



MGM INSTITUTE OF HEALTH SCIENCES

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

Grade 'A' Accredited by NAAC

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CHOICE BASED CREDIT SYSTEM

(CBCS)

(with effect from 2022-23 Batches)

Curriculum for Masters in Hospital Administration

Amended upto AC-42/2022, Dated 26/04/2022

Amended History

1. Approved in AC-42/2022, Resolution No. 4.4, Dated 26/04/2022.
2. As Amended in AC-42/2022 [Resolution No. 10.4.i], Dated 26/04/2022.

Resolution No. 4.4 of Academic Council (AC-42/2022): Resolved to accept synchronization of Semester I syllabus of Master in Public Health (MPH) Program & Master in Hospital Administration (MHA) Program and revision of syllabus for Semester II for MHA & MPH with effect from batch admitted in AY 2022-23, onwards. [ANNEXURE-45B]



MGM SCHOOL OF BIOMEDICAL SCIENCES
(A constituent unit of MGM INSTITUTE OF HEALTHSCIENCES)
(Deemed to be University u/s 3 of UGC Act 1956)
(Grade “A” Accredited by NAAC)
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CHOICE BASED CREDIT SYSTEM (CBCS)

With effect from Academic Year 2022 – 23

**Curriculum for
Master in Hospital Administration
First year
(Semester I & II)**

Proposed Program Outline:

Semester I

Course Code	Course Name	Credits / Week				Hrs./ Semester				Marks		
		Lecture (L)	Seminar / Self Directed Learning (SDL)	Practical/ Clinical Posting (P)	Total Credits (C)	Lecture (L)	Seminar / Self Directed Learning (SDL)	Practical/ Clinical Posting (P)	Total Hrs. (H)	Internal Assessment	Semester Exam	Total
MHA 101 (T)	Introduction to Human Biology, Environment, Public Health & Hospital Industry	3	1	-	4	45	15	-	60	20	80	100
MHA 102 (T)	Introduction to Epidemiology & Biostatistics	3	1	-	4	45	15	-	60	20	80	100
MHA 103 (T)	Introduction to Health Care System in India and Demography	3	1	-	4	45	15	-	60	20	80	100
MHA 104 (T)	Introduction to Concepts & Principles of Management, Health Economics and Business Communication	3	1	-	4	45	15	-	60	20	80	100
MHA 105 (CP)	Practice of Hospital Administration - Basic	-	-	24	12	-	-	360	360	-	50	50
TOTAL		12	4	24	28	180	60	360	600	80	370	450

Semester II

Course Code	Course Name	Credits / Week				Hrs./ Semester				Marks		
		Lecture (L)	Seminar / Self Directed Learning (SDL)	Practical/ Clinical Posting (P)	Total Credits (C)	Lecture (L)	Seminar / Self Directed Learning (SDL)	Practical/ Clinical Posting (P)	Total Hrs. (H)	Internal Assessment	Semester Exam	Total
MHA 201 (T)	Hospital Planning & Management & Organizational Behavior	4	-	-	4	60	-	-	60	20	80	100
MHA 202 (T)	Management Information System & Managerial Communication	4	-	-	4	60	-	-	60	20	80	100
MHA 203 (T)	Financial Management and Human Resource Management	4	-	-	4	60	-	-	60	20	80	100
MHA 204 (CP)	Practice of Hospital Administration – Advanced	-	-	20	10	-	-	300	300	-	50	50
CC 001 L	Research Methodology & Biostatistics (Core Course)	4	-	-	4	60	-	-	60	20	80	100
CC 001 P	Research Methodology & Biostatistics (Core Course)	-	-	4	2	-	-	60	60	10	40	50
TOTAL		12	-	24	28	180	60	360	600	90	410	500

FIRST YEAR
Master in Hospital Administration (MHA) SEMESTER – I

Code No.	CoreSubjects
Lectures, Self-Directed Learning& Clinical Posting	
MHA101 T	Introduction to Human Biology, Environment, Public Health & Hospital Industry
MHA 102 T	Introduction to Epidemiology & Biostatistics
MHA 103 T	Introduction to Health Care System in India and Demography
MHA 104 T	Introduction to Concepts & Principles of Management, Health Economics and Business Communication
MHA 105 CP	Practice of Hospital Administration (Basic)

