



Directorate of Technical Education, Maharashtra State, Mumbai
Approved courses for admission to UG and PG Professional Technical Courses for Academic Year 2020-21
3, Mahapalika Marg, Post Box No.1967 opposite Metro Cinema, Mumbai-400001. (M.S.)

Acknowledgement for Approval of Intake for Admission to Professional Technical Courses for Academic Year 2020-21
[As per DTE Circular No. २३/१३११/२०२१/४९२ Dated: 17 June 2021]

pt. 2 of Ex-1.2
To merge with pt 5 of Ex-1.1

Institute Information			
Institute Code	: 4202		
Institute Name	: Guru Nanak College of Pharmacy, Nagpur		
Region	: Nagpur	Region Type	: Urban
Address	: Khasra No 81/1 Mauza Nari, Near Pili Nadi Behind C.P. Foundry, Kamptee Road, Nagpur	District	: Nagpur
Taluka	: Nagpur Urban	Village	: Nagpur (M Corp.)
PIN	: 440026	NAAC	: Not Applied

Status Information			
Status	: Un-Aided	Autonomy Status	: Non-Autonomous
Minority Status	: Non-Minority		

PCI Approved Master of Pharmacy Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University having Un-Aided Courses

Choice Code	Course Name	Course Type	Education Type	Accreditation	Intake 2021-22							
					Intake 2020-21	PCI	GR	University/ Board Affiliation	Court / Other Case	Admission Intake	CAP	DTE/RO Approval
420212510	Quality Assurance	Regular	Co.Ed.	Accredited From 2015-2016 To 2020-2021	15	15	15	15	--	15	Yes	Approved
420281710	Pharmaceutics	Regular	Co.Ed.	Accredited From 2015-2016 To 2020-2021	15	15	15	15	--	15	Yes	Approved
420282210	Pharmaceutical Chemistry	Regular	Co.Ed.	Accredited From 2015-2016 To 2020-2021	15	15	15	15	--	15	Yes	Approved
Total					45	45	45	45	--	45		

PCI Approved Bachelor of Pharmacy Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University having Un-Aided Courses

Choice Code	Course Name	Course Type	Education Type	Accreditation	Intake 2021-22							
					Intake 2020-21	PCI	GR	University/ Board Affiliation	Court / Other Case	Admission Intake	CAP	DTE/RO Approval
420282310	Pharmacy	Regular	Co.Ed.		60	60	60	60	--	60	Yes	Approved
Total					60	60	60	60	--	60		

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Seal & Signature of the Principal

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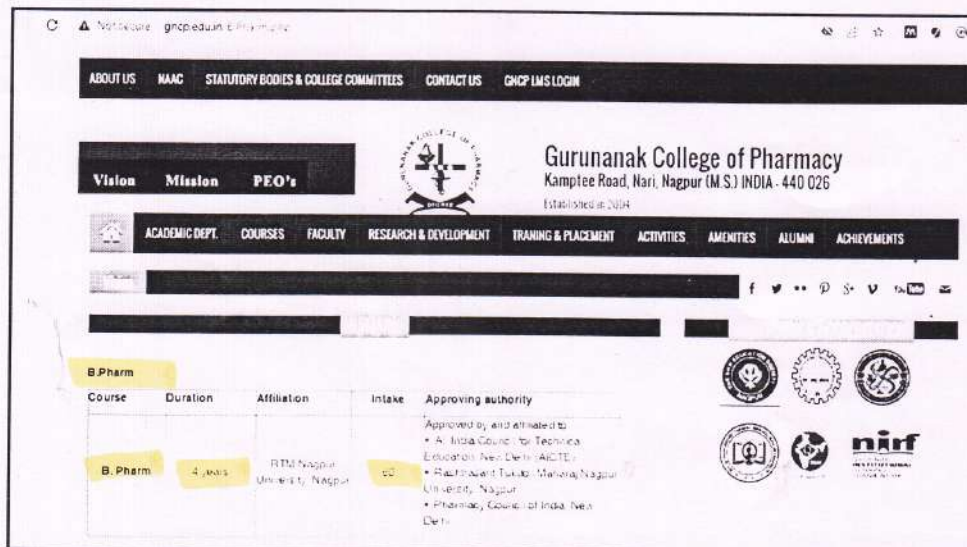
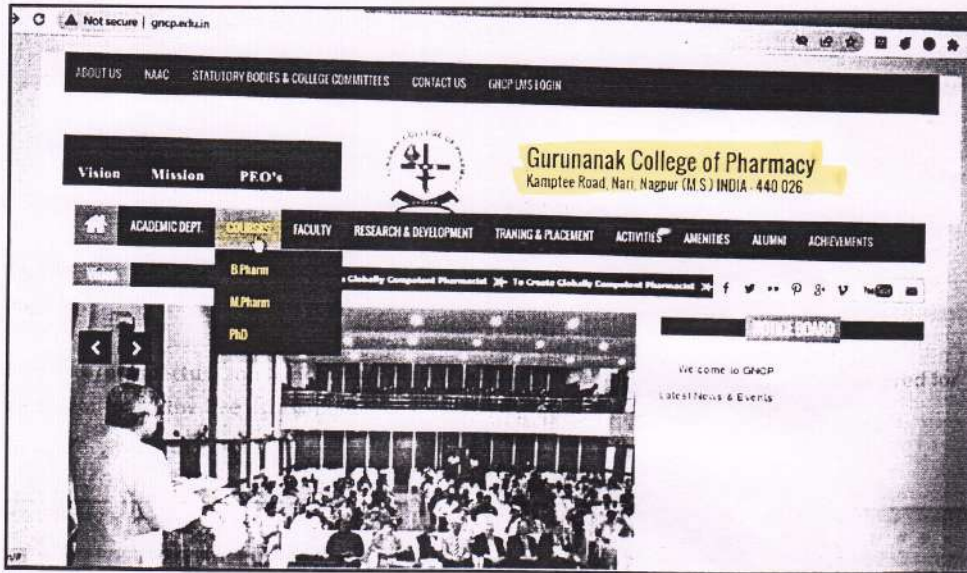
Vision: To Create Globally Competent Pharmacist
GURUNAK COLLEGE OF PHARMACY

Mauza Nari, Kh. No. 81/1, Kamgar Nagar, Nari, Nagpur – 440026.

UNDER THE AEGIS OF
 THE SIKH EDUCATION SOCIETY, BEZONBAGH, NAGPUR – 440004
 APPROVED BY A.I.C.T.E. & GOVERNMENT OF MAHARASHTRA
 Email: gncp2004@yahoo.com Web: gncp.edu.in

Print

Brochure/prospectus, and handbook/syllabus book highlighting programs and courses offered for each year for all the five assessment years.



