



Programme Specifications

M.Pharm. Programme

Programme:
Pharmacy Practice

Department:
Pharmacy Practice

Faculty of Pharmacy
M.S. Ramaiah University of Applied Sciences

PROGRAMME SPECIFICATIONS: PHARMACY PRACTICE

Faculty	Faculty of Pharmacy (FPH)
Department	Department of Pharmacy Practice
Programme	M.Pharm. in Pharmacy Practice
Dean of Faculty	Prof. (Dr.) V. Madhavan
HOD	Dr. Maheswari E

1. Title of the Award

M. Pharm. in Pharmacy Practice

2. Modes of Study

Full-Time Part-Time

3. Awarding Institution /Body

M.S.Ramaiah University of Applied Sciences – Bangalore, India

4. Joint Award

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5. Teaching Institution

Faculty of Pharmacy (FPH)

M.S.Ramaiah University of Applied Sciences – Bangalore, India

6. Month of Creation of Programme Specifications

February 2017

7. Programme Approval Month by the Academic Council of MSRUAS

April 2017

8. Next Review

March 2019

9. Programme Approving Regulatory Bodies and Date of Approval

Pharmacy Council of India (PCI), New Delhi

10. Programme Accrediting Body and Date of Accreditation

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11. Grade Awarded by the Accreditation Body

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12. Programme Accreditation Validity

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13. Programme Benchmark

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14. Rationale for the Programme

Pharmacy Practice is the discipline which develops the professional role of the clinical pharmacist in the areas like pharmacovigilance, therapeutic drug monitoring, pharmacoconomics, drug therapy review and patient counseling. Department of Pharmacy Practice is associated with 1500 bedded Ramaiah Medical Teaching Hospital and Ramaiah Memorial Hospital. The clinical pharmacist provides direct patient care services that optimizes the use of medication and promotes good health, wellness and disease prevention. A great deal of research work is required to be done to understand newer diseases and many other systemic disorders. With the advent of good clinical practices and ICH guidelines in clinical studies, clinical research has emerged as the most expanding and exponentially growing sector. To meet the demand in this field, there is an absolute need for more clinical pharmacists who can help in coordinating and conducting the clinical trials. Keeping these trends in view we intend to introduce the programme of Pharmacy practice.

The M.S. Ramaiah College of Pharmacy, now a constituent of MSRUAS as Faculty of Pharmacy has been in existence for over 2 decades. Over the years, Faculty of Pharmacy of MSRUAS has grown and evolved as one of the premier institutions in the state of Karnataka. It has very good infrastructure, noteworthy laboratory facilities, experienced and competent staff. During the last two decades, it has produced over 1000 graduates and 110 post graduates. The presence of other Faculties of applied sciences of the University will facilitate the students to experience more than the conventional curriculum.

Faculty of Pharmacy of MSRUAS offers M. Pharm in Pharmacy Practice degree which is featured with critical thinking, analytical and problem solving skills, outcome based curriculum, open electives across various Faculties.

15. Programme Aim

The aim of the programme is to produce postgraduates with advanced knowledge and understanding of pharmacy practice; higher order critical, analytical, problem solving and transferable skills; ability to think rigorously and independently to meet higher level expectations of pharmaceutical industry, academics, research or take up entrepreneurial route.

16. Programme Objectives

The objectives of the programme are:

1. To educate the students to focus their attention in the fields of hospital and community pharmacy and guiding them to take up the jobs in the hospitals after their graduation
2. To create research interest in the minds of students so that willingly they may take up research as a career with passion in the field of clinical research as well as in the research organizations
3. To give quality pharmacy education to the students, which help them get tuned to work in different research areas such as pharmacoconomics, pharmaco - epidemiology and pharmacovigilance

17. Intended Learning Outcomes of the Programme

The intended learning outcomes are listed under four headings:

1. Knowledge and Understanding,
2. Cognitive Skills
3. Practical Skills
4. Capability/ Transferable Skills.

17.1 Knowledge and Understanding

After undergoing this programme, a student will be able to:

- KU1: Explain the rationalisation of drug therapy
- KU2: Describe various adverse drug reactions
- KU3: Suggest alternative drug therapy in case of prescription errors
- KU4: Outline the guidelines used for specific diseases and clinical trials

17.2 Cognitive Skills

After undergoing this programme, a student will be able to:

- CS1: Interpret pharmacoconomics to provide cost effective therapy
- CS2: Modify and resolve medication errors in the prescription
- CS3: Employ clinical interventions by suggesting suitable pharmacotherapy and dose adjustment for patients
- CS4: Analyse and identify the best evidence based drug therapy

17.3 Practical Skills

After undergoing this programme, a student will be able to:

- PS1: Formulate hospital formulary
- PS2: Conduct patient counselling and pharmacovigilance activities
- PS3: Perform community pharmacy services
- PS4: Calculate doses based on individualised dosage regimen

17.4 Capability/Transferable Skills

After undergoing the programme, a student will be able to:

- TS1: Manage information, develop technical reports and make presentations
- TS2: Conduct community and clinical pharmacist services through patient counselling
- TS3: Work under various constraints to meet project targets
- TS4: Adopt to the chosen profession by continuously upgrading his/her knowledge and Understanding through life-long learning philosophy

18. Programme Structure

The following are the courses a student is required to successfully complete for the award of the degree. The course is delivered as per the Time-Table for every batch.

SEMESTER – I			
Course Code	Courses	Credits	Hours/Week
DEPARTMENT COMMON COURSE			
MPP101T	1. Clinical Pharmacy Practice	4	4
PROGRAMME SPECIALIZATION COURSES			
MPP102T	1. Pharmacotherapeutics-I	4	4
MPP103T	2. Hospital & Community Pharmacy	4	4
MPP104T	3. Clinical Research	4	4
MPP105P	4. Pharmacy Practice Practical I	6	12
MPP106	5.Seminar / Assignment	4	7
	Total	26	35
SEMESTER – II			
PROGRAMME SPECIALIZATION COURSES			
MPP201T	1. Principles of Quality Use of Medicines	4	4
MPP202T	2. Pharmacotherapeutics-II	4	4
MPP203T	3. Clinical Pharmacokinetics and Therapeutic Drug Monitoring	4	4
MPP204T	4. Pharmacoepidemiology & Pharmacoeconomics	4	4
MPP205P	5. Pharmacy Practice Practical II	6	12
MPP206	6. Seminar / Assignment	4	7
	Total	26	35
SEMESTER – III			
FACULTY COMMON SPECIALIZATION			
MRM301T	1. Research Methodology and Biostatistics	4	4
MPJ302	2. Journal Club	1	1
MMC301	3. Group Project	4	-
MPR301	4. Discussion / Presentation (Proposal Presentation)	2	2
MPR302	5. Research Work	14	28
	Total	25	35
SEMESTER – IV			
PROGRAMME SPECIALIZATION COURSES			
MPJ402	1. Journal Club	1	1
MPR403	2. Research Work	16	31
MPR404	3. Discussion / Interim - Final Presentation	3	3
	Total	20	35
MANDATORY COURSE/S			
MMC501	1. Participation /Presentation in research forum: National / International Seminar, Conferences,Workshops	2- 7	-
MMC502	2. Publication : National / International Journals		-
MMC503	3. Academic/Research award: State/National/International Agencies		-
	Grand Total	Minimum	98
		Maximum	100

19. Programme Delivery Structure- Full-Time

The programme is delivered from Monday to Saturday of the week.

Normally from 9AM to 1PM and 2PM to 5PM from Monday to Friday and 9AM to 1PM on Saturday

20. Teaching and Learning Methods

The programme delivery comprises of :

1. Face to Face Lectures using Audio-Visuals
2. Group Discussions, Presentations
3. Demonstrations
4. Guest Lectures
5. Laboratory/Field work/Workshops
6. Industry Visit/Hospital Visit
7. Seminars
8. Project Exhibitions
9. Case studies
10. Concept mapping

21. Mandatory Courses

Mandatory course/s can be any one or more of the following –

MMC501 Participation / Presentation in Research Forum

A student can participate / submit a paper and make a presentation in a conference, seminar, workshop, training programme or symposium related to the programme specialization which is approved by the department.

MMC502 Publication in National / International Journal (Referred & Abstracted)

A student can publish a review or research paper in a reputed scientific journal. The proof of submission and a copy of the paper shall be submitted to the department.

MMC503 Academic / Research award from State / National / International Agencies

A student with extraordinary accomplishment can participate and get academic excellence / research excellence awards from conferences/ competitions/ recognised affiliated bodies and agencies.