MHA	Semester I
<p>MHA 101 T (60 Hrs. / Credits – 04)</p>	<p>Introduction to Human Biology, Environment, Public Health & Hospital Industry</p>

MHA 101 T: Course Contents / Syllabus

Human Biology

- Introduction--A Human Perspective, Chemistry of Life
- Cell Structure and Function, Tissues, Organ Systems, and Homeostasis
- Introduction to Anatomy & Physiology of Digestive System and Nutrition
- Introduction to Anatomy & Physiology of Respiratory and Cardiovascular System
- Introduction to Composition and Function of Blood
- Introduction to Anatomy & Physiology of Urinary System and Excretion
- Introduction to Anatomy & Physiology of Musculoskeletal System
- Introduction to Anatomy & Physiology of Nervous System
- Introduction to Anatomy & Physiology of Endocrine System
- Introduction to Reproductive System
- Introduction to Medical Genetics

Environment

- Environment & Health
- Water – Sources, Pollution, Purification, Quality
- Air – Composition, Pollution, Ventilation,
- Light – Requirement, Measurement and Standards
- Noise – Sources, Effects, Control
- Radiation – Sources, Effects, Protection
- Introduction to Meteorology
- Housing and Health
- Disposal of Waste
- Disposal of Bio Medical Waste
- Visit to Water Treatment Plant
- Visit to Sewage Treatment Plant
- Visit to Bio Medical Waste Disposal Unit

Public Health

- History of Medicine
- Changing Concepts of Health
- Dimensions of Health
- Determinants of Health
- Concept of Disease
- Iceberg of Disease
- Changing Concepts in Public Health
- Concept of Control
- Concept of Prevention
- Levels of Prevention and Modes of Intervention
- Hospitals & Community
- Health Indicators
- Public Health Approach
- Public Health Problems in India
- Limitations of Public Health

Hospital Industry

- Global Overview
- Hospital Industry in India
- Regulatory Councils, Accreditation and Laws related to hospital
- Opportunities, Issues and Challenges in hospital industry

MPH	Semester I
MHA 102 T (60 Hrs. / Credits – 04)	Introduction to Epidemiology & Biostatistics

MHA 102 T: Course Contents / Syllabus

Epidemiology

- History of Epidemiology
- Measurements in Epidemiology
- Incidence and Prevalence
- Descriptive Epidemiology
- Cross sectional study design
- Analytical Epidemiology
- Case control study design
- Cohort study design
- Experimental Epidemiology
- Randomized control trials
- Non-randomized control trial
- Introduction to confounding and bias
- Interpretation of association
- Causation and association
- Screening
- Screening tests –Sensitivity & Specificity
- Introduction to Infectious Disease Epidemiology
- Disease surveillance
- Outbreak investigation

Biostatistics

- Biostatistics – Scope / Use
- Types of variables
- Scales of measurement
- Measures of central tendency
- Measures of dispersion
- Types of distribution
- Normal Distribution
- Sampling Methods
- Type1 and type 2 error
- Concept of P - value and 95% confidence Interval
- Chi Square Test
- T Test
- Choosing appropriate statistical test
- Concept of Correlation
- Concept of regression
- Data Visualization
- Histogram
- Bar Chart
- Pie Diagram
- Introduction to SPSS
- Introduction to EpiInfo

MHA	Semester I
MHA 103 T (60 Hrs. Credits – 04)	Introduction to Health Care System in India and Demography

MHA 103 T	Course Contents / Syllabus
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Health Care System

- Concept of Health Care
- Levels of Health Care
- Global overview of Health Care Systems
- Health Care System in India
- Health Care Delivery Infrastructure in India
- Health Care Delivery Workforce in India
- National Strategy for Health for All
- National Health Policy
- National Health Mission
- Overview of National Health Programmes
- Private Sector in Health Care

Demography

- Demographic Processes
- Demographic Cycle
- World Population Trends
- Demographic Trends in India
- Census
- Demographic Indicators
- Age Pyramid
- Sex ratio
- Population Density
- Migration
- Urbanization
- Literacy & Education
- Life Expectancy
- Fertility and factors associated
- Fertility Indicators
- Measures of Mortality
- Growth rate
- Vital Statistics
- Concept of Life Table