Committed
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 Email: gncp2004@yahoo.com Web: gncp.edu.in

Website: gncp.edu.in/first-semester

B. Pharm - 4 years - RIM Nagpur University, Nagpur - 60

Approved by:
 • All India Council for Technical Education, New Delhi (AICTE)
 • Rashtriyaan Tulaad, Maharashtra University, Nagpur
 • Pharmacy Council of India, New Delhi

Admission Procedure

- B. Pharm. First semester**
 Admission to 1st sem B. Pharm shall be strictly according to MHT-CET & CAP as per the rules of Govt. of Maharashtra. The candidates should submit duly completed application in prescribed form with all the mandatory documents so as to reach the office of the institute before the last date. If admission is approved the applicants will pay the fees in cash or D.D. along with original documents & two certified copies of each document.
- Admission for candidates outside the Maharashtra State shall be according to MHT-CET. The candidates seeking admission to B. Pharm 1st year should refer the rules & regulation framed by Government of Maharashtra MHT-CET published by Directorate of Technical Education M.S. Mumbai.
- Direct admission to third Semester (Second year B. Pharm)**
 The candidates who have passed D. Pharm are eligible for direct admission to third Sem (2nd B. Pharm) subjected to availability of seats. Admission to Direct 2nd year B. Pharm can be made by Govt. of Maharashtra (Directorate of Technical Education Mumbai) through CAP.

Note: - Candidates with 50% aggregate marks at D. Pharm may take admission to B. Pharm 1st year if the seats are vacant after CAP admissions.

Course Structure and Syllabus

B. Pharm Course Outcomes

Website: gncp.edu.in/quality

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Gurunanak College of Pharmacy
 Kamptee Road, Nari, Nagpur (M.S.) INDIA - 440 026
 Established in 2004

Vision | Mission | PEO's

ACADEMIC DEPT. | COURSES | FACULTY | RESEARCH & DEVELOPMENT | TRAINING & PLACEMENT | ACTIVITIES | AMENITIES | ALUMNI | ACHIEVEMENTS

To Create Globally Competent

Course	Duration	Affiliation	Intake Approved by and affiliated to
M. Pharm (Pharmaceutics)	2 years	RIM Nagpur University, Nagpur	15
M. Pharm (Pharmaceutics) Chemistry			15
M. Pharm (Quality Assurance)			15

Approved by:
 • All India Council for Technical Education, New Delhi (AICTE)
 • Rashtriyaan Tulaad, Maharashtra University, Nagpur
 • Directorate of Technical Education Maharashtra State Mumbai

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Screenshot of the GNCPLMS website showing the M.Pharm section.

Course	Duration	Affiliation	Intake Approved by and affiliated to
M. Pharm (Pharmaceutics)	2 years	R.T.M. Nagpur University, Nagpur	12
M. Pharm (Pharmaceutics-Chemistry)	2 years	R.T.M. Nagpur University, Nagpur	12
M. Pharm (Quality Assurance)	2 years	R.T.M. Nagpur University, Nagpur	15

Admission Procedure

The rules of admission to the first semester of the two years for three postgraduate courses in pharmacy shall be as per rules framed by DTE.

- Course Structure and Syllabus- M.Pharm
- M. Pharm (Pharmaceutics) Course Outcomes
- M. Pharm Quality Assurance Course Outcomes
- M. Pharm (Pharmaceutical Chemistry) Course Outcomes

Screenshot of the GNCPLMS website showing the Ph.D. section.

Course	Duration	Affiliation	Intake
Ph.D	3 years	R.T.M. Nagpur University, Nagpur	10

Navigation menu: ABOUT US, NAAC, STATUTORY BODIES & COLLEGE COMMITTEES, CONTACT US, GNCPLMS LOGIN

College Name: Gurunank College of Pharmacy
 Location: Kamptee Road, Nari, Nagpur (M.S.) INDIA - 440 026
 Established in 2004

Navigation menu: VISION, MISSION, PEO'S, ACADEMIC DEPT., COURSES, FACULTY, RESEARCH & DEVELOPMENT, TRAINING & PLACEMENT, ACTIVITIES, AMENITIES, ALUMNI, ACHIEVEMENTS

Motto: To Create Globally Competent Pharmacist

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Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

Syllabus and Scheme of

Degree of Pharmacy


(Semester, Credit & Grade system)

2013-14


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Scheme of Teaching for B. Pharm. (Semester wise)
First to Eight Semesters
 (Hours per week)

Sub. Code	Subject	Scheme of Teaching Hrs/week	
		Theory	Practical
Semester – I			
1.1	Pharmaceutics-I (General and Dispensing)	03	03
1.2	Pharmaceutical Chemistry-I (Inorganic)	03	03
1.3	Human Anatomy and Physiology-I	03	03
1.4	Pharmaceutical Biochemistry	03	03
1.5	Pharmacognosy and Phytochemistry-I	03	03
1.6	Hospital Pharmacy	03	-
Semester – II			
2.1	Pharmaceutics-II (General and Dispensing)	03	03
2.2	Pharmaceutical Chemistry-II (Organic)	03	03
2.3	Human Anatomy and Physiology-II	03	03
2.4	Pharmaceutical Analysis-I	03	03
2.5	Pharmacognosy and Phytochemistry-II	03	03
2.6	Statistics and Computer Application in Pharmacy	03	-
Semester – III			
3.1	Pharmaceutics-III (Unit operations)	03	03
3.2	Pharmaceutical Chemistry-III (Organic)	03	03
3.3	Pathophysiology and Clinical Biochemistry (Pathophysiology of common diseases)	03	03
3.4	Pharmacology-I	03	03
3.5	Pharmaceutical Microbiology and Immunology-I	03	03
3.6	Pharmaceutical Jurisprudence and ethics	03	-
Semester – IV			
4.1	Pharmaceutics-IV (Unit operations)	03	03
4.2	Pharmaceutical chemistry-IV (Heterocyclic and Macromolecules)	03	03
4.3	Pharmaceutical Analysis-II (Electroanalytical and Physical methods)	03	03
4.4	Pharmacology-II	03	03
4.5	Pharmaceutical Microbiology and Immunology-II	03	03
4.6	Pharmaceutical Management	03	-
Semester – V			
5.1	Pharmaceutics-V (Physical Pharmacy)	03	03
5.2	Pharmaceutical Medicinal chemistry-I	03	03
5.3	Pharmacology-III	03	03
5.4	Pharmacognosy and Phytochemistry-III (Chemistry of Natural Products)	03	03
5.5	Clinical Pharmacy	03	03
5.6	Regulatory Affairs and Intellectual Property Right	03	-
Semester – VI			
6.1	Pharmaceutics-VI (Physical Pharmacy)	03	03
6.2	Pharmaceutical Medicinal Chemistry-II	03	03
6.3	Pharmacology-IV	03	03
6.4	Pharmacognosy and Phytochemistry-IV (Recent Advances in Phytochemistry)	03	03

