



MGM INSTITUTE OF HEALTH SCIENCES

Accredited by NAAC with 'A' Grade

(Deemed University u/s 3 of UGC Act, 1956)

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CHOICE BASED CREDIT SYSTEM (CBCS)

(With effect from 2019-20 Batches)

Curriculum for M.Sc. Medical Pharmacology

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Registrar

MGM Institute of Health Sciences
(Deemed University u/s 3 of UGC Act, 1956)
Navi Mumbai-410 209

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Navi Mumbai - 410209

Approved as per BOM -57/2019, Resolution No. 3.2.1.6.i, Dated 26/04/2019

Annexure Item 7

Item 7: Restructuring syllabus of M.Sc. Medical Pharmacology Program as per Choice Based Credit System (CBCS)

Name of the Degree: M.Sc. Medical Pharmacology

AIMS OF THE PROGRAM

Postgraduate qualification in Medical Pharmacology can secure placements in Academics and Pharma industries. In academics, one can pursue for higher education like Ph.D. in Pharmacology. After completion of the course, one can work as Teaching faculty in a Medical College or as a researcher associate in Research and Development (RND).

Duration of Study: The duration of the study for M.Sc. Medical Pharmacology will be of six semesters spread over three years.

Program pattern- Commencement of Semester

- First Semester: August
- Second Semester: February
- Third Semester: August
- Fourth Semester: February
- Fifth Semester: August
- Sixth Semester: February

Eligibility Criteria: As a minimum criterion of eligibility, aspiring candidates are needed to have attained a B.Sc. in any discipline of Life Sciences, Biosciences, Bachelor's degree in any of Physics, Biological Sciences, M.B.B.S, BDS, BAMS, BHMS, B.Pharm., B.Tech (Biotechnology), Bachelor's Degree in Agricultural, Veterinary and Fishery Sciences, or equivalent examination with a minimum aggregate score of 50%.

For any query visit the website: www.mgmuhs.com

CURRICULUM FOR M. Sc. Medical Microbiology

I st YEAR

Semester I							
	Syllabus Ref. No.	Subject	Credits	Teaching hours	Marks		
					Internal Assessment	Semester Exam	Total
		Theory					
		Medical Anatomy	4	4	20	60	80
		Medical Physiology	4	4	20	60	80
		Medical Biochemistry	4	4	20	60	80
		Medical Pharmacology	4	4	20	60	80
		Medical Microbiology	4	4	20	60	80
		Practical					
		Medical Anatomy	1	2	20	50	70
		Medical Physiology	1	2	20	50	70
		Medical Biochemistry	1	2	20	50	70
		Medical Pharmacology	1	2	20	50	70
		Medical Microbiology	1	2	20	50	70
		Total	25	30	200	550	750

Semester II							
Syllabus Ref. No.	Subject	Credits	Teaching hours	Marks			
Theory				Internal Assessment	Semester Exam	Total	
	Medical Anatomy	4	4	20	60	80	
	Medical Physiology	4	4	20	60	80	
	Medical Biochemistry	4	4	20	60	80	
	Medical Pharmacology	4	4	20	60	80	
	Medical Microbiology	4	4	20	60	80	
	Research Methodology & Biostatistics (Core Course)	4	4	20	60	80	
Practical							
	Medical Anatomy	1	2	20	50	70	
	Medical Physiology	1	2	20	50	70	
	Medical Biochemistry	1	2	20	50	70	
	Medical Pharmacology	1	2	20	50	70	
	Medical Microbiology	1	2	20	50	70	
	Research Methodology & Biostatistics (Core Course)	1	2	20	50	70	

Total		30	36	240	660	900
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2ND YEAR

Semester III							
	Syllabus Ref. No.	Subject	Credits	Teaching hours	Marks		
	Theory				Internal Assessment	Semester Exam	Total
		Details of general pharmacology, CVS, ANS	4	4	20	60	80
		Core Elective course**	4	4	Internal Exam 80 Marks		
		Pharmacovigilance					
		Drug development using vertebrate animals					
		Clinical Postings	6	18	50		50
		Dissertation/Project Proposal*	5	10	50	-	50
		Seminar	2	2	50		50
	Practical						
		Clinical pharmacokinetic, Pharmacy, dosage form	2	4	20	50	70
		Core Elective practical Pharmacovigilance,	1	2	Internal Exam 70 Marks		

