	-	-	3	2
		Total	20	5	9	21





II Year I Semester

S. No.	Sub Code	Subject	L	T	P	Credits
1	PHR16211	Pharmaceutical Unit Operations - I	4	1	-	3
2	PHR16212	Pharmaceutical Biochemistry	4	1	-	3
3	PHR16213	Physical Pharmacy - II	4	1	-	3
4	PHR16214	Pharmaceutical Microbiology	4	1	-	3
5	PHR16215	Health Education & Pathophysiology	4	1	-	3
6	PHR16216	Pharmaceutical Biochemistry Lab	-	-	3	2
7	PHR16217	Physical Pharmacy – II Lab	-	-	3	2
8	PHR16218	Pharmaceutical Microbiology Lab	-	-	3	2
		Total	20	5	9	21

II Year II Semester

S. No.	Sub Code	Subject	L	T	P	Credits
1	PHR16221	Pharmaceutical Unit Operations -II	4	1	-	3
2	PHR16222	Pharmaceutical Analysis - I	4	1	-	3
3	PHR16223	Pharmacognosy -I	4	1	-	3
4	PHR16224	Medicinal Chemistry - I	4	1	-	3
5	PHR16225	Pharmacology - I	4	1	-	3
6	PHR16226	Pharmaceutical Unit Operations Lab	-	-	3	2
7	PHR16227	Pharmaceutical Analysis - I Lab	-	-	3	2
8	PHR16228	Pharmacognosy – I Lab	-	-	3	2
		Total	20	5	9	21





III Year I Semester

S. No.	Sub Code	Subject	L	T	P	Credits
1	PHR16311	Pharmacognosy -II	4	1	-	4
2	PHR16312	Medicinal Chemistry - II	4	1	-	4
3	PHR16313	Pharmaceutical Technology - I	4	1	-	4
4	PHR16314	Environmental Sciences	4	1	-	2
5	PHR16315	Pharmaceutical Management	4	1	-	3
6	PHR16316	Pharmacognosy –II Lab	-	n=	3	2
7	PHR16317	Medicinal Chemistry Lab	_	-	3	2
8	PHR16318	Pharmaceutical Technology-I Lab	-	-	3	2
		Total	20	5	9	23

III Year II Semester

S. No.	Sub Code	Subject	L	T	P	Credits
1	PHR16321	Pharmaceutical Technology -II	4	1	-	4
2	PHR16322	Pharm. Biotechnology	4	1	-	4
3	PHR16323	Pharmacology - II	4	1	-	4
4	PHR16324	Medicinal Chemistry - III	4	1	-	4
5	PHR16325	Regulatory Affairs, IPR & Patents	4	1	-	2
6	PHR16326	Pharmaceutical Technology -II Lab	-	-	3	2
7	PHR16327	Pharm. Biotechnology Lab	-	-	3	2
8	PHR16328	Pharmacology Lab	-	-	3	2
		Total	20	5	9	24





IV Year I Semester

S. No.	Sub Code	Subject	L	T	P	Credits
1	PHR16411	Pharmaceutical Analysis -II	4	1	-	4
2	PHR16412	Biopharmaceutics & Pharmacokinetics	4	1	-	4
3	PHR16413	Chemistry of Natural Products	4	1	-	4
4	PHR16414	Hospital & Community Pharmacy	4	1	-	3
5	PHR16415	Pharmaceutical Jurisprudence	4	1	-	3
6	PHR16416	Pharmaceutical Analysis - II Lab	-	-	3	2
7	PHR16417	Biopharmaceutics & Pharmacokinetics Lab	-	-	3	2
8	PHR16418	Chemistry of Natural Products Lab	-	-	3	2
9		Project Commencement	-	-	-	-
		Total	20	5	9	24

IV Year II Semester

S. No.	Sub Code	Subject	L	T	P	Credits
1	PHR16421	Bioassays & Toxicology	4	1	-	3
2	PHR16422	Clinical Pharmacy, Therapeutics &Pharmaco vigilance	4	1	-	3
3	PHR16423	Controlled release & Novel Drug Delivery Systems	4	1	-	4
4	PHR16424	Quality Assurance, GMP, GLP	4	1	-	2
5	PHR16425	Bioassays & Toxicology Lab	-	-	3	2
6	PHR16426	Seminar on selected topic	-	-	-	2
7	PHR16427	Project Work *	-	-	-	8
8.	PHR16428	Comprehensive Viva voce	-	-	-	4
		Total	16	4	3	28