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6.5	Clinical Pharmacotherapeutics-I	03	03
6.6	Pharmaceutical Validation	03	-
Semester – VII			
7.1	Pharmaceutics (DFT-I) (Conventional)	03	03
7.2	Pharmaceutical Medicinal chemistry-III	03	03
7.3	Pharmaceutical Analysis-III (Separation Techniques)	03	03
7.4	Clinical Pharmacotherapeutics-II	03	03
7.5	Pharmacognosy and Phytochemistry-V (Phytopharmaceutical /Herbal Technology)	03	03
7.6	Biopharmaceutics and Pharmacokinetics	03	-
Semester – VIII			
8.1	Pharmaceutics (DFT-II) (NDDS)	03	03
8.2	Pharmaceutical Biotechnology and Molecular Biology	03	03
8.3	Pharmaceutical Analysis-IV (Spectroscopy)	03	03
8.4	Pharmacognosy and Phytochemistry-VI(Industrial Pharmacognosy)	03	03
8.5	Pharmacovigilence (Drug safety)	03	-
8.6	Industrial Pharmacy	03	-
8.7	Project	-	03


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RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR

FACULTY OF SCIENCE AND TECHNOLOGY

Direction No. 31 of 2017

**EXAMINATIONS LEADING TO THE DEGREE OF
MASTER OF PHARMACY (CREDIT AND GRADE BASED) (SEMESTER PATTERN
COURSE), DIRECTION, 2017**

WHEREAS, Maharashtra Public Universities act No. VI of 2017 has come into force with effect from 1st March 2017 and has been amended from time to time.

AND

Whereas, the Pharmacy Council of India (herein after PCI), the apical and regulatory body for regulating the higher education in pharmaceutical sciences, has framed the Bachelor of Pharmacy Course Regulations, 2014, prescribing the structure of the Master of Pharmacy Course, which is binding on all Universities in India, offering the said course;

AND

WHEREAS, the Special task committee in Pharmaceutical Sciences in its meeting held on 18th July 2017 accepted the syllabi of the Master in pharmacy course prescribed by the Pharmacy council of India and resolved to implement the same as per regulation 10 of the Master of pharmacy (M.Pharm) Course Regulations, 2014, of Pharmacy council of India from the academic session 2017-18 programme.

AND

WHEREAS, the Special Task Committee in Pharmaceutical Sciences in its meeting held on 18th July 2017 has decided to accept & implement PCI syllabus for award of the degree of Master of Pharmacy commensurate with the curricula existing throughout India and with a view to include the latest trends in the Pharmacy stream as well as to design it to suit to the needs of the industries and corporate houses.


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AND

WHEREAS, the Dean of the Faculty of Science and Technology considered and approved the proposal of the Special Task Committee in Pharmaceutical Sciences, in the Faculty of Science and Technology, and recommended to the Vice-Chancellor to accept the syllabus and the Scheme of examinations for the course of Master of Pharmacy under section 12 (8) of the Act on behalf of the Academic Council and the Management council;


AND,

WHEREAS, it is necessary to make an Ordinance for the purpose of prescribing the revised scheme of examination for the course of Master of Pharmacy, as per the provisions of the Act;

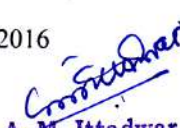
AND

WHEREAS, ordinance making is a time consuming process, I, Dr. S. P. Kane, Vice – Chancellor, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur, therefore, in exercise of the powers vested in me under Section 12(8) of the Act do hereby issue the following Direction-

1. This direction shall be called EXAMINATIONS LEADING TO THE DEGREE OF MASTER OF PHARMACY (CHOICE BASED, CREDIT AND GRADE BASED) (SEMESTER PATTERN COURSE), DIRECTION, 2017
2. This Direction shall apply from the Academic Session 2017-18.
3. **Definitions:-**In this direction, unless the context otherwise requires:-
 - a. **“University”** means R.T.M. Nagpur University.
 - b. **“Post Graduate programmes”** means Master’s degree course in Pharmaceutical Sciences.
 - c. **“Student”** means student admitted to Post Graduate programme in Pharmaceutical Sciences under this direction.
 - d. **“Degree”** means Post Graduate Degree in Pharmaceutical Sciences.
 - e. **“Board of Studies”** means Board of Studies of the University in Pharmaceutical Sciences.
 - f. **“Academic Council”** means Academic Council of R.T.M. Nagpur University.


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- g. **“Fees”** means the fees prescribed by the University/ Shikshan Shulka Samiti of Government of Maharashtra, for the Post Graduate programme in Pharmaceutical Sciences, from time to time.
- h. **“Credit”** Credits (C) for a course is dependent on the number of hours of instruction per week in that course, and is obtained by using a multiplier of one (1) for lecture and a multiplier of half (1/2) for practical (laboratory) hours. Thus, for example, a theory course having four lectures per week throughout the semester carries a credit of 4. Similarly, a practical having four laboratory hours per week throughout semester carries a credit of 2. The contact hours of seminars, assignments and research work shall be treated as that of practical courses for the purpose of calculating credits. i.e., the contact hours shall be multiplied by 1/2. Similarly, the contact hours of journal club, research work presentations and discussions with the supervisor shall be considered as theory course and multiplied by 1.
- i. **“Grade letter”** is an index to indicate the performance of a student in a particular course (Paper). It is the transformation of actual marks secured by a student in a course/paper.
Grade letters are O, A, B, C, D, F, AB.
- j. **“Grade Point”** is the weightage allotted to each grade letter depending on the range of marks awarded in a course/paper.
- k. **“Credit Points”** refer to the product of No. of credits multiplied by the Grade Point for a given course/paper.
- l. **“Semester Grade Point Average (SGPA)”** refers to the performance of the student in a given semester. SGPA is based on the total credit points earned by the student in all the courses and the total number of credits assigned to the courses/papers in a Semester.
- m. **“Cumulative Grade Point Average (CGPA)”** refers to the Cumulative Grade Point Average weighted across all semesters (4 semesters)
- n. **“ATKT”** refers to allowed to keep term in higher semester.
- o. **“Competent Authority”** (for admission purpose) means an “Authority” established or assigned the duty to regulate admissions in the course by the Government of Maharashtra.
- p. **“Old Course”** means the M.Pharm course governed by Direction No. 58 of 2016


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q. "New Course" means the M.Pharm course governed by this Direction.

4. Admission:-

a. Admission to Post Graduate Programme in Pharmaceutical Sciences shall be governed by the Competent Authority.

b. Admission to Post Graduate Programme in Pharmaceutical Sciences shall be on yearly basis (two semesters) for a particular academic session by paying prescribed fees.


5. Eligibility and conditions for admission:-

(1) For Maharashtra Candidature Candidates and All India Candidature Candidates.—

- (i) The candidate should be an Indian National, and
- (ii) Passed Bachelor's Degree in Pharmacy from any All India Council for Technical Education or Pharmacy Council of India or Central or State; Government approved institution, with at least 55% marks (at least 50% marks in case of Backward Class category and Persons with Disability Candidates belonging to Maharashtra State only), and
- (iii) Obtained score in Graduates Pharmacy Aptitude Test (GPAT) conducted by All India Council for Technical Education. For a sponsored candidate, minimum of two years of full time work experience in a registered firm/ company/ industry/ educational and/ or research institute/ any Government Department or Government Autonomous Organization in the relevant field in which admission is being sought is necessary.

