# University of Mumbai

**No. UG/ 67 of 2019-20**

**CIRCULAR:-**

Attention of the Principals of the Affiliated Colleges, Directors of the recognized Institutions in Science & Technology Faculty is invited to this office Circular No. UG/193 of 2016-17, dated 3rd December, 2016 relating to the Credit System Manual revised syllabus for B. Pharm. & M. Pharm. (Sem. I to IV).

They are hereby informed that the recommendations made by the Ad-hoc Board of Studies in Pharmacy at its meeting held on 14th June, 2019 have been accepted by the Academic Council at its meeting held on 26th July, 2019 **vide** item No. 4.39 and that in accordance therewith, the Manual and Revised Scheme and Syllabus as per the (CBCS) for the Bachelor of Pharmacy (Sem. I to VIII) has been brought into force with effect from the academic year 2019-20, accordingly. (The same is available on the University's website www.mu.ac.in).

(Dr. Ajay Deshmukh)
REGISTRAR

MUMBAI – 400 032
14th August, 2019

To

The Principals of the affiliated Colleges, and Directors of the recognized Institutions in Science & Technology Faculty. (Circular No. UG/334 of 2017-18 dated 9th January, 2018.)

**A.C/4.39/26/07/2019**

***************

No. UG/ 67 -A of 2019-20 MUMBAI-400 032 14th August, 2019

Copy forwarded with Compliments for information to:-

1) The I/c Dean, Faculty of Science & Technology,
2) The Chairman, Board of Studies in Pharmacy,
3) The Director, Board of Examinations and Evaluation,
4) The Director, Board of Students Development,
5) The Co-ordinator, University Computerization Centre,

(Dr. Ajay Deshmukh)
REGISTRAR

Item No. 4.39

# UNIVERSITY OF MUMBAI

## Syllabus for Approval

| Sr. No. | Heading | Particulars |
|---|---|---|
| 1 | Title of the Course | Bachelor of Pharmacy (B Pharm.) |
| 2 | Eligibility for Admission | H.S.C / CET |
| 3 | Passing Marks | 50% |
| 4 | Ordinances / Regulations ( if any) | |
| 5 | No. of Years / Semesters | 4 (Four) Years / 8 (Eight) Semesters |
| 6 | Level | ~~P.G.~~ / U.G./ ~~Diploma~~ / ~~Certificate~~ (Strike out which is not applicable) |
| 7 | Pattern | ~~Yearly~~ / Semester (Strike out which is not applicable) |
| 8 | Status | ~~New~~ / Revised (Strike out which is not applicable) |
| 9 | To be implemented from Academic Year | From Academic Year 2019-20 |

Date: 9/7/19

Signature :

Name of BOS Chairperson / Dean : KRISHNA IYER Ph.D.

# SCHEME AND SYLLABUS

# for

## CHOICE BASED CREDIT SYSTEM

for

## Undergraduate Programme

## (Bachelor of Pharmacy, B. Pharm.)

in

## PHARMACY

Revised Course (Revised 2019)

from the academic year 2019-2020

# INTRODUCTION

## RECOMMENDATIONS OF NATIONAL REGULATORY AUTHORITIES

**The University Grants Commission (UGC),** the **National Assessment and Accreditation Council (NAAC),** the **Distance Education Council (DEC)** and the **National Knowledge Commission (NKC)** have time and again come out with recommendations for improving the quality and effectiveness of Higher education provisions in the country. The ministry of Human Resource Development at the Central level and the Ministry of Higher & Technical Education, Govt. of Maharashtra have also repeatedly stressed on the need for universities to pay prompt attention to improve the quality of education. **T**he **National Knowledge Commission (NKC)**, in its report to the Prime Minister on 29th November 2006) has also reiterated the importance of higher education and the contribution it has made to economic development, social progress and political democracy in independent India.