^{*}Project work evaluation includes dissertation, seminar and viva voce



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Rules & Syllabus for the Bachelor
of Pharmacy (B. Pharm) Course
as approved by
Pharmacy Council of India
New Delhi

[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

Course code	Name of the course	No. of hours	Tuto rial	Credit 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	-	2
BP108P	Pharmaceutical Analysis I - Practical	4	199	2
BP109P	Pharmaceutics I – Practical	4	=	2
BP110P	Pharmaceutical Inorganic Chemistry – Practical	4	-	2
BP111P	Communication skills - Practical*	2	-	1
BP112RBP	Remedial Biology - Practical*	2		1
	Total	32/34 ⁸ /36 [#]	4	27/29 ^S /3

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

^{*} Non University Examination (NUE)





⁵Applicable 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	-	3
BP206T	Environmental sciences - Theory *	3		3
BP207P	Human Anatomy and Physiology II -Practical	4		2
BP208P	Pharmaceutical Organic Chemistry I- Practical	4	-	2
BP209P	Biochemistry - Practical	4	-	2
BP210P	Computer Applications in Pharmacy - Practical*	2	-	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	-	2
BP306P	Physical Pharmaceutics I – Practical	4	-	2
BP307P	Pharmaceutical Microbiology - Practical	4	-	2
BP 308P	Pharmaceutical Engineering -Practical	4	-	2
	Total	28	4	24





Table-IV: Course of study for semester IV

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP401T	Pharmaceutical Organic Chemistry III- Theory	3	1	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	-	2
BP407P	Physical Pharmaceutics II – Practical	4		2
BP408P	Pharmacology I – Practical	4	-	2
BP409P	Pharmacognosy and Phytochemistry I – Practical	4	-	2
	Total	31	5	28

Table-V: Course of study for semester V

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP501T	Medicinal Chemistry II - Theory	3	1	4
BP502T	Industrial Pharmacyl- 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 Pharmacyl – Practical	4	-	2
BP507P	Pharmacology II - Practical	4	-	2
BP508P	Pharmacognosy and Phytochemistry II – Practical	4	=:	2
	Total	27	5	26





Table-VI: Course of study for semester VI

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

Table-VII: Course of study for semester VII

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

^{*} Non University Examination (NUE)



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Table-VIII: Course of study for semester VIII

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

Table-IX: Semester wise credits distribution

Semester	Credit Points
I	27/29 ⁸ /30 [#]
П	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 ⁸ /212 [#]
VIII Extracurricular/ Co curricular activities	22 01*

^{*} 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.

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





⁵Applicable ONLY for the students studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics course.

10. Program Committee

- 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:
 - 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.



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

Semester |

Course			Internal As	sessment		End Semes	ter Exams	Total
code	Name of the course	Continuous	Sessional I	Exams	Total	Marks	Duration	Marks
couc		Mode	Marks	Duration	Total	Marks	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	l Hr	25	75	3 Hrs	100
BP105T	Communication skills – Theory *	5	10	l Hr	15	35	1.5 Hrs	50
BP106RBT BP106RMT	Remedial Biology/ Mathematics – Theory*	5	10	l Hr	15	35	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
BPIIIP	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 ⁵ /80"	115/125 ⁵ /130 [#]	23/24 ⁵ /26" Hrs	185/200 ⁵ /210"	490/525 ⁵ / 540"	31.5/33 ⁵ / 35" Hrs	675/725 ⁵ 750"

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

^{*} Non University Examination (NUE)



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⁵Applicable ONLY for the students studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics (RM) course.

Semester II

Course			Internal A	ssessment		End Semester Exams		Total
code	Name of the course	Continuous	Session	al Exams	Total	Marks	Duration	Marks
couc		Mode	Marks	Duration	Total	Marks	Duration	Maik
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





Semester III

			Internal As	ssessment		End Semester Exams		Total
Course	Name of the course	Continuous	Session	al Exams	Total	Marks	Duration	Marks
code		Mode	Marks	Duration	Total	Marks	24	
BP301T	Pharmaceutical Organic Chemistry II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP302T	PhysicalPharmaceuticsI - Theory	10	15	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	l 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





Semester IV

Course	-	1	Internal As	sessment	End Seme	TD-4-1		
code	Name of the course	Continuous Mode		al Exams	Total	Marks	Duration	Total Marks
BP401T	Pharmaceutical Organic Chemistry III– Theory	10	Marks 15	Duration 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 Нг	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