(2) For NRI / OCI/ PIO, Children of Indian workers in the Gulf countries, foreign National.-

- (i) Passed Bachelor's Degree in Pharmacy from any All India Council for Technical Education or Pharmacy Council of India or Central or State; Government approved institution, with at least 55% marks, and
- (ii) Any other criterion declared by competent authority from time to time.


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- Note:-** 1. Every student, selected for admission to post graduate pharmacy program in any PCI approved institution should have obtained registration with the State Pharmacy Council or should obtain the same within one month from the date of his/her admission, failing which the admission of the candidate shall be cancelled.
2. It is mandatory to submit a migration certificate issued by the university from where the candidates has obtained his/her qualifying degree (B.Pharm).

6. Duration of the programme:-

Duration of the Post Graduate Programme in Pharmaceutical Sciences shall be of four semesters (two academic years).

7. Medium of instructions and examinations:-

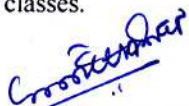
English shall be the medium of instructions and examinations for the programme.

8. Course Structure:-

The detail, semester wise, course structure shall be as given in **tables 1 to 15 in the Appendix I** of this Direction. The scope of each subject shall be as prescribed by the Pharmacy Council of India from time to time.

9. Program Committee:-

- 1) The M. Pharm. programme shall have a Programme Committee constituted by the Head of the institution in consultation with all the Heads of the departments.
- 2) The composition of the Programme Committee shall be as follows:
As far as possible a teacher in the cadre of Professor shall be the Chairperson and one teacher from each M.Pharm specialization and four student representatives (two from each academic year), nominated by the Head of the institution shall be the members of the committee.
- 3) Duties and functions of the Programme Committee:- Following shall be the duties and functions of the programme committee.
 - i. Periodical review of the progress of the classes.
 - ii. Discussing the problems concerning curriculum, syllabus and the conduct of classes.


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- 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 Programme Committee shall meet at least twice in a semester preferably at the end of each sessional exam and before the end of semester exam.

10. Examination/ Assessment:-

A. Examinations of all subjects of all semesters of the Post Graduate Programme in Pharmaceutical Sciences shall be conducted by the R.T.M. Nagpur University as per the scheme of examinations and the standard of examination given in **tables 1 to 13 of the Appendix II** of this Direction.


B. Guidelines for awarding credit points for Co-curricular activities.

The credit points assigned for extracurricular and or co-curricular activities shall be given by the Principal of the colleges/ Head of the Department and the same shall be submitted to the University. The criteria to acquire this credit point shall be as specified in **table no.14 and 15 in Appendix-I.**

- 1) The scheme for awarding internal assessment are given in **table 1 to 13 in Appendix-II.**
- 2) Scheme for awarding Internal Assessment: Continuous mode and guideline for the allotment of marks for the attendance are shown in **table no. 12 and 13 of Appendix-II.**
- 3) Sessional Exams:

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

Academic calendar showing dates of commencement and end of teaching, internal assessment tests & term end examination shall be duly notified before commencement of each semester every year by the University / Department / Affiliated Colleges.


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An unsuccessful examinee may appear as an ex-student at a subsequent examination in a subject in which he/she has failed on the payment of fresh fees. 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. 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.

11. Promotion and award of grades

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

12. Carry forward of marks

In case a student fails to secure the minimum 50% in any Theory or Practical course as specified in para 11, 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.

13. 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.

14. Allowed to keep terms (ATKT):

ATKT rules are applicable as follows:

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


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

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

15. 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. SGPA shall be calculated based on Grade Points corresponding to Grade as given in Table 1 and the Credits allotted to respective Theory/ Practical shown in the scheme for respective semester. SGPA shall be computed for every semester.

For example, if a student takes five courses (Theory/Practical) in a semester with credits C1, C2, C3 and C4 and the student's grade points in these courses are G1, G2, G3 and G4, respectively, and then students' SGPA is equal to:


$$\text{SGPA} = \frac{C_1G_1 + C_2G_2 + \dots + C_nG_n}{C_1 + C_2 + \dots + C_n}$$

Where, C1 = Credit of individual Theory / Practical

G1 = Corresponding Grade Point obtained in the Respective Theory / Practical

16. Cumulative Grade Point Average (CGPA)

The CGPA is calculated with the SGPA of all the IV semesters to two decimal points and is indicated in final grade report card/final transcript showing the grades of all IV semesters and their courses.


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$$\text{CGPA} = \frac{C1S1 + C2S2 + C3S3 + C4S4}{C1 + C2 + C3 + C4}$$

Where, C1, C2, C3 & C4 is the total number of credits for semester I, II, III & IV and S1, S2, S3 & S4 is the SGPA of semester I, II, III & IV.

CGPA	Final Grade
10	O
9	A
8	B
7	C
6	D
0	F
0	AB

Final Mark List will only show the grade and grade points and not the marks.

Grades-Marks would be converted to grades as shown in Table below.

Table : Conversion of marks to grades in credit system

Percentage of Marks Obtained	Letter Grade	Grade Points	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 50.00	F	0	Fail
Absent	AB	0	Fail

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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.

The proportion of internal and external marks for each theory / practical subjects shall be of 25:75 marks (Internal examination weightage 25 %, external examination weight age 75 %).

16. 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

17. Project work


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

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

Evaluation of Dissertation Book:

Objective(s) of the work done	50 Marks
Methodology adopted	150 Marks
Results and Discussions	250 Marks
Conclusions and Outcomes	50 Marks
Total	<hr/> 500 Marks

Evaluation of Presentation:


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Presentation of work	100 Marks
Communication skills	50 Marks
Question and answer skills	100 Marks
Total	<hr/> 250 Marks

18. 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 M. Pharm program shall not be eligible for award of ranks. Moreover, the candidates should have completed the M. Pharm program in minimum prescribed number of years, (two years) for the award of Ranks.

19. Award of degree

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

20. 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.


21. Revaluation / Retotaling of answer papers

There is no provision for revaluation of the answer papers in any examination. However, the candidates can apply for Retotaling by paying prescribed fee.

22. 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.

23. Rules for Absorption


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Student successful in the first year (I and II semesters) of the M. Pharm old course examinations may be admitted to the next higher class of new course M. Pharm i.e. IIIrd semester. Such students will have to clear the backlog of earlier semester of the old course within five attempts. On failure to clear the backlog within the stipulated attempt he/she shall be declared to be unfit for the course and he/she will not be allowed to appear further in any examination of the course.

24. Repeal

With the issuance of this Direction, The Direction No 58 of 2016 (Credit and Grade Based Semester pattern), shall stand repealed.