MHA	Semester I
MHA 104 T (60 Hrs. Credits – 04)	Introduction to Concepts & Principles of Management, Health Economics and Business Communication

Course Contents / Syllabus

Concepts & Principles of Management

- Concept of Management
- Principles of Management
- Managerial functions
- Contemporary Management Practice
- Management & Administration
- Roles and Skills of Manager
- Time Management
- Strategic Management
- Health Planning & Planning Cycle
- Management methods based on Behavioral Sciences
- Quantitative Management Methods
- Organizing, Directing & Staffing
- Management Control System
- Use of Information System

Health Economics

- Basic concepts in health economics
- Micro and Macro economics
- Production Function
- Determinants of demand, supply and costs of production
- Supply & Demand for Health Care Personnel
- Concepts of efficiency, effectiveness, equity, elasticity of demand
- Concept of costing, marginal cost analysis, and opportunity cost
- Short term and long-term cost
- Budgeting
- Measuring health outcomes
- Principles and application of economic evaluation in health care
- Cost Benefit Analysis (CBA)
- Cost-Effective Analysis (CEA)
- Lorenz's Curve
- Genie's Coefficient
- Universal health coverage and role of health care financing
- Health Insurance & Health Care Financing
- Health sector reforms

Business Communication

- Principles of Effective Writing
- Frequently Made Mistakes in Business Writing
- Conventions of Letter Writing
- Approaches to Writing Claims and Responses
- Memoranda
- E-Mail Etiquette

- Agenda and Minutes of Meeting
- Report Writing
- Business Proposals
- CVs and Applications
- Presentation Skills

MHA		Semester I
MHA 105 CP (360 Hrs. Credits – 12)		Practice of Hospital Administration (Basic)
Sr. No.	Clinical Posting	No. of Hrs.
1	<p><i>UNDER the Supervision of Hospital Director</i></p> <ul style="list-style-type: none"> Posting in various departments of Hospital on fortnightly rotatory basis 	360
Total		360 Hrs.

FIRST YEAR
Master in Hospital Administration (MHA) SEMESTER – II

Code No.	Core Subjects
Lectures, Self-Directed Learning & Clinical Posting	
MHA 201 T	Hospital Planning & Management & Organizational Behavior
MHA 202 T	Management Information System & Managerial Communication
MHA 203 T	Financial Management and Human Resource Management
MHA 204 CP	Practice of Hospital Administration (Advanced)
CC 001 L	Research Methodology & Biostatistics (core course)
CC 001 P	Research Methodology & Biostatistics (core course)

MHA	Semester II
MHA 201 T (60 Hrs. / Credits – 04)	Hospital Planning & Management & Organizational Behavior