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Semester V

Course	Name of the course		Internal A	ssessment		End Semester Exams		Total
code		Continuous	Session	al Exams	Total	Marks	Duration	Marks
couc		Mode	Marks	Duration	Total	Marks	Duration	IVAMI NO
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 – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP506P	Industrial Pharmacyl- Practical	5	10	4 Hr	15	35	4 Hrs	50
BP507P	Pharmacology II - Practical	5	10	4 Hr	15	35	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



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Semester VI

Course			Internal As	ssessment		End Seme	Total	
code	Name of the course	Continuous	Session	al Exams	Total	Marks	Duration	Marks
couc		Mode	Marks	Duration	Total	Marks	Duration	Maiks
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
BP603T	Herbal Drug Technology – Theory	10	15	l Hr	25	75	3 Hrs	100
BP604T	Biopharmaceutics and Pharmacokinetics – Theory	10	15	l Hr	25	75	3 Hrs	100
BP605T	Pharmaceutical Biotechnology— Theory	10	15	l Hr	25	75	3 Hrs	100
BP606T	Quality Assurance- Theory	10	15	1 Hr	25	75	3 Hrs	100
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



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Semester VII

Course code Name of the	No-se of the	1	Internal As	End S	Total			
	Name of the course	Continuous Mode	Sessional Exams		Total	Marks	Duration	Marks
			Marks	Duration	Total	Marks	Duration	
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



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Semester VIII

Course			Internal As	sessment		End Semester Exams		Total
code	Name of the course	Continuous	Sessiona	l Exams	Total	Marks	Duration	Marks
		Mode	Marks	Duration	Total	Marks	Duration	Maiks
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							
BP804ET	Pharmaceutical Regulatory Science - Theory							
BP805ET	Pharmacovigilance - Theory							
BP806ET	Quality Control and Standardization of Herbals – Theory	10 + 10	15 + 15 =	1+1=	25 + 25 =	75 + 75	3+3=6	100 +
BP807ET	Computer Aided Drug Design – Theory	= 20	30	2 Hrs	50	= 150	Hrs	100 = 200
BP808ET	Cell and Molecular Biology – Theory	81		=				
BP809ET	Cosmetic Science - Theory							
BP810ET	Experimental Pharmacology – Theory							
BP811ET	Advanced Instrumentation Techniques – Theory							
BP812PW	Project Work	-	-	-	-	150	4 Hrs	150

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Total 40 60 4 Hrs 100 450 16 Hrs 550

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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		imum irks
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	3	1.5
Total	10	5
Practical		
Attendance (Refer Table – XII)	2	
Based on Practical Records, Regular viva voce, etc.	3	
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.

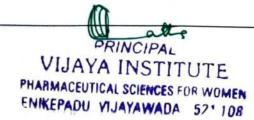
Sessional exam shall be conducted for 30 marks for theory and shall be computed for 15 marks. Similarly Sessional exam for practical shall be conducted for 40 marks and shall be computed for 10 marks.

Question paper pattern for theory Sessional examinations

For subjects having University examination

I. Multiple Choice Questions (MCQs)	=	$10 \times 1 = 10$
OR		OR
Objective Type Questions (5 x 2)	=	$05 \times 2 = 10$
(Answer all the questions)		
I. Long Answers (Answer 1 out of 2)	=	$1 \times 10 = 10$
II. Short Answers (Answer 2 out of 3)	=	$2 \times 5 = 10$
	Total =	30 marks





For subjects having Non University Examination

I. Long Answers (Answer 1 out of 2) $= 1 \times 10 = 10$ II. Short Answers (Answer 4 out of 6) $= 4 \times 5 = 20$

Total = 30 marks

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 OR = $10 \times 2 = 20$ (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 x 10 = 20 II. Short Answers (Answer 6 out of 8) = 6 x 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.

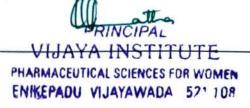
A lateral entry student shall be eligible to carry forward all the courses of III, IV and V semesters till the VI semester examinations. However, he/she shall not be eligible to attend the courses of VII semester until all the courses of III and IV semesters are successfully completed.

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.





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 Obtained	Letter Grade	Grade Point	Performance
90.00 - 100	0	10	Outstanding
80.00 - 89.99	Α	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 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, 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 ABS grade awarded in that semester. For example if a learner has a F or ABS grade in course 4, the SGPA shall then be computed as:





$$C_1G_1 + C_2G_2 + C_3G_3 + C_4* ZERO + C_5G_5$$

 $SGPA = C_1 + C_2 + C_3 + C_4 + C_5$

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:

$$CGPA = C_1S_1 + C_2S_2 + C_3S_3 + C_4S_4 + C_5S_5 + C_6S_6 + C_7S_7 + C_8S_8$$

$$C_1 + C_2 + C_3 + C_4 + C_5 + C_6 + C_7 + C_8$$

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:	-
Presentation of work	25 Marks
Communication skills	20 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.