		clinical pharmacology					
		Total	24	44	190	110	300

Semester IV								
	Syllabus Ref. No.	Subject	Credits	Teaching hours	Marks			
	Theory				Internal Assessment	Semester Exam	Total	
		Details of Endocrinology, CNS, Ethics,	4	4	20	60	80	
		General elective **	4	4				
		Bioethics, Biosafety, IPR & Technology Transfer	Internal Exam of 80 Marks					
		Disaster Management and Mitigation Resources						
		Human rights						
		Clinical Postings	7	21	50		50	
		Dissertation / Project*	5	10	50		50	
		Seminar	2	2	50		50	
	Practical							
		Bioassay, Experimental graphs	2	4	20	50	70	
		Total	24	45	190	110	300	

IIIrd YEAR

Semester V							
	Syllabus Ref. No.	Subject	Credits	Teaching hours	Marks		
					Internal Assessment	Semester Exam	Total
		Drug discovery and development	4	4	20	60	80
		Clinical Postings	6	18	50		50
		Dissertation / Project*	12	24	50		50
		Practical					
		Clinical research, Instrumentation	1	2	20	50	70
		Total	23	46	140	110	250

Semester VI							
	Syllabus Ref. No.	Subject	Credits	Teaching hours	Marks		
					Internal Assessment	Semester Exam	Total
		Drug screening and Evaluation methods	4	4	20	60	80
		Clinical Postings	6	18	50		50
		Dissertation / Project*	12	24		100	100

Practical							
	Animal handling, short procedures	2	4	20	50	70	
	Total	24	50	90	210	300	

*(a) **Dissertation / Project Course** commences in II nd Semester.

Students should undergo ICMR Online Course of Research Methodology before submitting the protocol for their Dissertation. (Ist / II nd Semester)

Allotment of Guide	II nd Semester (On or Before 30 April)
Submission of Protocol for Scientific and Ethical Committee Approval	III rd Semester (On or Before 14 th Aug)
Scientific and Ethical Approval	III rd Semester (On or Before 14 th October)
Commencement of Research Work	III rd Semester 15 th October
Submission of Thesis	VI th Semester 31 st March

(Elective): Any one subject is to be chosen from the subjects offered (Subjects offered may change from time to time depending on the availability of expertise)

**Elective courses may or may not have practical and/or field work.

Outline of course curriculum
MSc-Medical Courses (2019-20 batch)
Semester -I (Total Credits=25)

Core subjects	Hrs/week				Total Credits/week	Hrs/semester				Exam Marks			
	Lecture/week	Tutorial/week	Practical hrs/week	Total Hrs/week		Lecture/semester	Tutorial/semester	Practical/semester	Total hours	IA	semester Exam	Total marks	
Theory													
Anatomy	3	1		4	4	45	15		60	20	60	80	
Physiology	3	1		4	4	45	15		60	20	60	80	
Biochemistry	3	1		4	4	45	15		60	20	60	80	
Pharmacology	3	1		4	4	45	15		60	20	60	80	
Microbiology	3	1		4	4	45	15		60	20	60	80	
Practical													
Anatomy			2	2	1			30	30	20	50	70	
Physiology			2	2	1			30	30	20	50	70	
Biochemistry			2	2	1			30	30	20	50	70	
Pharmacology			2	2	1			30	30	20	50	70	
Microbiology			2	2	1			30	30	20	50	70	
Total								450				750	

Total Marks for IA	
Theory	Practical
30	30

Theory Internal Assessment	
Theory	15
Seminar	5
Total	20

Practical Internal Assessment	
Practical	15
Journal	5
Total	20

**MSc-Medical Courses (2019-20 batch)
Semester -II (Total Credits=30)**

Core subjects	Hrs/week				Total Credits/week	Hrs/semester				Exam Marks		
	Lectur e/week	Tutor ial /week	Prac tical hrs/week	Total Hrs /week		Lecture/ semester	Tutoria l/ semester	Prac tical/ semester	Total hours	IA	semester Exam	Total marks
Theory												
Anatomy	3	1		4	4	45	15		60	20	60	80
Physiology	3	1		4	4	45	15		60	20	60	80
Biochemistry	3	1		4	4	45	15		60	20	60	80
Pharmacology	3	1		4	4	45	15		60	20	60	80
Microbiology	3	1		4	4	45	15		60	20	60	80
Research Methodology & Biostatistics	4			4	4	60			60	20	60	80
Practical												
Anatomy			2	2	1			30	30	20	50	70
Physiology			2	2	1			30	30	20	50	70
Biochemistry			2	2	1			30	30	20	50	70
Pharmacology			2	2	1			30	30	20	50	70
Microbiology			2	2	1			30	30	20	50	70
Research Methodology & Biostatistics			2	2	1			30	30	20	50	70
Total								540				900