An important concern voiced more strongly in recent times, is the need to develop a Choice-Based Credit System (CBCS) in tune with global trends and the adoption of a sound grading system for reflecting learner performance. This is in line with the **recommendation of the UGC** in its *Action Plan for Academic and Administrative Reforms* (Ref. UGC letters January 2008; March 2009) "……. *Curricular flexibility and learners' mobility is an issue that warrants our urgent attention. These can be addressed by introducing credit based courses and credit accumulation. In order to provide with some degree of flexibility to learners, we need to provide flexibility in course selection and also a minimum as well as a maximum permissible span of time in which a course can be completed by a learner… The Choice-Based Credit System (CBCS) imminently fits into the emerging socioeconomic milieu, and could effectively respond to the educational and occupational aspirations of the upcoming generations. In view of this, institutions of higher education in India would do well to invest thought and resources into introducing CBCS. Aided by modern communication and information technology, CBCS has a high probability to be operationalized efficiently and effectively — elevating learners, institutions and higher education system in the country to newer heights…".*

## RATIONALE FOR INTRODUCTION OF CREDIT AND GRADING SYSTEM

The UGC while outlining the several unique features of the Choice-Based Credit System (CBCS) has, in fact, given in a nutshell, the rationale for its introduction. Among the features highlighted by the UGC are: *Enhanced learning opportunities, ability to match learners' scholastic needs and aspirations, inter-institution transferability of learners (following the completion of a semester), part-completion of an academic programme in the institution of enrolment and part-completion in a specialized (and recognized) institution, improvement in educational quality and excellence, flexibility for working learners to complete the programme over an extended period of time, standardization and comparability of educational programmes across the country, etc.*

This Choice Based Credit System enables a much-required shift in focus from teacher-centric to learner-centric education since the workload estimated is based on the investment of time in learning, not in teaching. It also focuses on continuous evaluation which will enhance the quality of education. It can be concluded from the above discussion that it is very much essential to implement the Choice Based Credit System in higher education in India. Course credit structure, examination/assessment and grading are mainly focused aspects of this manual and discussed in subsequent chapters.

**DIRECTIVES OF PHARMACY COUNCIL OF INDIA**

The Pharmacy Council of India (PCI) in exercise of the powers conferred to it under the sections 10 and 18 of the Pharmacy Act 1948 (8 of 1948), with the approval of the Central Government, had made the Bachelor of Pharmacy (B. Pharm.) Course Regulations, 2014 and Master of Pharmacy (M. Pharm.) Course regulations vide Gazette dated December 10, 2014. Further as per regulations 6 and 8 of the above course regulations the PCI has also prescribed the Rules and Syllabus for B. Pharm. course and Scheme and Syllabus for M. Pharm., its letter Ref 14-136/2016-PCI and Ref 14-154/2015 PCI dated December 21, 2016, with the subject heading "Statutory Scheme/Rules and syllabus for B. Pharm and M. Pharm. courses". It is thus mandatory to implement the directives of PCI with regard to the Rules/Regulations/Syllabus for recognition and extension of approval of B. Pharm. and M. Pharm. programs of institutes/Universities by the PCI

## 1. ADMISSION CRITERIA

Admission to the B. Pharm. program of University of Mumbai is governed by the rules and regulations of University of Mumbai and is as per norms of the Govt. of Maharashtra through the State CET-CELL (Maharashtra State), the All India Council for Technical Education (AICTE, New Delhi), and Pharmacy Council of India (PCI, New Delhi). Minimum qualification for admission into Bachelor of Pharmacy program would be according to the rules and regulations of AICTE, PCI, Government of Maharashtra and University of Mumbai in force at the time of admission.

**Admission criteria for First Year B. Pharm is as follows:**

In general, a learner who has passed HSC or its equivalent examination with Physics and Chemistry as compulsory subjects along with one of the Mathematics or Biotechnology or Biology and obtained at least 50% marks (at least 45 marks in case of candidates of backward category and persons with disability belonging to Maharashtra state only.) in the above subjects taken together and obtained score in CET/ NEET / any other equivalent exam is eligible for admission to Semester I of First Year B. Pharm. However, the rules/regulations and qualifications for admission will be those in effect at the day and time of admission.

**Admission criteria for admission into Semester III of Bachelor of Pharmacy (Lateral Entry to Second Year B. Pharm.) is as follows:**

In general, a learner who has passed Diploma course in Pharmacy with an aggregate of 45% (at least 40 marks in case of candidates of backward category and persons with disability belonging to Maharashtra state only.) from an All India Council for Technical Education or Pharmacy Council of India or Central or State Government approved institutions or its equivalent. However, the rules/regulations and qualifications for admission will be those in effect at the day and time of admission.