Total

30 Marks

75 Marks

22. Industrial training (Desirable)

Question and answer skills

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.





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.







VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

Enikepadu, Vijayawada-521108. Andhra Pradesh, India. vijayapharmacyfw@gmail.com Phone: +91 741 656 0999

SYLLABUS | R13 M.PHARMACY



COURSE STRUCTURE AND DETAILED SYLLABUS

For M.PHARMACY Pharmaceutics







JAWAHARLAL NEHRUTECHNOLOGY UNIVERSITY KAKINADA KAKINADA - 533 003, Andhra Pradesh, India

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

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III SEMESTER

Paper 301 - Seminar-I
Paper 302 - Project Works

IV SEMESTER

Paper 401 - Seminar-II

Paper 402 - Project Work - II

Paper 403 - Comprehensive Viva Voce

SCHEME OF INSTRUCTIONS AND EVALUATION PHARMACEUTICAL ANALYSIS AND QUALITY ASSURANCE

			I SEME	STER			
Paper	Title		Evaluation	/ Marks			
No.	of the	7	Theory	Practica	ıl		
	Paper	Mid Examina tion	University End Examina- tion	Mid Examina- tion	University End Examina tion	Total	Cred its
Paper - 101	Modern Analytical Techniques	40	60			100	3
Paper - 102	Research Methodo -logies	40	60			100	3
Paper - 103	Biopharma- ceutics & Pharcokineties	40	60			100	3
Paper - 104	Advanced Physical Pharmaceutics	40	60			100	3
Paper - 105	Biopharma- ceutics &Pharcokineties			40	60	100	2
Paper - 106	Advanced Physical Pharmaceutics	okama	EPADU (AWADA.	40	60	100	2
Paper - 107	Seminal	ALIANS OF THE OF	EPADU CON CONTRACTOR C		MOIPAL	100	2
	Total	A STATE OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OWNER OF THE OWNER	* namote	VIJAYA PHARMACEUTIC ENIKEPADU	INSTITUTAL SCIENCES FOR N	NOMEN 71 700	18

PHARMACEUTICAL SCIENCES FOR WOMEN ENIKEPADU VIJAYAWADA 521 108

III SEMESTER

Paper No.		Marks	Credits
Paper - 301	Seminar - I	50	2
Paper - 302	Project work - I	100	14
	Total	150	16
		1.00	

IV SEMESTER

Paper No.		Marks	Credits
Paper - 401	Seminar – II	50	2
Paper - 402	Project work – II	100	14
Paper - 403	Comprehensive Viva Voce	100	4
	Total	250	20
Grand Total (Four Semesters)		1800	72





COURSE STRUCTURE AND DETAILED SYLLABUS

For M.PHARMACY PHARMACEUTICALANALYSIS AND QUALITY ASSURANCE







JAWAHARLAL NEHRUTECHNOLOGY UNIVERSITY KAKINADA KAKINADA - 533 003, Andhra Pradesh, India

M.PHARMACY

PHARMACEUTICALANALYSIS AND QUALITY ASSURANCE

I SEMESTER

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 - Seminar-I

Paper 302 - Project Work

IV SEMESTER

Paper 401 - Seminar-II

Paper 402 - Project Work - II

SCHEME OF INSTRUCTIONS AND EVALUATION PHARMACEUTICAL ANALYSIS AND QUALITY ASSURANCE

			I SEME	STER			
Paper	Title	ı	Evaluation	/ Marks			
No.	of the	7	Theory	Practica	ıl		
357.65	Paper	Mid Examina tion	University End Examina- tion	Mid Examina- tion	University End Examina tion	Total	Cred
Paper - 101	Modern Analytics Techniques	40	60			100	3
Paper - 102	Research Methodo -Igies	40	60			100	3
Paper - 101	Advanced Pharmaceutical Analysis	40	60			100	3
Paper - 102	Chromato graphic and other special Techniques	40	60			100	3
Paper - 104	Advanced Pharmaceutical Analysis I Practical			40	60	100	3
Paper - 105	Chromato graphic and other special Techniques I Practical		aceutica/ screen	40	60	100	3
Paper - 106		o aniii eii	NAVAWADA OF	VIJ	AYA INSTI	100	2
	Total	1	Melly * no	PHARMAC	EUTICAL SCIENCES	FOR WOME	