Total Marks for IA	
Theory	Practical
30	30

Theory Internal Assessment	
Theory	15
Seminar	5
Total	20

Practical Internal Assessment	
Practical	15
Journal	5
Total	20

ACADEMIC SYLLABUS FOR SEMESTER-I

Name of the Programme	M. Sc. Medical Pharmacology
Course Code	_____
Name of the Course	Medical Pharmacology I Semester

Course Objective (Teaching Objectives)	<ul style="list-style-type: none"> • This course is designed to enable students to understand basic concepts of pharmacology. • To acquire basic knowledge and skill of pharmacodynamics, principles of therapeutics and pharmacokinetics of commonly used drug and essential medicines
Course Outcomes (Learning Objectives)	<p>At the end of course student should be able to</p> <ol style="list-style-type: none"> 1. Understand basic concepts of pharmacology 2. Describe pharmacodynamics and pharmacokinetics of essential and commonly used drugs 3. List indication, contraindication, interaction and adverse reaction of commonly used drugs 4. Indicate the use of appropriate drug in particular disease with consideration of efficacy, safety and cost of the therapy 5. Explain and understand the pharmacological basis for prescribing drug in special medical situations

<u>Unit no.</u>	Theory Topics	Hours allotted No. of-hrs
1.	General Pharmacology :Introduction to Pharmacology, Sources of Drugs, Routes of Drug Administration, Pharmacokinetics ,	10

	Pharmacodynamics, Factors Modifying Drug action and Adverse drug reactions.	
2.	Autonomic Nervous System: General Consideration, Adrenergic agonist, Adrenergic antagonists, Cholinergic agonists, Anticholinesterases drugs, Anticholinergic drugs, Skeletal muscle relaxants.	11
3.	Cardiovascular System: Antihypertensive Agents, Diuretics and Anti-diuretics, Antianginal Agents, Coagulants & Anticoagulants, Thrombolytics & Antiplatelet agents, Drugs for congestive cardiac failure, Management of shock, Hypolipidemic agents and Haematinics.	16
4.	Gastrointestinal System: Emetics and Antiemetics, Drugs for peptic ulcer, Anti-diarrheal agents and Laxative & purgatives.	5
5.	Respiratory System: Treatment of Cough, Drugs for Bronchial asthma.	3
	Total	45

Unit no.	Tutorial Topics	Hours allotted No. of hrs
1.	Bioavailability of Drug	1
2.	Dosage Form of drugs	1
3.	Pharmacovigilance	1
4.	Management of Organophosphorus Compound Poisoning (OPC)	1
5.	Factors Modifying Drug action	1
6.	Atropine Substitutes	1
7.	β adrenergic blockers	1
8.	Management of Hypertension (HT)	1
9.	Management of Angina pectoris	1
10.	Management of Congestive Cardiac Failure (CCF)	1
11.	Management of Myocardial Infarction (MI)	1
12.	Management of Anemia	1
13.	Management of Diarrhea	1
14.	Management of Bronchial Asthma	1
15.	Skeletal muscle relaxants	1
	Total	15

Unit no.	Practical Topics	Hours allotted No. of hrs
1.	Introduction to Practical Pharmacology	4
2.	Prescription Writing	4
3.	Pharmacokinetics- I	4
4.	Routes of Administration – Oral	4
5.	Routes of Administration – Parenteral	4

6.	Routes of Administration – Topical	4
7.	Introduction to Pharmacy	4
8.	Introduction to Experimental Pharmacology	2
	Total hours	30

Reference Books:

1. K.D. Tripathi, Essentials of Medical Pharmacology, Japjee Brothers, Post 7193, G-16,
2. EMCA house, 23/23, Bansari Road, Daryanganj, New Delhi
3. R.S. Satoakar, A.D. Bhandarkar, S.S. Ainapure, Pharmacology and Pharmacotherapeutics
4. H.L. Sharma and K.L. Sharma, Principles of Pharmacology, Paras Medical Publisher, Hyderabad, New Delhi