MMC301 Group Project

A group project shall have up to 5 interdepartmental students within the faculty. The purpose of group project is that the group should be able to design/develop/evaluate a drug moiety, dosage form, product, data or process in their area of specializations. The students are required to develop a report for assessment and also need to demonstrate the final outcome. The IPR rights of all such work lies with the University only. The students are required to sign an agreement before the commencement of the project. The project should be approved by a committee of examiners before the start of the project. Students can choose a project from the database of projects available with the concerned department. The detailed procedure and evaluation procedure is available in the Operation Manual / I - portal.

- 22. MPH106 & MPH206 Seminar/ Assignment**
- Assignment:** Every candidate shall submit a word processed assignment for individual theory courses in their first and second semester specialization.
- Seminar:** Every candidate shall present on the submitted assignment topic for individual theory courses in their first and second semester specialization.
- The detailed procedure and evaluation procedure is available in the Operation Manual / I- portal.
- 23. MPJ302 & MPJ402 Journal Club**
- Every student shall critically appraise the research article of their specialization published in reputed journals. Students are trained for inquiry based learning and critical thinking skills. Students shall access journals adopting search engines and made to collect relevant data, analyze and comment on the findings with the submission of the document evidence and present on the same for assessment. The detailed procedure and evaluation procedure is available in the Operation Manual/ I- portal.
- 24. MPR304 & MPR403**
- Dissertation /Research Work**
- Every candidate shall carry out work on an assigned research project under the guidance of a recognized Postgraduate teacher in the third and fourth semester, the result of which shall be written up and submitted in the form of a dissertation.
- Work for writing the dissertation is aimed at contributing to the development of a spirit of enquiry, besides exposing the candidate to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature.
- The dissertation shall be examined by a minimum of two examiners; one internal (Mentor) and one external examiner (outside the University).

25. Assessment and Grading

SEMESTER - I

Course code	Course	Internal Assessment				Semester End Examination		Total Marks
		Continuous Mode	Sessional Examination		Total	Marks	Duration	
			Marks	Duration				
MPP 101T	Clinical Pharmacy Practice	10	15	1h.	25	75	3h.	100
MPP 102T	Pharmacotherapeutics-I	10	15	1h.	25	75	3h.	100
MPP 103T	Hospital & Community Pharmacy	10	15	1h.	25	75	3h.	100
MPP 104T	Clinical Research	10	15	1h.	25	75	3h.	100
MPP 105P	Pharmacy Practice Practical I	20	30	6h.	50	100	6h.	150
MPP 106	Seminar / Assignment	-	-	-	-	-	-	100
Total								650

SEMESTER - II

Course code	Course	Internal Assessment				Semester End Examination		Total Marks
		Continuous Mode	Sessional Examination		Total	Marks	Duration	
			Marks	Duration				
MPP 201T	Principles of Quality Use of Medicines	10	15	1h.	25	75	3h.	100
MPP 202T	Pharmacotherapeutics II	10	15	1h.	25	75	3h.	100
MPP 203T	Clinical Pharmacokinetics and Therapeutic Drug Monitoring	10	15	1h.	25	75	3h.	100
MPP 204T	Pharmaco-epidemiology & Pharmacoeconomics	10	15	1h.	25	75	3h.	100
MPP 205P	Pharmacy Practice Practical II	20	30	6h.	50	100	6h.	150
MPP 206	Seminar/ Assignment	-	-	-	-	-	-	100
Total								650

SEMESTER - III

Course code	Course	Internal Assessment				Semester End Examination		Total Marks
		Continuous Mode	Sessional Examination		Total	Marks	Duration	
			Marks	Duration				
MRM 301T	Research Methodology and Biostatistics	10	15	1h.	25	75	3h.	100
MPJ 302	Journal Club	-	-	-	25	-	-	25
MPR 301	Discussion / Presentation (Proposal Presentation)	-	-	-	50	-	-	50
MPR 302	Research Work	-	-	-	-	350	1h.	350
Total								525

SEMESTER - IV

Course code	Course	Internal Assessment				End Semester Examination		Total Marks
		Continuous Mode	Sessional Examination		Total	Marks	Duration	
			Marks	Duration				
MPJ 402	Journal Club	-	-	-	25	-	-	25
MPR 403	Research Work	-	-	-	-	400	-	400
MPR 404	Discussion / Interim - Final Presentation	-	-	-	75	-	1h.	75
Total								500