rhatmaceutical Analysis And Quanty Assurance

			II SEME	ESTER			
Paper	Title	1	Evaluation / Marks				
No.	of the	Theory Practical					
	Paper	Mid Examina tion	University End Examina- tion	Mid Examina- tion	University End Examina tion	Total	Cred- its
Paper - 201	Advanced Pharmaceutical Analysis-II	40	60	43		100	3
Paper - 202	Pharmaceutical and Biological Analysis	40	60			100	3
Paper - 203	Quality Assuraranceof Pharmaceutical	3.70	60			100	3
Paper - 204	Drug Regultory Affairs	40	60			100	3
Paper - 205	Advanced Pharmaceutical I Analysis II Practical			40	60	100	3
Paper - 205	Phytopharma ceutical and Biological Analysis Practical			40	60	100	3
Paper - 206	Seminal	(Sept)	AIKEPADU AYAWADA.			100	2
	Total	of to all the of	HIKEPADU ES	VIJ	AYA INSTI	FOR MOM	18
1151				ENIKEPA	DAWAYALIV UD.	A 521 10)A

III SEMESTER

Paper No.		Marks	Credits
Paper - 301	Seminar – I	50	2
Paper - 302	Project work – I	100	14
	Total	150	16

IV SEMESTER

Paper No.		Marks	Credits
Paper - 401	Seminar – II	50	2
Paper – 402	Project work – II	100	14
Paper - 403	Comprehensive Viva Voce	100	4
	Total	250	20
Grand Total (Fou	ır Semesters)	1800	72



COURSE STRUCTURE AND DETAILED SYLLABUS

For M.PHARMACY PHARMACOLOGY







JAWAHARLAL NEHRUTECHNOLOGY UNIVERSITY KAKINADA KAKINADA - 533 003, Andhra Pradesh, India

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

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Paper 207 - Seminar

III SEMESTER

Paper 301 - Seminar-I

Paper 302 - Project Work – I

IV SEMESTER

Paper 401 - Seminar-II

Paper 402 - Project Work - II

Paner 403 - Comprehensive Viva Voce



SCHEME OF INSTRUCTIONS AND EVALUATION PHARMACOLOGY

			I SEME	STER			
Paper	Title		Evaluation	/ Marks			
No.	of the	٦	Theory	Practica	ıl		
2000000	Paper	Mid Examina tion	University End Examina- tion	Mid Examina- tion	University End Examina tion	Total	Cred its
Paper - 101	Modern Analytical Techniques	40	60			100	3
Paper - 102	Research Methodo -logies	40	60			100	3
Paper - 103	Systemic Pharmaco - logy	40	60			100	3
Paper - 104	Pharmaco kinetics and drug Metabolism	40	60			100	3
Paper - 105	Systemic Phramaco logy- Lab			40	60	100	2
Paper - 106	Pharmaco kinetics and drug Metabolism Lab	- Cast	MACEULICAL CO.	40	60	100	2
Paper - 107		titute of	NIKEPADU RES	VIJA	PAINCIPAL YA INSTIT	u 120	2
	Total	(See	NIKEPADU S	ENIKEPADI	VIJAYAWADA	521 10> 700	18

			II SEME	ESTER			
Paper	Title	Evaluation / Marks					
No.	of the	7	Theory	Practica	ıl		
	Paper	Mid Examina tion	University End Examina- tion	Mid Examina- tion	University End Examina tion	Total	Cred- its
Paper - 201	Advanced Pharmac ology	40	60			100	3
Paper - 202	Pathophy siology Pharma cother apeutics	40	60			100	3
Paper - 203	Bioassays and Phamacological Screening Methods	40	60			100	3
Paper - 204	Drgu Regultory Affairs	40	60			100	3
Paper - 205	Pathophy siology Pharma cother apeutics - Lab			40	60	100	2
Paper - 206	Bioassays and Pharmacdogica Screening Methods -			40	60	100	2
Paper - 207	Seminar	aimaci	utica/ Scie	M	N 15	100	2
	Total	A Jo of Ph	EPADU RESTOR	VIJAY	PRINCIPAL A INSTITUTION SCIENCES FOR VIJAYAWADA	T 700 WOMEI 521 108	18

III SEMESTER

Paper No.		Marks	Credits
Paper - 301	Seminar – I	50	2
Paper - 302	Project work – I	100	14
	Total	150	16

IV SEMESTER

Paper No.		Marks	Credits
Paper - 401	Paper - 401 Seminar - II		2
Paper - 402	Paper – 402 Project work – II		14
Paper - 403	Comprehensive Viva Voce	100	4
	Total	250	20
Grand Total (Four	Semesters)	1800	72