MPH 201 T: Course Contents / Syllabus

- Introduction- evolution of hospital planning, changing health care concept in planning / designing, need for planning health care facilities, health care facility planning in India
- Steps in Hospital Planning-Need Assessment, Planning process, Appointment of Planning Teams/Consultants, Preparation of Project Report, sources of finance, site selection Appointment of Architect, Architect Report, Size of the Hospital, Design of the Hospital, Selection of the Contractor, tender documents
- Architect Report- Preparation of Architect’s Brief, Selection of the Size, Preparation of the Master plan, Layout, Grouping, Zoning & Phasing of Activities, Circulation & Movements of Patients, Staff, Visitors, functional and space programming, hospital design, departmental layouts, inter- relationships between services
- Types of Hospital Organization& Statutory Requirements for Planning- Planning of 30,100,250 bedded hospital (general/specialty), Planning of 500, 750 and above bedded hospital (teaching/super-specialty/non-teaching specialty hospitals); Hospital standards and design: Building requirement- Entrance & Ambulatory Zone, Diagnostic Zone, Intermediate Zone, Critical zone, Service Zone, Administrative zone; Voluntary & Mandatory standards – General standards, Mechanical standards, Electrical standards, standard for centralized medical gas system, standards for biomedical waste
- Project Management: PERT/CPM techniques, managing finance and other resources, equipment planning and procurement process, record-keeping, commissioning the facilities
- Departmental Planning: Planning for Out Patient Department/Accident/Emergency, Indoor accommodation, Ward design, Bed wise planning, special requirements of certain departments such as ICU, OT, Pediatric, Maternity ward; Planning for Water supply, Electricity, Drainage & Sewage disposal; Planning for Equipment& Purchase.
- Engineering Services and Utilities-Electrical system; water supply and sanitary system; air- conditioning and fresh air systems (HVAC); fire protection systems; centralised medical gas system; telecommunication system; transportation system; illumination.
- Environmental Control and Safety-General environmental control; infection control; radiological health; accidental injury prevention programme; occupational health; solid waste management; hospital safety programmes; bomb threat; alarm system; disaster preparedness; code blue procedures.
- Manpower Planning-Planning for various categories of Staff, Administrative action for Appointment, Training
- Hospital Clinical Services:Meaning and scope of patient care services – significance of patient care – role of administration in patient care – classification of Hospitals.Ambulatory Services,Diagnostic Services,Therapeutic Services,Nursing Services,Rehabilitative Services,General, Specialty Services, Role of clinical services in the hospital services system,Professional Staff Management
- Hospital Support Services: Administrative care Unit, Hospital Store & Pharmacy, Engineering Department, Hospitality Services,Central Sterile Supply Department, Hospital Information System, Medical Record Department, Public relation in hospital-process & practices of patient relationship, counseling, patient doctor relationship, Security Services- Staff, Patients, New born unit, Female staff/Patients, Stores; Transport Services (External & Internal), Mortuary
- Organizational Behavior: Concept, Nature, Characteristics, Conceptual Foundations and Importance, Models of Organizational Behavior, Management Challenge, A Paradigm Shift, Relationship with Other Fields, Organizational Behavior: Cognitive Framework, Behaviouristic Framework and Social Cognitive Framework.
- Perception and Attribution: Concept, Nature, Process, Importance, Management and Behavioral Applications of Perception; Attitude: Concept, Process and Importance, Attitude Measurement. Attitudes and Workforce Diversity; Personality: Concept, Nature, Types and Theories of Personality Shaping, Personality Attitude and Job Satisfaction; Learning: Concept and Theories of Learning.
- Motivation: Concepts and Their Application, Principles, Theories, Employee Recognition, Involvement, Motivating a Diverse Workforce; Leadership: Concept, Function, Style and Theories ofLeadership-Trait, Behavioral and Situational Theories, Analysis of Interpersonal Relationship, Group Dynamics: Definition, Stages of Group

Development, Group Cohesiveness, Formal and Informal Groups, Group Processes and Decision Making, Dysfunctional Groups.

- Organizational Power and Politics: Concept, Sources of Power, Distinction between Power, Authority and Influence, Approaches to Power, Political Implications of Power: Dysfunctional Uses of Power; Knowledge Management & Emotional Intelligence in Contemporary Business Organization; Organizational Change: Concept, Nature, Resistance to change, Managing resistance to change, Implementing Change, Kurt Lewin Theory of Change. Organizational Design: Structure, size, technology, environment of organization
- Organizational Roles: Concept of roles; role dynamics, Conflict: Concept, Sources, Types, Functionality and Dysfunctionality of Conflict, Classification of Conflict Intra, Individual, Interpersonal, Intergroup and Organizational, Resolution of Conflict, Meaning and Types of Grievance and Process of Grievance Handling; Stress: Understanding Stress and Its Consequences, Causes of Stress, Managing Stress.
- Organizational Culture: Concept, Characteristics, Elements of Culture, Implications of Organization culture, Process of Organizational Culture; Organization Development: Organizational Change and Culture, Environment, organizational culture and climate; contemporary issues relating to business situations. Process of change and Organizational Development.

MPH	Semester I
MHA 202 T (60 Hrs. / Credits – 04)	Management Information System & Managerial Communication

MHA 202 T: Course Contents / Syllabus

- Basic Information Concepts and Definitions
- Need for Information and Information Systems (IS) in an organization
- Characteristics of Information and Organization with respect to organization form, structure, philosophy, hierarchy etc.
- Types of IS – Transaction
- Operational Control
- Management Control
- Decision Support
- Executive Information Systems
- Determining Information Needs for an Organization/Individual Manager
- Overview of use of data flow method, analysis of information for decision processes etc.
- Strategic use of Information and IS – Use of Information for Customer Bonding
- For Knowledge Management
- For innovation,
- For Managing Business Risks
- For Creating a new business models and new business reality.
- Information Security –
- Sensitize students to the need for information security
- Concepts such as confidentiality, Integrity and Availability.
- Types of threats and risk, overview of some of the manual, procedural and automated controls in real life IT environments.
- Introduction to managerial communication, understanding the component of communication, small group and team communication, business and professional communication.
- Written Analysis and communication, Spoken Business communication
- Cultural Identity and intercultural communication, difficult communication
- Intercultural communication competence, Organizational communication
- Persuasive Communication, Barriers to communication.