Theory: 100 Marks

(Component -1: 25 Marks + Component-2: 75Marks)

Component - 1: 25 Marks

It has two sub-components (Part A & B)

Part – A: Continuous Evaluation: 10 Marks

The marks allocated for Continuous mode of internal assessment shall be awarded as per the scheme given below:

Scheme for awarding Continuous Evaluation -Theory

Criteria	Maximum marks
Attendance *	8
Student –Teacher Interaction**	2
Total	10

** student will be continuously assessed during theory and practical sessions

Guidelines for allotment of marks for attendance*

Percentage of Attendance	Theory
95-100	8
90-94	6
85-89	4
80-84	2
Less than 80	0

Part – B: Sessional Examination: 15 Marks

Two sessional examinations (each for 15 Marks with one-hour duration) will be conducted.

Average marks of the two sessionals will be computed for sessional examination marks.

Component -2 Semester End Theory Examination :75 Marks

Theory Examination: A theory exam shall be conducted for maximum marks 75 Marks with three hours of duration

Practical – 150 Marks**(Component - 1: 50 Marks + Component - 2: 100 Marks)****Component - 1: 50 Marks**

It has two sub-components (Part A & B)

Part – A: Continuous Evaluation: 20 Marks

The marks allocated for Continuous mode of internal assessment shall be awarded as per the scheme given below:

Scheme for awarding Continuous Evaluation - Practical

Criteria	Maximum marks
Attendance *	10
Practical Records, Regular viva-voce	10
Total	20

Guidelines for allotment of marks for attendance*

Percentage of Attendance	Practical
95-100	10
90-94	7.5
85-89	5
80-84	2.5
Less than 80	0

Part – B: Sessional Examination: 30 Marks

Two sessional examinations (each for 30 Marks with six-hour duration) will be conducted. Average marks of the two sessionals will be computed for sessional examination marks.

Component -2 Semester End Practical Examination: 100 Marks

Practical Examination: 100 Marks with six hours of duration. Practical examination shall also consist of a viva –voce (Oral) examination.

The assessment questions are set to test the learning outcomes. In each component a certain learning outcome is assessed.

Note: For more details on the break-ups, please refer to the Course Specifications

A student is required to score an overall 50% for successful completion of a course and earn the credits.

Note: Final marks awarded in each of the courses will be confirmed only after SAB/PAB as explained in Academic Regulations of M. Pharm. Programme.

Assignment & Seminar

The detailed procedure and evaluation procedure is available in the Operation Manual / Student Handbook/Academic Regulations.

Journal Club

The detailed procedure and evaluation procedure is available in the Operation Manual / Student Handbook/Academic Regulations.

Group Project

The detailed procedure and evaluation procedure is available in the Operation Manual / Student Handbook/Academic Regulations.

Mandatory Courses

The credit points assigned for extracurricular and/ or co-curricular activities shall be given by the Dean of the Faculty and the same shall be submitted to the University.

Name of the activity	Maximum credit points Eligible/Activity
Participation in National Level Seminar/Conference/Workshop/Symposium/ Training	01
Participation in International Level outside India Seminar/Conference/Workshop/Symposium/ Training Programs (related to the specialization of the student)	02
Academic Award/Research Award from State Level/National Agencies	01
Academic Award/Research Award from International Agencies	02
Research / Review Publication in National Journals (Indexed in Scopus / Web of Science)	01
Research / Review Publication in International Journals (Indexed in Scopus / Web of Science)	02

Dissertation/Research Work

1. Every candidate shall carry out work on an assigned research project under the guidance of a recognized Postgraduate Teacher, the result of which shall be written up and submitted in the form of a dissertation.

2. Work for writing the Dissertation is aimed at contributing to the development of spirit of enquiry, besides exposing the candidate to the techniques of research, critical analysis, acquaintance with the latest advances in pharmaceutical/medical sciences and the manner of identifying and consulting available literature. Dissertation shall be submitted as per the

notified time schedule mentioned in the Academic calendar / student hand book.

3. The Dissertation and viva-voce shall be evaluated by two examiners, one Internal and one External examiner appointed by the University.