*** Credits for III & IV Seminar (Research & Seminar) = 40





VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

SYLLABUS | R08 PHARM D





साप्ताहिक/WEEKLY

प्राधिकार से प्रकाशित PUBLISHED BY AUTHORITY

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नई दिल्ली, शनिवार, मई 10-मई 16, 2008 (वैशाख 20, 1930)

No. 19]

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 सिम्मिलित हैं] [Miscellaneous Notifications including Notifications, Orders, Advertisements and Notices issued by Statutory Bodies]

भारतीय रिज़र्व 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 बैंक लिमिटेड'' शब्द होंगे।

ENIKEPADU VIJAYAWADA. O

आनन्द सिन्हा कार्यपालक निदेशक

[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

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



CHAPTER-II

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

Mathematics or Biology.

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

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

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



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

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

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

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

TABLES

First Year:

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

* For Biology





Second Year:

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

Third Year:

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





Fourth Year:

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

Fifth Year:

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

^{*} Attending ward rounds on daily basis.





Sixth Year:

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

- (i) Six months in General Medicine department, and
- (ii) Two months each in three other speciality departments
- 8. Syllabus. The syllabus for each subject of study in the said Tables shall be as specified in Appendix -A to these regulations.
- 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	Maximu	Maximum marks for Theory		Maximum marks for Practic		racticals
		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 = 1200

for Biology.



Second Year examination:

S.No.	Name of Subject	Maximum marks for Theory			Maximum marks for Practicals		
		Examination	Sessional	Total	Examination	Sessional	Total
2.1	Pathophy siology	70	30	100	-	-	-
2.2	Pharmaceutical Microbiology	70	30	100	70	30	100
2.3	Pharmacognosy & Phytopharmaceuticals	70	30	100	70	30	100
2.4	Pharmacolo gy -1	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	-	-	-
3.5	Medicinal Chemistry	70	30	100	70	30	100
3.6	Pharmaceutical Formulations	70	30	100	70	30	100
				600		No.Certi	500 = 1100

Fourth Year examination:

S.No.	Name of Subject	Maximum marks for Theory		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	•	-	-
4.5	Biopharmaceutics & Pharmacokinetics	70	30	100	70	30	100
4.6	Clinical Toxicology	70	30	100		-	-
				600			400 = 1000



Fifth Year examination:

S.No.	Name of Subject	Maximum marks for Theory			Maximun	Maximum marks for Practic	
		Examination	Sessional	Total	Examination	Sessional	Total
5.1	Clinical Research	70	30	100	-	-	-
5.2	Pharmacoepidemiology and Pharmacoeconomics	70	30	100	-	-	-
5.3	Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	70	30	100	-		*1
5.4	Clerkship *	- 4	-	-	70	30	100
5.5	Project work (Six Months)		-	-	100**	-	100
				300			200 = 50

- * Attending ward rounds on daily basis.
- ** 30 marks viva-voce (oral)

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, prompters viva voce record maintenance, etc.

ENIKEPADU VIJAYAWADA (10 marks).

- 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 to12 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.



CHAPTER-III Practical training

- 19. Hospital posting.— Every student shall be posted in constituent hospital for a period of not less than fifty hours to be covered in not less than 200 working days in each of second, third & fourth year course. Each student shall submit report duly certified by the preceptor and duly attested by the Head of the Department or Institution as prescribed. In the fifth year, every student shall spend half a day in the morning hours attending ward rounds on daily basis as a part of clerkship. Theory teaching may be scheduled in the afternoon.
- 20. Project work.— (1) To allow the student to develop data collection and reporting skills in the area of community, hospital and clinical pharmacy, a project work shall be carried out under the supervision of a teacher. The project topic must be approved by the Head of the Department or Head of the Institution. The same shall be announced to students within one month of commencement of the fifth year classes. Project work shall be presented in a written report and as a seminar at the end of the year. External and the internal examiners shall do the assessment of the project work.
 - (2) Project work shall comprise of objectives of the work, methodology, results, discussions and conclusions.
- 21. Objectives of project work. The main objectives of the project work is to—
 - show the evidence of having made accurate description of published work of others and of having recorded the findings in an impartial manner; and
 - (ii) develop the students in data collection, analysis and reporting and interpretation skills.
- 22. Methodology.— To complete the project work following methodology shall be adopted, namely:—
 - (i) students shall work in groups of not less than two and not more than four under an authorised teacher;
 - (ii) project topic shall be approved by the Head of the Department or Head of the Institution;
 - (iii)project work chosen shall be related to the pharmacy practice in community, hospital and clinical setup. It shall be patient and treatment (Medicine) oriented, like drug utilisation reviews, pharmacoepidemiology, pharmacovigilance or pharmacoeconomics;
 - (iv) project work shall be approved by the institutional ethics committee;
 - (v) student shall present at least three seminars, one in the beginning, one at middle and one at the end of the project work; and
 - (vi) two-page write-up of the project indicating title, objectives, methodology anticipated benefits and references shall be submitted to the Head of the Department or Head of the Institution.