ACADEMIC SYLLABUS FOR SEMESTER-II

Name of the Programme	M. Sc. Medical Pharmacology
Course Code	_____
Name of the Course	Pharmacology II Semester

Course Objective (Teaching Objectives)	<ul style="list-style-type: none"> • This course is designed to enable students to understand basic concepts of pharmacology. • To acquire basic knowledge and skill of pharmacodynamics, principles of therapeutics and pharmacokinetics of commonly used drug and essential medicines
Course Outcomes (Learning Objectives)	<p>At the end of course student should be able to</p> <ol style="list-style-type: none"> 1. Understand basic concepts of pharmacology 2. Describe pharmacodynamics and pharmacokinetics of essential and commonly used drugs 3. List indication, contraindication, interaction and adverse reaction of commonly used drugs 4. Indicate the use of appropriate drug in particular disease with consideration of efficacy, safety and cost of the therapy

	5. Explain and understand the pharmacological basis for prescribing drug in special medical situations
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Unit no.	Theory Topics	Hours allotted No. of-hrs
1.	Drugs affecting Central Nervous system (CNS) :Introduction to CNS,Sedative and Hypnotics,Local Anaesthetics,General Anaesthetics, Antiepileptics, Antidepressants, Antipsychotics, NSAIDS, Opioids and Antiparkinson agents.	13
2.	Hormones and Antagonists: Introduction to Endocrinology, Glucocorticoids,Insulin,Oral hypoglycemic agents,Thyroxine &Antithyroid drugs,Estrogens and Antagonists,Progestins and Antagonists,Oral Contraceptives, Testosterone and Anabolic steroids.	12
3.	Chemotherapeutic agents: General consideration, Sulphonamides and Cotrimoxazole, Fluroquinolones, Penicillins, Cephalosporins and Other beta lactam antibiotics, Aminoglycosides, Macrolides, Tetracyclines and Chloramphenicol, Antitubercular drugs, Antileprotic agents, Antimalarial agents, Antiamoebic agents, Antihelminthics, Antifungal agents, Antiviral agents and Cancer Chemotherapy.	20
	Total	45

Unit no.	Tutorial Topics	Hours allotted hrs	No. of
1.	Management of Epilepsy	1	
2.	Management of Depression	1	
3.	Management of Pain	1	
4.	Management of Drug Dependence	1	

5.	Management of Parkinson's disease	1
6.	Management of Diabetes Mellitus	1
7.	Oral contraceptives	1
8.	General consideration of Chemotherapy	1
9.	Management of Urinary tract infection	1
10	Management of Typhoid	1
11	Management of Tuberculosis	1
12	Management of Leprosy	1
13	Management of Malaria	1
14	Management of Amoebiasis	1
15	Management of HIV	1
	Total	15

Unit no.	Practical Topics	Hours allotted No. of hrs
1.	Pharmacokinetics –II	4
2.	Pharmacodynamics-I	4
3.	Pharmacodynamics-II	4
4.	Screening techniques for new drugs	4
5.	Adverse drug reactions	4
6.	Sources of drug Information	4
7.	Computer assisted learning (CAL) – Experimental pharmacology	2
8.	CNS Screening instruments and equipments	4
	Total hours	30

Reference Books:

1. K.D. Tripathi, Essentials of Medical Pharmacology, Japjee Brothers, Post 7193, G-16, EMCA house, 23/23, Bansari Road, Daryanganj, New Delhi
2. R.S. Satoskar, A.D. Bhandarkar, S.S. Ainapure, Pharmacology and Pharmacotherapeutics
3. H.L. Sharma and K.L. Sharma, Principles of Pharmacology, Paras Medical Publisher, Hyderabad, New Delh