## 2. COURSE STRUCTURE

### 2.1. 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 medium of instruction shall be English.

### 2.2. Working days in each semester

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

As the requirements for a particular degree (undergraduate or postgraduate), a certain quantum of academic work measured in terms of credits is laid down in general. Learner earns credits every semester by satisfactorily clearing courses/other academic activities. 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 activities is dependent upon the quantum of work expected to be put in for each of the other activity per week.

### 2.3. Attendance and progress

A candidate is required to put in at least **75%** 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.

### 2.4. Credit Assignment

#### 2.4.1. Theory and Laboratory Courses:

Courses are broadly classified as *Theory courses* and *Laboratory Courses.* Theory courses consist of lecture (**L**) and /or tutorial (**T**) hours. Laboratory courses consist of practical hours, but may have attached tutorial hours in special cases. Credit (**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 laboratory hours. Thus, for example, a theory course having **four** lectures and **one** tutorial per week throughout the semester carries a credit of **5**. Similarly, a laboratory course having **two** laboratory hours per week throughout semester carries a credit of **1**.

**For example –**

| **Theory course** | | | |
|---|---|---|---|
| **L** | **T** | **=** | **C** |
| **3** | **1** | | **4** |

| **Laboratory course** | | | |
|---|---|---|---|
| **P** | **T** | **=** | **C** |
| **4** | **0** | | **2** |

### 2.4.2. Projects/Dissertations

Project is a requirement for the B. Pharm. degree, wherein under the guidance of a faculty member, a group of not more than five learners in the eighth semester, is required to do some innovative work with the application of knowledge gained while learning various courses in the earlier years. The learner/s is/are expected to do a survey of literature in the subject, work out a Project plan and carry it out through survey, experimentation and/or modeling / computation. Through the Project work the learner has to exhibit skills for both analysis and critical thinking. The complete details of the project have to submitted as a report of not less than 25 pages (A4, 1 inch margins, single line space, font Times Roman, font size 12, excluding count of reference pages) to the College before the prescribed date. The credits assigned for Project is **6** credits.

### 2.4.3. Practice School

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

At the end of the practice school, every student shall submit a printed report (in triplicate) on the practice school he/she attended (not more than 25 pages). Along with the exams of semester VII, the report submitted by the student, knowledge and skills acquired by the student through practice school shall be evaluated by the subject experts at college level and grade point shall be awarded. The credits assigned for Practice School is **6** credits.

### 2.4.4. 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.

## 2.5. Minimum Credit Requirements

The minimum credit points required for award of a B. Pharm. degree is 208 plus credit of 1 for extra-curricular and co-curricular activities. These credits are divided into Theory courses, Tutorials, Practical, Practice School and Project over the duration of eight semesters. The credits are distributed semester wise as shown in the structure and syllabus manual. 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.

**2.6. Course/Subject codes:**

In the syllabus manual of each programme of a particular discipline, subject code is assigned for each course as follows:

- First two characters are alphabets and indicate the program of a particular discipline (BP indicates B. Pharm.).
- Third digit indicates semester number (1 indicates first Semester).
- The next two digits indicate chronological order of the course in the list of the subjects of the respective semester (01 indicates first course in the list of all courses of the respective semester).
- Alphabets onward sixth indicates nature of the course i.e. T indicates Theory, P indicates Practical and ET indicates Elective Theory, R indicates Remedial, PS indicates Practice School, PW indicates Project Work.

***For example –***

- ✔ BP101T indicates a B. Pharm. course of semester one and first theory course
- ✔ BP107P indicates a B. Pharm. course of semester one and seventh practical course
- ✔ BP807ET indicates a B. Pharm. course of semester eight and seventh elective theory course

## 3. EXAMINATION / ASSESSMENT AND GRADING

Semester wise performance assessment of every registered learner is to be carried out through various modes of examinations, in both theory and laboratory classes. These include Internal Assessment and End Semester Examination.