- 23. Reporting .— (1) Student working on the project shall submit jointly to the Head of the Department or Head of the Institution a project report of about 40-50 pages. Project report should include a certificate issued by the authorised teacher, Head of the Department as well as by the Head of the Institution
 - (2) Project report shall be computer typed in double space using Times Roman font on A4 paper. The title shall be in bold with font size 18, sub-tiles in bold with font size 14 and the text with font size 12. The cover page of the project report shall contain details about the name of the student and the name of the authorised teacher with font size 14.
 - (3) Submission of the project report shall be done at least one month prior to the commencement of annual or supplementary examination.
- 24. Evaluation.— The following methodology shall be adopted for evaluating the project work—
 - (i) Project work shall be evaluated by internal and external examiners.
 - (ii) Students shall be evaluated in groups for four hours (i.e., about half an hour for a group of four students).
 - (iii) Three seminars presented by students shall be evaluated for twenty marks each and the average of best two shall be forwarded to the university with marks of other subjects.

(iv) Evaluation shall be done on the following items:	Marks
a) Write up of the seminar	(7.5)
b) Presentation of work	(7.5)
c) Communication skills	(7.5)
d) Question and answer skills	(7.5)
Total	(30 marks)
(v) Final evaluation of project work shall be done on the following items:	Marks
a) Write up of the seminar	(17.5)
b) Presentation of work	(17.5)
c) Communication skills	(17.5)
d) Question and answer skills	(17.5)
Total	(70 marks)

Explanation.— For the purposes of differentiation in the evaluation in case of topic being the same for the group of students, the same shall be done based on item numbers b, c and d mentioned above.



SCANNED IMAGES O	F COLLEGE CALENDAR
(201	(7-18)

Vijaya Ii itute of Pharmaceutical Sciences for Wom Enikepadu, Vijayawada – 521108.

I Semester Academic Calendar for the year 2017-18

Commencement of	I B. Pharm	II B. Pharm	III B. Pharm	IV B. Pharm	
Class Work 04.09.2017	04.09.2017	12.06.2017	12.06.2017	19.06.2017	
1 Unit Instruction	04.09.2017 - 28.10.2017	12.06.2017 -05.08.2017	12.06.2017 - 05.08.2017	19.06.2017 - 12.08.2017	
I Mid Exams	30.10.2017 - 04.11,2017	07.08.2017 - 12.08.2017	07.08.2017 - 12.08.2017	14.08.2017 - 19.08.2017	
II Unit Instruction	06.11.2017 - 30.12.2017	14.08.2017 - 07.10.2017	14.08.2017 -07.10.2017	21.08.2017 - m14.10.2017	
Internal Lab Exams	25.12.2017 - 30.12.2017	03.10.2017 - 07.10.2017	03.10.2017 - 07.10.2017	09.10.2017 - 14.10.2017	
II Mid Exams	01.01.2018 - 06.01.2018	09.10.2017 - 14.10.2017	09.10.2017 - 14.10.2017	16.10.2017 - 21.10.2017	
External Lab Exams	08.01.2018 - 13.01.2018	16.10.2017 - 21.10.2017	16.10.2017 - 21.10.2017	23.10.2017 - 28.10.2017	
Sem End Exams	16.01.2018 - 27.01.2018	23.10.2017 - 04.11.2017	23.10.2017 - 04.11.2017	30.10.2017 - 11.11.2017	
II Sem Commencement	29.01.2018	20.11.2017	20.11.2017	27.11.2017	