MGM INSTITUTE OF HEALTH SCIENCES		
M. Sc. Medical Students		
Syllabus for Research Methodology and Biostatistics		
		No. of Hours
I. Research Methodology:	Theory	Practical
Scientific Methods of Research : Definition of Research, Assumptions, Operations and Aims of Scientific Research. Research Process, Significance and Criteria of Good Research , Research Methods versus Methodology, Different Steps in Writing Report, Technique of Interpretation, Precaution in interpretation, Significance of Report Writing, Layout of the Research Report	5	—
Research Designs: Prospective, retrospective, Observational Studies: Descriptive, explanatory, and exploratory, Experimental Studies: Pre-test design, post-test design, Follow-up or longitudinal design, Cohort Studies, Case Control Studies, Cross sectional studies, Intervention studies, Panel Studies.	5	—
Sampling Designs : Census and Sample Survey, Implications of a Sample Design, Steps in Sampling Design Criteria of Selecting a Sampling Procedure, Characteristics of a Good Sample Design, Different Types of Sample Designs (Probability sampling and non probability sampling), How to Select a Random Sample?, Systematic sampling, Stratified sampling, Cluster sampling, Area sampling, Multi-stage sampling, Sampling with probability proportional to size, Sequential sampling.	4	0
Measurement in research: Measurement Scales, Sources of Error in Measurement, Tests of Sound Measurement, Technique of Developing Measurement Tools, Scaling Meaning of Scaling, Scale Classification Bases, Important Scaling Techniques, Scale Construction Techniques, Possible sources of error in measurement, Tests of sound measurement	5	5
Methods of Data Collection: Types of data, Collection of Primary Data, Observation Method, Interview Method, Collection of Primary Data	3	0
Ethics and Ethical practice in research and plagiarism	1	

Sampling Fundamentals: Need and importance for Sampling, Central Limit Theorem, Sampling Theory, Concept of Standard Error, Estimation, Estimating the Population Mean Estimating Population Proportion, Sample Size and its Determination, Determination of Sample Size through the Approach Based on Precision Rate and Confidence Level.	5	2
II. Biostatistics		
Data Presentation : Types of numerical data: Nominal, Ordinal, Ranked, Discrete and continuous. Tables: Frequency distributions, Relative frequency, Graph: Bar charts, Histograms, Frequency polygons, one way scatter plots, Box plots, two way scatter plots, line graphs	3	3
Measures of Central Tendency and Dispersion : Mean, Median, Mode Range, Inter quartile range, variance and Standard Deviation, Coefficient of variation, grouped mean and grouped standard deviation (including merits and demerits).	3	3
Testing of Hypotheses: Definition, Basic Concepts, Procedure for Hypothesis Testing, Normal distribution, data transformation Important Parametric Tests, Hypothesis Testing of Means, Hypothesis Testing for Differences between Means, Hypothesis Testing for Comparing Two Related Samples, Hypothesis Testing of Proportions, Hypothesis Testing for Difference between Proportions, Testing the Equality of Variances of Two Normal Populations.	6	6
Chi-square Test: Chi-square as a Non-parametric Test, Conditions for the Application Chi-square test, Steps Involved in Applying Chi-square Test, Alternative Formula, Yates' Correction, and Coefficient by Contingency.	2	2
Measures of Relationship: Need and meaning, Correlation and Simple Regression Analysis	2	2
Analysis of Variance and Covariance: Analysis of Variance (ANOVA): Concept and technique of ANOVA, One-way ANOVA, Two-way ANOVA, ANOVA in Latin-Square Design Analysis of Co-variance (ANOCOVA), ANOCOVA Technique.	4	4
Nonparametric or Distribution-free Tests: Important Nonparametric or Distribution-free Test Sign test, Wilcoxon signed-Rank Test, Wilcoxon Rank Sum Test: Mann-Whitney U test Kruskal Walli's test, Friedman's test, and Spearman Correlation test.	3	3
Vital Health Statistics: Measurement of Population: rate, crude rate, specific rate, <i>Measurement of fertility:</i> specific fertility rate, Total fertility rate, <i>Reproduction rate,</i> Gross Reproduction Rate, Net Reproduction Rate, Measures related to mortality: Crude Death Rate (CDR) , Age-specific death Rate, Infant and child mortality rate, Measures related to morbidity.	4	3

Computer Application Use of Computer in data analysis and research, Use of Software and Statistical package.	0	2
Total hours	55	35

REFERENCE BOOKS:

List of the books recommended

MSc- Medical Microbiology

Semester	Name of the Books	Author/ Editor
II	Textbook of Microbiology	Ananthnarayan&Paniker
	Textbook of Microbiology	C.P. Baveja
	Practical & Applied Microbiology	Anuradha De
	Medical Parasitology	C.P. Baveja V. Baveja

ASSESSMENT

1. LETTER GRADES AND GRADE POINTS:

MGMIHS has adopted the UGC recommended system of awarding grades and CGPA under Choice Based Credit Semester System for MSc Medical courses.