MHA	Semester II
MHA 203 T (60 Hrs. Credits – 04)	Financial Management and Human Resource Management

MHA 203 T	Course Contents / Syllabus
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- Introduction- Origin of Accounting & its importance, Different disciplines in Accounting, Difference between Accounts, Costing, Finance, Taxation, Audit, etc.
- Double Entry System of Accounts-Transactions – Debit & Credit, Classification of Accounts, Rules of Accounts, Convention, concepts & norms of Accounts, Advantages of Double Entry System of Accounts
- Journal & Ledger: Types of Journals/Subsidiary Books, Passing of Journal Entries, writing of narrations, Posting in Ledger, Balancing of Ledger Accounts
- Depreciation- Why depreciation, Mode of Depreciations
- Preparation of Trial Balance & Final Accounts-Correction of mistakes in Trial Balance, Difficulties in locating the mistakes & its consequences, Profit making Hospitals, Non-profit making Hospitals.
- Working Capital Management- Needs of Working Capital, Estimation of Working Capital requirement, Different sources of funds, Norms to be considered for Bank Loans
- Changes in Financial Statements-Ratio Analysis, Limitation of Ratio Analysis.
- Budgetary Control-Difference between Budget, Estimate & Projection, Types of Budget – with special reference to Functional Budget, How to monitor a Budget
- Elements of Cost of a Product/Service-Direct & Indirect Cost, Allocation of Overhead Cost, Analysis of Marginal Costing & Unit Costing, Accounting for manufacturing operations, classification of manufacturing costs, Accounting for manufacturing costs
- Perspectives in human resource management - Evolution of human resource management – the importance of the human factor – objectives of human resource management – role of human resource manager – human resource policies – computer applications in human resource management
- The concept of best fit employee – Importance of human resource planning, Job Analysis, Job Description & Specifications, forecasting human resource requirement – internal and external sources. Selection process-screening – tests - validation – interview - medical examination – recruitment introduction – importance – practices – socialization benefits.
- Training and executive development – Types of training, methods, purpose, benefits and resistance. Executive development programmes, common practices, benefits, self development, knowledge management.
- Sustaining employee interest – Wage Administration, Salary Administration. Employee Benefits & Social Security compensation plan, reward, motivation, theories of motivation, career management, development, mentor, protege relationships.
- Performance evaluation and control process - Method of performance evaluation, feedback, industry practices, Promotion, demotion, transfer and separation, Employee Turnover, implication of job change. The control process-importance, methods, requirement of effective control systems grievances – causes, implications, redressal methods.
- Industrial Relations-Unions & their role, Settlement of disputes, Industrial Dispute Act, Collective bargaining.
- Issues Relating to Management of Professionals-Consultants, Specialists, Medical Officers, Nursing Staff, Other Paramedical Staff.
- Discipline- Punctuality, Dress code, Identification, Behaviors of staff, Disciplinary action, Law of natural justice.
- Brief introduction to Rules and regulations:-Minimum wages act, The ESI Act-1948-the maternity benefit act-1961-the workmen's compensation act-1923-the payment of gratuity act-1972- Employee provident funds and miscellaneous provisions act-1952. Retirement, health and life insurance, The Trade Unions Act

MHA	Semester II
MHA 204 CP (300 Hrs. Credits – 10)	Practice of Hospital Administration (Advance)

Sr. No.	Clinical Posting	No. of Hrs.
1	<i>UNDER the Supervision of Hospital Director</i> <i>Posting in various departments of Hospital on fortnightly rotatory basis</i>	300
Total		300 Hrs.