### 3.1. End semester examinations

The End Semester Examinations in Semesters I, II, III, IV, V and VI of the B. Pharm. Degree course will be conducted by the respective institutions/colleges where the learner has been admitted following rules and regulations. The examinations in Semesters VII and VIII will be conducted by the university. All Non University Examination Subjects (NUES) marked with asterisk symbol (*) syllabus structure, will have examinations conducted by the subject experts at college level and the marks/grades shall be submitted to the university.

A common time-table and common question papers for all the theory examinations of different semesters will be prepared/set by the university as per the procedure.

The question papers for the Theory courses in Semesters I, II, III, IV, V, VI, VII, and VIII will be set by examiners and paper-setters appointed by the University.

The assessment and moderation of the answer booklets for the examinations in Theory courses in Semesters I to VI will be carried out by respective institutions/colleges by the examiners and moderators appointed by the principals of the institutions/colleges for each paper from the panel approved by the Ad-hoc Board of Studies in Pharmacy.

Principals of the respective institutions/colleges are authorized to appoint examiners in the Practical examinations at Semesters I to VI on behalf of the university, only from the panel of suitable persons for appointment as examiners prepared by the Ad-hoc Board of Studies in Pharmacy.

The assessment and moderation of the answer booklets of the Theory courses in Semesters VII and VIII will be conducted by the University through Central Assessment Programme (CAP) or On Screen Marking (OSM) or as directed by the University of Mumbai.

The End Semester Examination for Laboratory classes for Semesters I to VI would be done at the institutional level by a pair of examiners appointed by the institution. For Semesters VII and VIII, the University would appoint two examiners for each Laboratory prescribed in Semesters VII and VIII. Evaluation would be done by the examiners appointed by the University at the place and time announced by the University.

### 3.2. Internal assessment: Continuous mode

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

**Table-1: Scheme for awarding internal assessment: Continuous mode**

| **Theory** | | |
|---|---|---|
| **Criteria** | **Maximum Marks** | |
| | **100 M Course** | **50 M Course** |
| Attendance (Refer Table – 2) | **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 – 2) | **2** | |
| Based on Practical Records, Regular viva voce, etc. | **3** | |
| **Total** | **5** | |

**Table- 2: Guidelines for the allotment of marks for attendance**

| **Percentage of Attendance** | **Theory** | **Practical** |
|---|---|---|
| **90 – 100** | **4** | **2** |
| **85 – 89** | **3** | **1.5** |
| **80 – 84** | **2** | **1** |
| **75 – 79** | **1** | **0.5** |
| **Less than 75** | **0** | **0** |

### 3.3. 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 of Schemes for internal assessments and end semester examinations.

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) (Answer all the questions) | = | 10 x 1 = 10 |
| I. Long Answers (Answer 1 out of 2) | = | 1 x 10 = 10 |
| II. Short Answers (Answer 2 out of 3) | = | 2 x 5 = 10 |
| **Total** | **=** | **30 marks** |

**For subjects having Non University Examination**

| | | |
|---|---|---|
| I. Long Answers (Answer 1 out of 2) | = | 1 x 10 = 10 |
| II. Short Answers (Answer 4 out of 6) | = | 4 x 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** |

## 4. PROMOTION AND AWARD OF GRADES

A student shall be declared **PASS** and eligible for getting grade in a course of B. Pharm. programme 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.

## 5. CARRY FORWARD OF MARKS

In case a student fails to secure the minimum **50%** in any Theory or Practical course, 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.

**6. 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

**7. RE-EXAMINATION OF END SEMESTER EXAMINATIONS**

Reexamination of end semester examination shall be conducted as per the schedule given in table 3. The exact dates of examinations shall be notified from time to time.

**Table-3: 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) | | |
| (Answer all the questions) | = | 20 x 1 = 20 |
| I. Long Answers (Answer 2 out of 3) | = | 2 x 10 = 20 |
| II. Short Answers (Answer 7 out of 9) | = | 7 x 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 x 10 =10 |
| II. Short Answers (Answer 5 out of 7) | = | 5 x 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 |

**8. ACADEMIC PROGRESSION:**

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 10.

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 10.

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 AB should 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.

## 9. GRADING OF PERFORMANCES

### 9.1. 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 – 4.

**Table – 4: Letter grades and grade points equivalent to Percentage of marks and performances**

| Percentage of Marks Obtained | Letter Grade | Grade Point | Performance |
|---|---|---|---|
| 90.00 – 100 | O | 10 | Outstanding |
| 80.00 – 89.99 | A | 9 | Excellent |
| 70.00 – 79.99 | B | 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.