Nagpur :

Date : 26.10.2017

Sd/-

DR. S.P. KANE

Vice-Chancellor


Dr. A. M. Itadwar

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Appendix- I

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

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

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

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


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Course Code	Course	Credit Hours	Credit Points	Hrs./week	Marks
Semester I					
MPH101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPH102T	Drug Delivery System	4	4	4	100
MPH103T	Modern Pharmaceutics	4	4	4	100
MPH104T	Regulatory Affair	4	4	4	100
MPH105P	Pharmaceutics Practical I	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650
Semester II					
MPH201T	Molecular Pharmaceutics (Nano Tech and Targeted DDS)	4	4	4	100
MPH202T	Advanced Biopharmaceutics & Pharmacokinetics	4	4	4	100
MPH203T	Computer Aided Drug Delivery System	4	4	4	100
MPH204T	Cosmetic and Cosmeceuticals	4	4	4	100
MPH205P	Pharmaceutics Practical II	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650



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Table – 3: Course of study for M. Pharm. (Industrial Pharmacy)

Course Code	Course	Credit Hours	Credit Points	Hrs./week	Marks
Semester I					
MIP101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MIP102T	Pharmaceutical Formulation Development	4	4	4	100
MIP103T	Novel drug delivery systems	4	4	4	100
MIP104T	Intellectual Property Rights	4	4	4	100
MIP105P	Industrial Pharmacy Practical I	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650
Semester II					
MIP201T	Advanced Biopharmaceutics and Pharmacokinetics	4	4	4	100
MIP202T	Scale up and Technology Transfer	4	4	4	100
MIP203T	Pharmaceutical Production Technology	4	4	4	100
MIP204T	Entrepreneurship Management	4	4	4	100
MIP205P	Industrial Pharmacy Practical II	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650

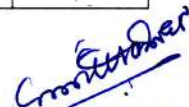

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Table – 4: Course of study for M. Pharm. (Pharmaceutical Chemistry)

Course Code	Course	Credit Hours	Credit Points	Hrs./week	Marks
Semester I					
MPC101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPC1012T	Advanced Organic Chemistry -I	4	4	4	100
MPC103T	Advanced Medicinal chemistry	4	4	4	100
MPC104T	Chemistry of Natural Products	4	4	4	100
MPC105P	Pharmaceutical Chemistry Practical I	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650
Semester II					
MPC201T	Advanced Spectral Analysis	4	4	4	100
MPC202T	Advanced Organic Chemistry -II	4	4	4	100
MPC203T	Computer Aided Drug Design	4	4	4	100
MPC204T	Pharmaceutical Process Chemistry	4	4	4	100
MPC205P	Pharmaceutical Chemistry Practical II	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650

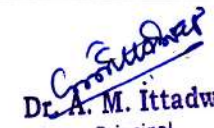

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Table – 5: Course of study for M. Pharm. (Pharmaceutical Analysis)

Course Code	Course	Credit Hours	Credit Points	Hrs./wk	Marks
Semester I					
MPA101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPA102T	Advanced Pharmaceutical Analysis	4	4	4	100
MPA103T	Pharmaceutical Validation	4	4	4	100
MPA104T	Food Analysis	4	4	4	100
MPA105P	Pharmaceutical Analysis Practical I	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650
Semester II					
MPA201T	Advanced Instrumental Analysis	4	4	4	100
MPA202T	Modern Bio-Analytical Techniques	4	4	4	100
MPA203T	Quality Control and Quality Assurance	4	4	4	100
MPA204T	Herbal and Cosmetic Analysis	4	4	4	100
MPA205P	Pharmaceutical Analysis Practical II	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650

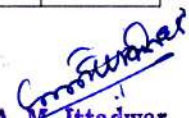

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Table – 6: Course of study for M. Pharm. (Pharmaceutical Quality Assurance)

Course Code	Course	Credit Hours	Credit Points	Hrs./week	Marks
Semester I					
MQA101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MQA102T	Quality Management System	4	4	4	100
MQA103T	Quality Control and Quality Assurance	4	4	4	100
MQA104T	Product Development and Technology Transfer	4	4	4	100
MQA105P	Pharmaceutical Quality Assurance Practical I	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650
Semester II					
MQA201T	Hazards and Safety Management	4	4	4	100
MQA202T	Pharmaceutical Validation	4	4	4	100
MQA203T	Audits and Regulatory Compliance	4	4	4	100
MQA204T	Pharmaceutical Manufacturing Technology	4	4	4	100
MQA205P	Pharmaceutical Quality Assurance Practical II	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650


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Table – 12: Course of study for M. Pharm. III Semester
(Common for All Specializations)

Course Code	Course	Credit Hours	Credit Points
MRM 301T	Research Methodology and Biostatistics*	4	4
-	Journal club	1	1
-	Discussion / Presentation (Proposal Presentation)	2	2
-	Research Work	28	14
Total		35	21

* Non University Exam

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

Course Code	Course	Credit Hours	Credit Points
-	Journal Club	1	1
-	Research Work	31	16
-	Discussion/Final Presentation	3	3
Total		35	20

Table – 14: Semester wise credits distribution

Semester	Credit Points
I	26
II	26
III	21
IV	20
Co-curricular Activities (Attending Conference, Scientific Presentations and Other Scholarly Activities)	Minimum=02 Maximum=07*
Total Credit Points	Minimum=95 Maximum=100*

*Credit Points for Co-curricular Activities


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Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

Proposed Syllabi and Scheme of

Master of Pharmacy

(Semester, Credit & Grade system)

2012-13


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Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

M. Pharm. Syllabus

Credit-grade based performance and assessment system (CGPA)

Features of the Credit System

With effect from Academic Session 2012- 2013

FEATURES OF THE CREDIT SYSTEM

- Master's degree would be of 80 credits each.
- One credit course of theory will be of one clock hour per week running for 15 weeks.
- Two credit course of theory will be of two clock hours per week running for 15 weeks.
- Four-credit course of theory will be of four clock hours per week running for 15 weeks.
- One credit course of practical will consist of 2 hours of laboratory exercise for 15 weeks.
- Two credit courses of practical will consist of 4 hours of laboratory exercise for 15 weeks.
- Four credit course of practical will consist of 8 hours of laboratory exercise for 15 weeks.

FIRST TWO SEMESTERS SHALL HAVE 5 THEORY COURSES, 2 PRACTICAL COURSES AND 1 SEMINAR FOR EACH SEMESTER

- 3 Theory courses x 4 credits = 12 credits
- 2 Theory courses x 2 credits = 04 credits
- 2 Laboratory courses x 4 credits = 08 credits
- 1 Seminar x 2 credits = 02 credits

Total = 26 credits

EVERY STUDENT SHALL COMPLETE 80 CREDITS IN A MINIMUM OF FOUR SEMESTERS.

FIRST TWO SEMESTERS WILL HAVE 26 CREDITS EACH, THIRD SEMESTER WILL BE OF 08 CREDITS AND FOURTH SEMESTER WILL BE OF 20 CREDITS.

- Two semesters 2 x 26 credits = 52 credits
- Third semester 1 x 08 = 08 credits
- Forth semester 1 x 20 = 20 credits

Four semesters total credits = 80 credits

SCHEME OF SYLLABUS AND CREDIT SYSTEM

The syllabus for the first semester includes three (03) theory courses common to all M. Pharm. Specializations, one theory course of respective specialization and an elective subject, so consist of total five theory papers and two laboratory courses and one seminar. Two credits have been allocated for seminar. Marks out of 50 will be allotted. Evaluation of seminar shall be done by three internal Examiners appointed by the Head/Principal of the Department/Institute based on scientific contents, communication, representation and skill in oral presentation.