Scheme of 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 : 500 Marks

Scheme of Evaluation of Presentation:

Presentation of work	: 100 Marks
Communication skills	: 50 Marks
Question and answer skills	: 100 Marks

Total : 250 Marks

A student is required to score a minimum of 50% overall for successful completion of Dissertation and earn the corresponding credits.

Supplementary/ Re-registration examination and improvement of sessional marks

The eligibility criteria and procedures for supplementary examination and improvement of sessional marks are as per the Pharmacy Council of India (PCI) norms and as indicated in the Academic Regulations governing this programme.

26. Attendance

A student is required to have a minimum of 85% attendance to be eligible to appear for the examination. Any condoning is as per the Academic regulations of M. Pharm. programme.

27. Award of Class

As per the Academic Regulations for M. Pharm. Programme

28. Student Support for Learning

Students are given the following support:

1. Course Notes
2. Reference Books in the Library
3. Magazines and Journals
4. Internet Facility
5. Computing Facility
6. Laboratory Facility
7. Workshop Facility
8. Staff Support
9. Lounges for Discussions
10. Any other support that enhances their learning

29. Quality Control Measures

The following are the Quality Control Measures:

1. Review of Course Notes
2. Review of Question Papers and Assignment
3. Student Feedback
4. Moderation of Assessed work
5. Opportunities for the students to see their assessed work
6. Review by External Examiners and External Examiners Reports
7. Staff Student Consultative Committee Meetings
8. Student Exit Feedback
9. Subject Assessment Board
10. Programme Assessment Board

30. Curriculum Map

Course Code	Intended Learning Outcomes											
	Knowledge and Understanding				Cognitive (Thinking) Skills Critical, Analytical, Problem solving, Innovation				Practical Skills			
	KU1	KU2	KU3	KU4	CS1	CS2	CS3	CS4	PS1	PS2	PS3	PS4
MPP101T		X	X			X						
MPP102T	X			X			X					X
MPP103T	X								X		X	
MPP104T				X								
MPP105P									X	X	X	X
MPP106									X	X	X	X
MPP201T	X	X	X			X						
MPP202T	X		X	X			X	X				
MPP203T							X					X
MPP204T					X							
MPP205P		X			X	X	X			X		
MPP206									X	X	X	X
MRM301T						X						
MPJ302										X		
MMC301		X	X		X				X	X	X	
MPR301							X					
MPR302							X		X	X		X
MPJ402										X		
MPR403							X		X	X		X
MPR404								X				
MMC501												
MMC502												
MMC503												

31. Capability / Transferable Skills Map

Course Code	Group work	Self learning	Research Skills	Written Communication Skills	Verbal Communication Skills	Presentation Skills	Behavioral Skills	Information Management	Personal management/ Leadership Skills
MPP101T		X	X						
MPP102T		X	X						
MPP103T		X		X	X				
MPP104T		X	X	X					
MPP105P	X	X	X	X	X	X	X	X	X
MPP106	X	X	X	X	X	X		X	X
MPP201T		X	X						
MPP202T		X	X	X	X		X		
MPP203T		X	X						
MPP204T		X	X						
MPP205P	X	X	X	X	X	X	X	X	X
MPP206	X	X	X	X	X	X		X	X
MRM301T	X	X	X	X	X	X	X	X	X
MPJ302		X	X	X	X	X	X	X	X
MMC301	X	X	X	X	X	X	X	X	X
MPR301		X	X	X	X	X	X	X	X
MPR302		X	X	X	X	X	X	X	X
MPJ402		X	X	X	X	X	X	X	X
MPR403		X	X	X	X	X	X	X	X
MPR404		X	X	X	X	X	X	X	X
MMC501		X	X	X	X	X	X	X	X
MMC502		X	X	X	X	X	X	X	X
MMC503		X	X	X	X	X	X	X	X

32. Co-curricular Activities

Students are encouraged to take part in co-curricular activities like seminars, conferences, symposium, paper writing, attending industry exhibitions, project competitions and related activities to enhance their knowledge and network.

33. Cultural and Literary Activities

To remind and ignite the creative endeavors annual cultural festivals are held and the students are made to plan and organize the activities

34. Sports and Athletics

Students are encouraged to develop a habit of playing games on daily basis and also take part in annual sports and athletic events.