**9.2. 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:

$$\text{SGPA} = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4G_4 + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

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 AB grade awarded in that semester. For example if a learner has an F or AB grade in course 4, the SGPA shall then be computed as:

$$\text{SGPA} = \frac{C_1G_1 + C_2G_2 + C_3G_3 + \text{ZERO} + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

### 9.3. 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 status in case 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:

$$\text{CGPA} = \frac{C_1S_1 + C_2S_2 + C_3S_3 + C_4S_4 + C_5S_5 + C_6S_6 + C_7S_7 + C_8S_8}{C_1 + C_2 + C_3 + C_4 + C_5 + C_6 + C_7 + C_8}$$

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,…. .

### 9.4. Declaration of class

**Although the GPA system is a stand-alone system of grading not amenable to facile conversion to percent marks, in general the conversion of CGPA to percent marks is: CGPA x 9.5 = Percent marks.**

The class shall be awarded on the basis of CGPA as follows:

| | |
|---|---|
| First Class with Distinction | = CGPA of. 7.37 and above |
| First Class | = CGPA of 6.32 to 7.36 |
| Second Class | = CGPA of 6.00 to 6.31 |

### 9.5. Project work

The internal and external examiner appointed by the college but approved by the Board of Studies for Pharmacy 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 |
| Question and answer skills | 30 Marks |
| **TOTAL** | **75 Marks** |

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

**9.6. 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.

**9.7. Practice School**

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

At the end of the practice school, every student shall submit a printed report (in triplicate) on the practice school he/she attended (not more than 25 pages). Along with the exams of semester VII, the report submitted by the student, knowledge and skills acquired by the student through practice school shall be evaluated by the subject experts at college level and grade point shall be awarded. The credits assigned for Practice School is **6** credits.

**9.8. Award of degree**

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

**10. Duration for completion of the program of study**

The duration for the completion of the program shall be fixed as per the norms of the University of Mumbai

**11. 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.

**12. 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.

ii. 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 Sessional exam (Internal Assessment) and before the end semester exam.

## 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 | Tutorial | 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<br>BP106RMT | Remedial Biology/<br>Remedial Mathematics – Theory* | 2 | - | 2 |
| BP107P | Human Anatomy and Physiology – Practical | 4 | - | 2 |
| BP108P | Pharmaceutical Analysis I – Practical | 4 | - | 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$/36#** | **4** | **27/29$/30#** |

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

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

* Non University Examination (NUE)

**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 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 | - | 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 | Instrumental Methods of Analysis –Practical | 4 | - | 2 |
| BP706PS | Practice School* | 12 | - | 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 | Pharma Marketing Management | 3 + 3 = 6 | 1 + 1 = 2 | 4 + 4 = 8 |
| BP804ET | Pharmaceutical Regulatory Science | | | |
| BP805ET | Pharmacovigilance | | | |
| BP806ET | Quality Control and Standardization of Herbals | | | |
| BP807ET | Computer Aided Drug Design | | | |
| BP808ET | Cell and Molecular Biology | | | |
| BP809ET | Cosmetic Science | | | |
| BP810ET | Experimental Pharmacology | | | |
| BP811ET | Advanced Instrumentation Techniques | | | |
| BP812ET | Dietary Supplements And Nutraceuticals - Theory | | | |
| BP813ET | Pharmaceutical Product Development - Theory | | | |
| BP814PW | Project Work | 12 | - | 6 |
| | **Total** | **24** | **4** | **22** |

**Table-IX: Semester wise credits distribution**

| Semester | Credit Points |
|---|---|
| I | **27/29$/30#** |
| II | 29 |
| III | 24 |
| IV | 28 |
| V | 26 |
| VI | 30 |
| VII | 24 |
| VIII | 22 |
| Extracurricular/ Co curricular activities | 01* |
| **Total credit points for the program** | **211/213$/214#** |

* The credit points assigned for extracurricular and or co-curricular activities shall be given by the Principals of the colleges and the same shall be submitted to the University. The criteria to acquire this credit point shall be defined by the colleges from time to time.