1. MGMIHS would be following the absolute grading system, where the marks are compounded to grades based on pre-determined class intervals.
2. The UGC recommended 10-point grading system with the following letter grades will be followed:

Table 1: Grades and Grade Points

Letter Grade	Grade Point
O (Outstanding)	10
A+ (Excellent)	9

A (Very Good)	8
B (Good)	7
C (Above Average)	6
F (Fail)/ RA (Reappear)	0
Ab (Absent)	0
Not Completed (NC)	0
RC (<50% in attendance or in Internal Assessment)	

- a. A student obtaining Grade RA shall be considered failed and will be required to reappear in the examination.
- b. Candidates with NC grading are those detained in a course (s); while RC indicate student not fulfilling the minimum criteria for academic progress or less than 50%in attendance or less than 50% in internal assessments (IA). Registrations of such students for the respective courses shall be treated as cancelled. If the course is a core course, the candidate has to re-register and repeat the course when it is offered next time.

c. CBCS Grading System - Marks Equivalence Table

Table 2: Grades and Grade Points

Letter Grade	Grade Point	% of Marks
O (Outstanding)	10	86-100
A+ (Excellent)	9	70-85
A (Very Good)	8	60 -69
B (Good)	7	55 -59
C (Above Average) – Pass both for UG and PGs	6	50- 54
F (Fail))/ RA (Reappear)	0	Less than 50

Ab (Absent)	0	-
NC- not completed	0	-
RC- Repeat the Course	0	0

Table 3: Cumulative Grades and Grade Points

Letter Grade	Grade Point	CGPA
O (Outstanding)	10	9.01 - 10.00
A+ (Excellent)	9	8.01 – 9.00
A (Very Good)	8	7.01 – 8.00
B (Good)	7	6.00 - 7.00
C (Above Average)	6	5.01 - 6.00

- d. **Assessment of a Course:** Evaluation for a course shall be done on a continuous basis. Uniform procedure will be adopted under the CBCS to conduct continuous internal assessments (IA), followed by one end-semester university examination (ES) for each course.
- e. Courses in programs wherein Theory and Lab are assessed jointly, the minimum passing head has to be 50% Grade each for theory and practical's separately. RA grade in any one of the components will amount to reappearing in both components. i.e. theory and practical.

2. Eligibility to appear for the end-semester examinations for a course includes:

2.1 Candidates having $\geq 75\%$ attendance and obtaining the minimum 35% in internal assessments in each course to qualify for appearing in the end-semester university examinations.

2.2 The students desirous of appearing for university examination shall submit the application form duly filled along with the prescribed examination fee.

2.3 Incomplete application forms or application forms submitted without prescribed fee or application form submitted after due date will be rejected and student shall not be allowed to appear for examination.

3. Passing Heads

- 3.1 The minimum passing mark shall be 50% in both Theory and practicals separately including the internal assessment.
- 3.2 Elective subjects – the minimum prescribed marks for a pass in elective subject should be 50%. The marks obtained in an elective subject should be communicated to the university before the commencement of the university examination. (From IIIrd Sem Onwards)

4 Detention:

A student not meeting any of the above criteria may be detained (NC) in that particular course for the semester. In the subsequent semester, such a candidate improve in all, including attendance and/or IA minimum to become eligible for the next end-semester examination.

- 5 The maximum duration for completing the course will be 6 years (minimum duration of course x 2) i.e. (3x2) =6 years for PG Courses, failing which his/her registration will be cancelled. Full fees of entire course of three years may be liable to be paid by the students.

6 Carry over benefit:

6.1 A candidate who fails in any two main subjects of previous semester shall be permitted to carry over those subjects to the next semester.

6.2 A candidate shall not be allowed to appear in the final semester examination unless the candidate has cleared all the previous semester examinations.

7 Grace Marks for PG Courses:

No grace marks will be awarded for PG Exams.

8. University End-Semester Examination

8.1 There will be one final university examination at the end of every semester.

8.2 A candidate must have minimum 75% attendance (Irrespective of the type of absence) in theory and practical in each subject to be eligible for appearing the University examination.

8.3 The Dean shall send to the university a certificate of completion of required attendance and other requirements of the applicant as prescribed by the university, two weeks before the date of commencement of the written examination.

8.4 A candidate shall be eligible to sit for the examination only, if she / he has secured minimum 35% in internal assessment of that subject. The internal examinations will be conducted at college/ department level.

8.5 Notwithstanding – anything in any examination, a deficiency of attendance at lectures or practical maximum to the extent of 10% - may be condoned by the Dean.