The syllabus for the second semester includes two (02) theory courses common to all M. Pharm. Specializations, two theory course of respective specialization and an elective subject, so consist of total five theory papers and two laboratory courses and one seminar. Two credits have been allocated for seminar. Marks out of 50 will be allotted. Evaluation of seminar shall be done by three internal Examiners appointed by the Head/Principal of the Department/Institute based on scientific contents, communication, representation and skill in oral presentation.

The syllabus for the third semester includes one theory course of respective specialization and an elective subject, so consist of total two theory papers and one seminar. Two credits



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have been allocated for seminar. Marks out of 50 will be allotted. Evaluation of seminar shall be done by three internal Examiners appointed by the Head/Principal of the Department/Institute based on scientific contents, communication, representation and skill in oral presentation. The topic for the research envisaged for the dissertation shall be assigned to him/her within one month from the date of commencement of third semester.

One elective subject can be chosen by minimum 8 and maximum 12 students of a particular college/institution during a semester. Each student has to clear three different elective subjects during his/her course of studies from the list given in Annexure-I

Total four credits have been allocated for the seminar on dissertation on completed research work for dissertation prior to thesis submission in fourth semester.

Scheme for Marks Distribution of Seminar on Dissertation (Semester IV)

CONTENT	MARKS	CREDIT
1. Introduction, justification, scope of dissertation work, organization of materials, methods and references.	25	01
2. Experimental work, observations, results and conclusion	50	02
3. Presentation skill, questioning and defending	25	01
Total	100	04

- Twelve credits have been allocated for the dissertation work.

Scheme for Marks Distribution for Dissertation Work

CONTENT	MARKS	CREDIT
1. Introduction, information retrieval system	50	02
2. Experimental work	100	04
3. Scientific content	50	02
4. Results / Conclusion	50	02
5. Organization of Scientific materials, dissertation thesis and references	50	02
Total	300	12

- Four credits each have been allocated for the Viva-voce on dissertation.

Scheme for Marks Distribution for Viva-voce

CONTENT	MARKS	CREDIT
1. Reading research paper and depth of knowledge on work topic	50	02
2. Discussion	25	01
3. Report	25	01
Total	100	04

- One credit = 25 marks; two credits = 50 marks and four credits = 100 marks.
- Four credits (theory) = 100 marks

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- Internal Examination (20 marks) External Examination (80 marks)
- Four credits (Practical) = 100 marks
- Internal Examination (20 marks) External Examination (80 marks)
- The Internal Assessment marks for theory should be based on C class Test and Attendance as follows:-
- a) Class Test - 15
Marks will be based upon average marks of two Class Tests.
- b) Attendance - Mark/s
- | | |
|-------------|-----|
| 75% to 80% | - 1 |
| 81% to 85% | - 2 |
| 86% to 90% | - 3 |
| 91% to 95% | - 4 |
| 96% to 100% | - 5 |

Academic calendar showing dates of commencement and end of teaching, internal assessment tests & term end examination shall be duly notified before commencement of each semester every year by the affiliated colleges.


- Credit system offers more options to students and has more flexibility.
- Students can get requisite credits from the concerned colleges where she/he is mutually permitted on terms mutually agreed to complete the same and be eligible to appear for term end examination.
- The term end examination, however, shall be conducted by the RTM Nagpur University, Nagpur in the allotted centers.
- The research project shall be compulsory.
- These activities, including preparation of the result-sheets for the students, would be coordinated by the Departmental Examination Committee comprising Course in-charges and HOD or Head of the institution.
- Grades-Marks for each course would be converted to grades as shown in Table 1.

Table 1: Conversion of marks to grades in credit system

Marks Obtained	Grade	Grade Points
100-85	A ⁺	10
84-75	A	9
74-65	B ⁺	8
64-60	B	7
59-55	C	6
54-50	D	5
49 and less (internal)	FR	0-Failed (Clear course)

- A student who passes the internal tests but fails in Term End Examination of a course shall be given FR grade.
- Student with FR grade in a course would be granted credit for that course but not the grade for that course.
- Grade points earned in each paper shall be calculated as – Grade points obtained (vide Table 1 above) x Credits for the paper.

The computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) of an examinee shall be as given below:-


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The marks will be given in all examinations which will include college assessment marks and the total marks for each Theory / Practical shall be converted into Grades as per Table I. SGPA shall be calculated based on Grade Points corresponding to Grade as given in Table I and the Credits allotted to respective Theory / Practical shown in the scheme for respective semester.

SGPA shall be computed for every semester and CGPA shall be computed only in IV semester. The CGPA of IV semester shall be calculated based on SGPA of all four semesters as per following computation :-

$$\text{SGPA} = \frac{C_1 \times G_1 + C_2 \times G_2 + \dots + C_n \times G_n}{C_1 + C_2 + \dots + C_n}$$

Where C₁ = Credit of individual Theory / Practical
G₁ = Corresponding Grade Point obtained in the Respective Theory / Practical

$$\text{CGPA} = \frac{(\text{SGPA}) I \times (\text{Cr}) I + (\text{SGPA}) II \times (\text{Cr}) II + (\text{SGPA}) III \times (\text{Cr}) III + (\text{SGPA}) IV \times (\text{Cr}) IV}{(\text{Cr}) I + (\text{Cr}) II + (\text{Cr}) III + (\text{Cr}) IV}$$

Where, (SGPA) I = SGPA of I Semester
(Cr) I = Total Credits for I Semester
(SGPA) II = SGPA of II Semester
(Cr) II = Total Credits for II Semester
(SGPA) III = SGPA of III Semester
(Cr) III = Total Credits for III Semester
(SGPA) IV = SGPA of IV Semester
(Cr) IV = Total Credits for IV Semester

CGPA	Final Grade
9.0 – 10	A+
8.0 – 8.9	A
7.0 – 7.9	B+
6.0 – 6.9	B
5.5 – 5.9	C
5.0 – 5.4	D
4.9 and less	FR (Failed)

Final Mark List will only show the grade and grade points and not the marks.

CGPA equal to 6.00 and above shall be considered as equivalent to First Class which shall be mentioned on Grade Card of IV Semester as a foot note.


ACADEMIC CALENDAR AND TERMS

The terms and academic activities of the college affiliated to RTM, Nagpur University under CGPA shall be as prescribed by the University for respective academic session.