Name of the Course	Research Methodology & Biostatistics (Core Course)
Course Code	CC 001 L

Course Outcome	Student will be able to understand develop statistical models, research designs with the understating of background theory of various commonly used statistical techniques as well as analysis interpretation & reporting of results and use of statistical software.
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Sr. No.	Topics	No. of Hrs.
A	Research Methodology:	
1	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
2	Research Designs: 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
3	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.	5
4	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	5
6	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
B	Biostatistics	
7	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	3

	plots, line graphs	
8	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
9	Testing of Hypotheses: Definition, Basic Concepts, Procedure for Hypothesis Testing, Measuring the Power of a Hypothesis Test, 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, Hypothesis Testing for Comparing a Variance to Some Hypothesized Population Variance, Testing the Equality of Variances of Two Normal Populations.	6
10	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
11	Measures of Relationship: Need and meaning, Correlation and Simple Regression Analysis	2
12	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
13	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
14	Vital Health Statistics: Measurement of Population: rate, crude rate, specific rate, Measurement of fertility: specific fertility rate, Total fertility rate, Reproduction rate, 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
15	Computer Application Use of Computer in data analysis and research, Use of Software and Statistical package. Introduction to SPSS. Importing data from excel, access, tab and comma separated files. Entering data, labeling a variable, coding and recoding a categorical and continuous variable. Converting data from string to numeric variables, sorting & filtering, merging, appending data sets. Frequencies, descriptive statistics, cross tabulations. Diagrammatic presentation include histogram, bar chart, pie chart, scatter diagram, box plot, line chart. Parametric test of hypothesis-one sample, Independent and paired sample t test, one way ANOVA & post HOC test. Testing for normality, Chi-square test with measures of association. Pearson correlation. Non parametric test.	3
Total		60 hrs

CC 001P –Research Methodology & Biostatistics

Sr. No.	Topics	No. of Hrs
A	Research Methodology	
1	Sampling Designs	4
2	Measurement in research	5
3	Methods of Data Collection	3
4	Sampling Fundamentals	3
B	Biostatistics	
5	Data Presentation	4
6	Measures of Central Tendency and Dispersion	4
7	Testing of Hypotheses	12
8	Chi-square Test	2
9	Measures of Relationship	3
10	Analysis of Variance and Covariance	4
11	Nonparametric or Distribution-free Tests	4
12	Vital Health Statistics: Measurement of Population	6
13	Computer Application Using Statistical Software	6
Total		60 hrs

REVISED SCHEME OF UNIVERSITY EXAMINATION FOR PG PROGRAM (w.e.f. AY 2022-23)
MASTER of PUBLIC HEALTH (MPH)
&
MASTER of HOSPITAL ADMINISTRATION (MHA)

SEMESTER I & II

General structure / patterns for setting up question papers for Theory / Practical courses, their evaluation weightage for PG Programs (MPH & MHA) are given in following tables

Marks Scheme for the University Examination

Final Theory Mark will be 100 Marks (80 Marks University Theory Exam + 20 Marks Internal Assessment)

Theory Paper Pattern: Marks: 80 Time: 3 Hrs.

Question Paper	Question No.	Question Type	Marks Distribution	Marks Per Section
Section A	1	LAQ (1 out of 2)	1 X 10 Marks = 10	40
	2	SAQ (5 out of 6)	5 X 06 Marks = 30	
Section B	3	LAQ (1 out of 2)	1 X 10 Marks = 10	40
	4	SAQ (5 out of 6)	5 X 06 Marks = 30	
TOTAL				80 Marks

Note: If the paper is combination of two sub-subjects, the each section is to be dedicated for separate sub-subject for 50% weightage each.

Practical Examination, if applicable, will be as per last approved pattern

Internal Assessment Pattern - Theory

Marks – 20

Internal Theory Examination	30 Marks / 2 = 15 Marks
Seminar / Assignment	10 Marks / 2 = 05 Marks
Total	20 Marks

Resolution No. 10.4 of Academic Council (AC-42/2022):

- i) “Resolved to accept “50% eligibility in internal assessment” pattern for all the CBCS programs (UG & PG) running under the constituent units of MGMIHS.(MGM School of Biomedical Sciences, MGM School of Physiotherapy, MGM Medical College (M.Sc. Medical 3 year courses).

This will be applicable to all existing batches (for remaining regular examinations) and forthcoming batches from June 2022 onwards”



MGM INSTITUTE OF HEALTH SCIENCES

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

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