Note:-

- . Dasahara :- 28.09.2017 02.10.2017.
- 2. Diwali :- 19.10.2017

II Semester Academic Calendar for the year 2017-18

11 Semester Academic Calendar for the year 2017-18				
Commencement of	I B. Pharm	II B. Pharm	III B. Pharm	IV B. Pharm
Class Work	29.01.2018	20.11.2017	20,11,2017	27.11.2017
Unit Instruction	29.01.2018 - 24.03.2018	20.11.2017 - 13.01.2018	20.11.2017 - 13.01.2018	22.01.2018 - 27.01.2018
I Mid Exams	26.03.2018 - 31.03.2018	15.01.2018 - 20.01.2018	15.01.2018 - 20.01.2018	22.01.2018 - 27.01.2018
II Unit Instruction	02.04.2018 - 26.05.2018	22.01.2018 - 17.03.2018	22.01.2018 - 17.03.2018	29.01.2018 - 24.03.2018
Internal Lab Exams	21.05.2018 - 26.05.2018	12.03.2018 - 17.03.2018	12.03.2018 - 17.03.2018	19.03.2018 - 24.03.2018
Il Mid Exams	28.05.2018 - 02.06.2018	19.03.2018 - 24.03.2018	19.03.2018 - 24.03.2018	26.03.2018 - 31.03.2018
External Lab Labras	4.06.2018 - 09.06.2018	26.03.2018 - 31.03.2018	26.03.2018 - 31.03.2018	02.04.2018 - 07.04.2018
Sem End Example ENIKEPADY	.06.2018 - 23.06.2018	02.04.2018 - 14.04.2018	02.04.2018 - 04.04.2018	09.04.2018 - 21.04.2018
Commencement of West	09.07.2018	11.06.2018	11.06.2018	
Academic Year		PAIN	CIPAL	677

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I M.PHARM ACADEMIC CALENDAR FOR THE YEAR 2017-18

Commencement of Class Work	I SEMESTER	II SEMESTER	
	18.09.2017	12.02.2018	
I Unit Instruction	18.09.2017 - 11.11.2017	12.02.2018 - 07.04.2018	
I Mid Exams	13.11.2017 - 18.11.2017	09.04.2018 - 14.04.2018	
II Unit Instruction	20.11.2017 - 13.01.2018	16.04.2018 - 09.06.2018	
Internal Lab Exams	15.01.2018 - 15.01.2018	10.05.2018 - 10.05.2018	
II Mid Exams	16.01.2018 - 20.01.2018	11.06.2018 - 16.06.2018	
External Lab Exams	22.01.2018 - 27.01.2018	18.06.2018 - 23.06.2018	
Sem End Exams	29.01.2018 - 10.02.2018	25.06.2018 - 07.07.2018	

II M.PHARM ACADEMIC CALENDAR FOR THE YEAR 2017-18

Commencement of	III SEMESTER	IV SEMESTER 06.11.2017	
Class Work	05.06.2017		
Project Work	05.06.2017 - 04.11.2017		
Seminar - I	04.11.2017		
Project Work		06.11.2017 - 07.04.2018	
Seminar - II		07.04.2018	
Thesis Submission		09.04.2018 - 30.06.2018	

Note:

1. Dasahara :- 28.09.2017 - 02.10.2017.

2. Diwali :- 19.10.2017



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Academic Calendar for the year 2017-18

Academic Calendar for the year 2017-16				
Commencement of	I Pharm D	II Pharm D	III Pharm D	
Class Work	04.09.2017	10.07.2017	12.06.2017	
I Unit Instruction	104.09.2017 - 25.11.2017	10.07.2017 - 30.09.2017	12.06.2017 - 02.09.2017	
I Mid	27.11.2017 - 02.12.2017	03.10.2017 - 07.10.2017	04.09.2017 - 09.09.2017	
II Unit Instruction	04.12.2017 - 24.02.2018	09.10.2017 - 30.12.2017	11.09.2017 - 02.12.2017	
II Mid	26.02.2018 - 03.03.2018	01.01.2018 - 06.01.2018	04.12.2017 - 09.12.2017	
III Unit Instruction	05.03.2018 - 26.05.2018	08.01.2018 - 31.03.2018	11.12.17 - 03.03.2018	
III Mid	28.05.2018 - 02.06.2018	02.04.2018 - 07.04.2018	05.03.2018 - 10.03.2018	
Internal Lab	28.05.2018 - 02.06.2018	02.04.2018 - 07.04.2018	05.03.2018 - 10.03.2018	
External Lab	04.06.2018 - 16.06.2018	09.04.2018 - 21.04.2018	12.03.2018 - 24.03.2018	
Annual Exam	18.06.2018 - 30.06.2018	23.04.2018 - 05.05.2018	26.03.2018 - 07.04.2018	
Commencement of Next Academic Year	16.07.2018	11.06.2018	11.06.2018	

Note:-

1. Dasahara: - 28.09.2017 - 02.10.2017.

2. Diwali :- 19.10.2017.

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