8.6 If a candidate fails either in theory or in practical, he/ she have to re-appear for both.

8.7 There shall be no provision of re- evaluation of answer sheets. Candidates may apply to the university following due procedure for recounting of theory marks in the Presence of the subject experts.

8.8 Internal assessments shall be submitted by the Head of the Department to the university through the Dean MGMMC at least two weeks before commencement of University theory examination.

8.9 Supplementary examination: There shall be no supplementary examination

8.10 Re-Verification -There shall be provision of retotaling of the answer sheets, candidate shall be permitted to apply for recounting/retotaling of theory papers within 8 days from the date of declaration of results.

8.11 Scheme of University Exam Theory PG Program: General structure / patterns for setting up question papers for Theory / Practical courses, their evaluation weightages for PG programs are given in the following tables.

8.12 Theory Question Paper Pattern for Core Subjects in University Examinations

Under CBCS - 60Marks

Question Type	No. of Questions	Questions to be Answered	Questions X Marks	Total Marks
Brief Answer Questions	7	6	1X 10	60

General Instructions (Theory):

- A. Time duration of each Theory Paper will be of Three (3) Hrs .
- B. Total Marks of each Theory Paper will be 60 Marks

8. 13 Practical Question Paper Pattern For University Examinations Under CBCS - 50 Marks

Exercise	Description	Marks
Q No 1	Practical exercise – 1	1 x10=15 M
Q No 2	Station exercise	3x5M=25 M
Q No 3	VIVA	10 M
		Total = 50 M

General Instructions (Practical):

- A. All the students have to remain present at the examination center 15 minutes before the scheduled time for examination.
- B. Students have to carry with them certified journal, I-card or examination receipt, and other necessary requirements for examination.
- C. Candidate should not leave the practical hall without the permission of examiner.
- D. Use of calculator is allowed but the use of mobile phones is strictly prohibited.
- E. The candidate has to leave the laboratory only after the submission of all the answer sheets of the exercises performed.

8.14 Internal examination pattern (Theory) : 30marks

Question type	No. of questions	Questions to be answered	Question X marks	Total marks
Brief Answer Questions	4	3	1X10	30

8.15 Breakup of theory IA calculation for 20 marks

Internal exam (Department -30 Marks)	15 marks
Seminar	5 marks
	Total = 20 M

8.16 Internal Examination Pattern (Practical): 30 Marks

Practical Exercise	10marks
Station Exercise	10 marks
Viva	10 marks
Total practical	30 Marks

8.17 Breakup of practical IA calculation:

Internal exam (Department -30 Marks)	15 marks
Journal	5 marks
	Total = 20 M

Internal Assessment marks should be submitted to the university by respective departments at least 15 days prior to onset of university examination.

9. Submission of Protocol of Dissertation: Students should undergo Online Course of Research Methodology (MCI- PG) before submitting the protocol for their Dissertation.



Mahatma Gandhi Mission's

MEDICAL COLLEGE

Sector1, Kamothe Navi Mumbai – 410209,

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Academic Year 2019 – 2020

Academic Calendar For M.Sc. (3 Years) Medical Courses

(Anatomy, Physiology, Biochemistry, Pharmacology, Microbiology)

SCHEDULE OF ACTIVITY	DATES
Commencement of First Semester	01.08.2019
Commencement of Third Semester & Fifth Semester	01.08.2019
Receipt of completed Eligibility forms at MGMIHS from Respective college without late fees	On or before 30.10.2019
Receipt of completed Eligibility forms at MGMIHS from Respective college with late fees (Only for new admission)	On or before 30.11.2019
Commencement of Internal Exam	3 rd Week of November 2019
Winter Vacation for Staff	16.10.2019 to 15.11.2019
Notification of First / Third / Fifth Semester University Examination	As per MGMIHS
Commencement of First / Third / Fifth Semester University Examination	1 Week of January 2020
Conclusion of respective semesters	Last week of February 2020
Declaration of final Result	As per MGMIHS
Commencement of Second / Fourth / Sixth Semester	1 st Week of February 2020
Commencement of Internal Examination	3 rd Week of April 2010
Notification of Second / Fourth / Sixth Semester University Examination	As per MGMIHS

Summer Vacation for staff	01.05.2020 to 10.06.2020
Commencement of Second / Fourth / Sixth Semester University Examination	1 Week of July 2020
Conclusion of Respective Semesters	Last week of July 2020
Declaration of final Result	As per MGMIHS
Commencement of Next Academic Section	01.08.2020