Beginning of First Term (Semester I and III) : As per University academic calendar

Vacation : As per University academic calendar

Beginning of Second Term (Semester II and IV) : As per University academic calendar


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Draft Syllabus Prescribed for Master of Pharmacy

The several courses leading to the Master Degree of Pharmacy covers following subjects namely

1. Pharmaceutics
2. Pharmaceutical Chemistry
3. Pharmacology
4. Pharmacognosy
5. Biotechnology
6. Quality Assurance
7. Industrial Pharmacy
8. Pharmacoinformatics
9. Clinical Pharmacy
10. Natural Products
11. Pharmaceutical Management


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SCHEME OF TEACHING AND EXAMINATION


APPENDIX-A

Pharmaceutics

Semester	Paper Code		Title of Paper	Scheme of Teaching in Hrs/week		Scheme of Internal Examination		Scheme of External Examination						Total Marks (Credits)
				Lecture	Practical	Theory	Practical	Theory		Practical		Minimum Marks for Passing		
								Hrs	Marks	Hrs	Marks	Theory	Practical	
Semester-I	S1/101	MC-S1	Advanced Analytical Techniques	4	8	20	20	03	80	08	80	50	50	200(8)
	S1/102	MC-S2	Research Methodology & Biostatistics	2		10		02	40			25		50(2)
	S1/103	MC-S3	Drug Regulatory Affairs	4		20		03	80			50		100(4)
	S1/104	MPH-S4	Advanced Pharmaceutics	4	8	20	20	03	80	08	80	50	50	200(8)
	S1/105		Elective-I	2		10		02	40			25		50(2)
	S1/106	MPH-6	Seminar (I)		4									50(2)
			16	20	80	40	13	320	16	160			650(26)	
Semester-II	S2/201	MC-S7	Validation & cGMP	2		10		02	40			25		50(2)
	S2/202	MC-S8	Biological Evaluation	4	Demo	20		03	80			50		100(4)
	S2/203	MPH-S9	Product Development and Formulation	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/204	MPH-S10	Novel Drug Delivery Systems	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/205		Elective-II	2		10		02	40			25		50(2)
	S2/206	MPH-12	Seminar (II)		4									50(2)
			16	20	80	40	13	320	16	160			650(26)	
Semester-III	S3/301	MPH-S13	Biopharmaceutics and Pharmacokinetics	4		20		03	80			50		100(4)
	S3/302		Elective-III	2		10		02	40			25		50(2)
	S3/303	MPH-15	Seminar (Pre-synopsis presentation)		4									50(2)
	S3/304	MPH-16	Dissertation		24									
			06	28	30		05	120					200(8)	
Semester-IV	S4/401	MPH-17	Dissertation		24									300(12)
	S4/402	MPH-18	Seminar on Dissertation											100(4)
	S4/403	MPH-19	Viva-voce											100(4)
													500(20)	
													2000(80)	

MC-S : Subject common to all branches

MPH-S : Subject specialization in pharmaceutics


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Pharmaceutical Chemistry

APPENDIX – B

Semester	Paper Code		Title of Paper	Scheme of Teaching in Hrs/week		Scheme of Internal Examination		Scheme of External Examination						Total Marks (Credits)
				Lecture	Practical	Theory	Practical	Theory		Practical		Minimum Marks (Credit) for Passing		
								Hrs	Marks	Hrs	Marks	Theory	Practical	
Semester-I	S1/101	MC-S1	Advanced Analytical Techniques	4	8	20	20	03	80	08	80	50	50	200(8)
	S1/102	MC-S2	Research Methodology & Biostatistics	2		10		02	40			25	25	50(2)
	S1/103	MC-S3	Drug Regulatory Affairs	4		20		03	80			50	50	100(4)
	S1/104	MPC-S4	Advanced Pharmaceutical Chemistry-I	4	8	20	20	03	80	08	80	50	50	200(8)
	S1/105		Elective-I	2		10		02	40			25	25	50(2)
	S1/106	MPC-6	Seminar (I)		4									50(2)
			16	20	80	40	13	320	16	160			650(26)	
Semester-II	S2/201	MC-S7	Validation & cGMP	2		10		02	40			25	25	50(2)
	S2/202	MC-S8	Biological Evaluation	4	Demo	20		03	80			50	50	100(4)
	S2/203	MPC-S9	Advanced Pharmaceutical Chemistry-II	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/204	MPC-S10	Advanced Pharmaceutical Chemistry-III	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/205		Elective-II	2		10		02	40			25	25	50(2)
	S2/206	MPC-12	Seminar (II)		4									50(2)
			16	20	80	40	13	320	16	160			650(26)	
Semester-III	S3/301	MPC-S13	Advanced Pharmaceutical Chemistry-IV	4		20		03	80			50	50	100(4)
	S3/302		Elective-III	2		10		02	40			25	25	50(2)
	S3/303	MPC-15	Seminar (Synopsis presentation)		4									50(2)
	S3/304	MPC-16	Dissertation		24									
			06	28	30		05	120					200(8)	
Semester-IV	S4/401	MPC-17	Dissertation		24									300(12)
	S4/402	MPC-18	Seminar on Dissertation											100(4)
	S4/403	MPC-19	Viva-voce											100(4)
														500(20)
														2000(80)

MC-S : Subject common to all branches

MPC-S : Subject specialization in pharmaceutical chemistry


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Pharmacology

APPENDIX-C

Semester	Paper Code		Title of Paper	Scheme of Teaching in Hrs/week		Scheme of Internal Examination		Scheme of External Examination						Total Marks (Credits)
				Lecture	Practical	Theory	Practical	Theory		Practical		Minimum Marks (Credit) for Passing		
								Hrs	Marks	Hrs	Marks	Theory	Practical	
Semester-I	SI/101	MC-S1	Advanced Analytical Techniques	4	8	20	20	03	80	08	80	50	50	200(8)
	SI/102	MC-S2	Research Methodology & Biostatistics	2		10		02	40			25		50(2)
	SI/103	MC-S3	Drug Regulatory Affairs	4		20		03	80			50		100(4)
	SI/104	MPL-S4	Advanced Physiology & Pathophysiology	4	8	20	20	03	80	08	80	50	50	200(8)
	SI/105		Elective-I	2		10		02	40			25		50(2)
	SI/106	MPL-6	Seminar (I)		4									50(2)
				16	20	80	40	13	320	16	160			650(26)
Semester-II	S2/201	MC-S7	Validation & cGMP	2		10		02	40			25		50(2)
	S2/202	MC-S8	Biological Evaluation	4	Demo	20		03	80			50		100(4)
	S2/203	MPL-S9	Advanced Systemic Pharmacology	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/204	MPL-S10	Advanced Pharmacology & Pharmacotherapeutics	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/205		Elective-II	2		10		02	40			25		50(2)
	S2/206	MPL-12	Seminar (II)		4									50(2)
				16	20	80	40	13	320	16	160			650(26)
Semester-III	S3/301	MPL-S13	Molecular Pharmacology and Toxicology	4		20		03	80			50		100(4)
	S3/302		Elective-III	2		10		02	40			25		50(2)
	S3/303	MPL-15	Seminar (Presynopsis presentation)		4									50(2)
	S3/304	MPL-16	Dissertation		24									200(8)
				06	28	30		05	120					300(12)
Semester-IV	S4/401	MPL-17	Dissertation		24									100(4)
	S4/402	MPL-18	Seminar on Dissertation											100(4)
	S4/403	MPL-19	Viva-voce											100(4)
														500(20)
														2000(80)