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

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

## Schemes for internal assessments and end semester examinations semester wise

**Semester I**

| Course code | Name of the course | Internal Assessment | | | | End Semester Exams | | Total Marks |
|---|---|---|---|---|---|---|---|---|
| | | Continuous Mode | Sessional Exams | | Total | Marks | Duration | |
| | | | Marks | Duration | | | | |
| 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 | 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 |
| 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$/80#** | **115/125$/130#** | **23/24$/26#Hrs** | **185/200$/210#** | **490/525$/ 540#** | **31.5/33$/ 35# Hrs** | **675/725$/ 750#** |

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

$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 code | Name of the course | Internal Assessment | | | | End Semester Exams | | Total Marks |
|---|---|---|---|---|---|---|---|---|
| | | Continuous Mode | Sessional Exams | | Total | Marks | Duration | |
| | | | Marks | Duration | | | | |
| 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** |

**Semester III**

| Course code | Name of the course | Internal Assessment | | | | End Semester Exams | | Total Marks |
|---|---|---|---|---|---|---|---|---|
| | | Continuous Mode | Sessional Exams | | Total | Marks | Duration | |
| | | | Marks | Duration | | | | |
| 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 | 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** |

**Semester IV**

| Course code | Name of the course | Internal Assessment | | | | End Semester Exams | | Total Marks |
|---|---|---|---|---|---|---|---|---|
| | | Continuous Mode | Sessional Exams | | Total | Marks | Duration | |
| | | | Marks | Duration | | | | |
| 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** |

**Semester V**

| Course code | Name of the course | Internal Assessment | | | | End Semester Exams | | Total Marks |
|---|---|---|---|---|---|---|---|---|
| | | Continuous Mode | Sessional Exams | | Total | Marks | Duration | |
| | | | Marks | Duration | | | | |
| BP501T | Medicinal Chemistry II – Theory | 10 | 15 | 1 Hr | 25 | 75 | 3 Hrs | 100 |
| BP502T | Industrial PharmacyI– 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 and Phytochemistry 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 PharmacyI– 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** |

**Semester VI**

| Course code | Name of the course | Internal Assessment | | | | End Semester Exams | | Total Marks |
|---|---|---|---|---|---|---|---|---|
| | | Continuous Mode | Sessional Exams | | Total | Marks | Duration | |
| | | | Marks | Duration | | | | |
| 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 | 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 | Pharmaceutical 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** |

**Semester VII**

| Course code | Name of the course | Internal Assessment | | | | End Semester Exams | | Total Marks |
|---|---|---|---|---|---|---|---|---|
| | | Continuous Mode | Sessional Exams | | Total | Marks | Duration | |
| | | | 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 conductexaminations

**Semester VIII**

| Course code | Name of the course | Internal Assessment | | | | End Semester Exams | | Total Marks |
|---|---|---|---|---|---|---|---|---|
| | | Continuous Mode | Sessional Exams | | Total | Marks | Duration | |
| | | | Marks | Duration | | | | |
| 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 = 20 | 15 + 15 = 30 | 1 + 1 = 2 Hrs | 25 + 25 = 50 | 75 + 75 = 150 | 3 + 3 = 6 Hrs | 100 + 100 = 200 |
| BP804ET | Pharmaceutical Regulatory Science – Theory | | | | | | | |
| BP805ET | Pharmacovigilance – Theory | | | | | | | |
| BP806ET | Quality Control and Standardization of Herbals – Theory | | | | | | | |
| BP807ET | Computer Aided Drug Design – Theory | | | | | | | |
| BP808ET | Cell and Molecular Biology – Theory | | | | | | | |
| BP809ET | Cosmetic Science – Theory | | | | | | | |
| BP810ET | Experimental Pharmacology – Theory | | | | | | | |
| BP811ET | Advanced Instrumentation Techniques – Theory | | | | | | | |
| BP812ET | Dietary Supplements And Nutraceuticals - Theory | | | | | | | |
| BP813ET | Pharmaceutical Product Development - Theory | | | | | | | |
| BP814PW | Project Work | - | - | - | - | 150 | 4 Hrs | 150 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Total** | **40** | **60** | **4 Hrs** | **100** | **450** | **16 Hrs** | **550** |