MC-S : Subject common to all branches
MPL-S : Subject specialization in pharmacology

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Pharmacognosy

APPENDIX-D

Semester	Paper Code		Title of Paper	Scheme of Teaching in Hrs/week		Scheme of Internal Examination		Scheme of External Examination						Total Marks (Credits)
				Lecture	Practical	Theory	Practical	Theory		Practical		Minimum Marks (Credit) for Passing		
								Hrs	Marks	Hrs	Marks	Theory	Practical	
Semester-I	S1/101	MC-S1	Advanced Analytical Techniques	4	8	20	20	03	80	08	80	50	50	200(8)
	S1/102	MC-S2	Research Methodology & Biostatistics	2		10		02	40			25		50(2)
	S1/103	MC-S3	Drug Regulatory Affairs	4		20		03	80			50		100(4)
	S1/104	MPG-S4	Advanced Pharmacognosy and Phytochemistry	4	8	20	20	03	80	08	80	50	50	200(8)
	S1/105		Elective-I	2		10		02	40			25		50(2)
	S1/106	MPG-6	Seminar (I)		4									50(2)
				16	20	80	40	13	320	16	160			650(26)
Semester-II	S2/201	MC-S7	Validation & cGMP	2		10		02	40			25		50(2)
	S2/202	MC-S8	Biological Evaluation	4	Demo	20		03	80			50		100(4)
	S2/203	MPG-S9	Standardization of Natural Products	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/204	MPG-S10	Herbal Drug Formulation and Development	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/205		Elective-II	2		10		02	40			25		50(2)
	S2/206	MPG-12	Seminar (I)		4									50(2)
				16	20	80	40	13	320	16	160			650(26)
Semester-III	S3/301	MPG-S13	Selected Topics in Pharmacognosy	4		20		03	80			50		100(4)
	S3/302		Elective-III	2		10		02	40			25		50(2)
	S3/303	MPG-15	Seminar (Presynopsis presentation)		4									50(2)
	S3/304	MPG-16	Dissertation		24									
				06	28	30		05	120					200(8)
Semester-IV	S4/401	MPG-17	Dissertation		24									300(12)
	S4/402	MPG-18	Seminar on Dissertation											100(4)
	S4/403	MPG-19	Viva-voce											100(4)
														500(20)
														2000(80)

MC-S : Subject common to all branches

MPG-S : Subject specialization in pharmacognosy and phytochemistry


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Biotechnology

APPENDIX-E

Semester	Paper Code		Title of Paper	Scheme of Teaching in Hrs/week		Scheme of Internal Examination		Scheme of External Examination						Total Marks (Credits)
				Lecture	Practical	Theory	Practical	Theory		Practical		Minimum Marks (Credit) for Passing		
								Hrs	Marks	Hrs	Marks	Theory	Practical	
Semester-I	S1/101	MC-S1	Advanced Analytical Techniques	4	8	20	20	03	80	08	80	50	50	200(8)
	S1/102	MC-S2	Research Methodology & Biostatistics	2		10		02	40			25		50(2)
	S1/103	MC-S3	Drug Regulatory Affairs	4		20		03	80			50		100(4)
	S1/104	MBT-S4	Fundamentals of Biotechnology	4	8	20	20	03	80	08	80	50	50	200(8)
	S1/105		Elective-I	2		10		02	40			25		50(2)
	S1/106	MBT-6	Seminar (I)		4									50(2)
			16	20	80	40	13	320	16	160			650(26)	
Semester-II	S2/201	MC-S7	Validation & cGMP	2		10		02	40			25		50(2)
	S2/202	MC-S8	Biological Evaluation	4	Demo	20		03	80			50		100(4)
	S2/203	MBT-S9	Molecular Biology	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/204	MBT-S10	Fermentation Technology	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/205		Elective-II	2	4	10		02	40			25		50(2)
	S2/206	MBT-S12	Seminar (II)		4									50(2)
			16	20	80	40	13	320	16	160			650(26)	
Semester-III	S3/301	MBT-S13	Advanced Tissue and Cell Culture Techniques	4		20		03	80			50		100(4)
	S3/302		Elective-III	2		10		02	40			25		50(2)
	S3/303	MBT-S15	Seminar (Pres-nopsis presentation)		4									50(2)
	S3/304	MBT-S16	Dissertation		24									
			06	28	30		05	120					200(8)	
Semester-IV	S4/401	MBT-S17	Dissertation		24									300(12)
	S4/402	MBT-S18	Seminar on Dissertation											100(4)
	S4/403	MBT-S19	Viva-voce											100(4)
														500(20)
													2000(80)	

MC-S : Subject common to all branches
 MBT-S : Subject specialization in biotechnology


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APPENDIX-F

Quality Assurance

Semester	Paper Code		Title of Paper	Scheme of Teaching in Hrs/week		Scheme of Internal Examination		Scheme of External Examination						Total Marks (Credits)
				Lecture	Practical	Theory	Practical	Theory		Practical		Minimum Marks (Credit) for Passing		
								Hrs	Marks	Hrs	Marks	Theory	Practical	
Semester-I	S1/101	MC-S1	Advanced Analytical Techniques	4	8	20	20	03	80	08	80	50	50	200(8)
	S1/102	MC-S2	Research Methodology & Biostatistics	2		10		02	40			25		50(2)
	S1/103	MC-S3	Drug Regulatory Affairs	4		20		03	80			50		100(4)
	S1/104	MQA-S4	Pharmaceutical Validation	4	8	20	20	03	80	08	80	50	50	200(8)
	S1/105		Elective-I	2		10		02	40			25		50(2)
	S1/106	MQA-6	Seminar (I)		4									50(2)
			16	20	80	40	13	320	16	160			650(26)	
Semester-II	S2/201	MC-S7	Validation & cGMP	2		10		02	40			25		50(2)
	S2/202	MC-S8	Biological Evaluation	4	Demo	20		03	80			50		100(4)
	S2/203	MQA-S9	Quality Assurance of Cosmetics	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/204	MQA-S10	Novel Drug Delivery Systems	4	8	20	20	03	80	08	80	50	50	200(8)
	S2/205		Elective-II	2		10		02	40			25		50(2)
	S2/206	MQA-12	Seminar (II)		4									50(2)
			16	20	80	40	13	320	16	160			650(26)	
Semester-III	S3/301	MQA-S13	Quality Management	4		20		03	80			50		100(4)
	S3/302		Elective-III	2		10		02	40			25		50(2)
	S3/303	MQA-15	Seminar (Presynopsis presentation)		4									50(2)
	S3/304	MQA-16	Dissertation		24									200(8)
			06	28	30		05	120					200(8)	
Semester-IV	S4/401	MQA-17	Dissertation		24									300(12)
	S4/402	MQA-18	Seminar on Dissertation											100(4)
	S4/403	MQA-19	Viva-voce											100(4)
													500(20)	
													2000(80)	

MC-S : Subject common to all branches
MQA-S : Subject specialization in quality assurance

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