

**CURRICULUM and SYLLABUS**  
**of**  
**MBA in Healthcare and Hospital**  
**Management**

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(as)

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## DETAILED SYLLABUS

Syllabus Framework						
MBA (Healthcare and Hospital Management)						
Level 500: Semester – 1						
SI No	Course Code	Course Name	Credits			Total Credits
			L	T	P	
1	MBA(HC&HM) 5001	Health Economics & Health Policy	3	1	0	4
2	MBA(HC&HM)5002	Management Theories & Corporate Governance	3	1	0	4
3	MBA(HC&HM)5003	Public Health & Epidemiology	3	1	0	4
4	MBA(HC&HM) 5004	Quality Management in Healthcare	3	1	0	4
5	MBA(HC&HM) 5005	Hospital Support Service and Facilities Management	3	1	0	4
6	MBA(HC&HM) 5006	Research Methodology in Healthcare and Hospital Management	3	1	0	4
			<b>Total Credits</b>			<b>24</b>

Level 500: Semester – 2						
SI No	Course Code	Course Name	Credits			Total Credits
			L	T	P	
1	MBA(HC&HM) 5007	Clinical Services Planning and Management	3	1	0	4
2	MBA(HC&HM) 5008	Human Resource Management in Healthcare	3	1	0	4
3	MBA(HC&HM) 5009	Healthcare Marketing and Public Relations	3	1	0	4
4	MBA(HC&HM) 5010	Hospital & Healthcare Accreditation	3	1	0	4
5	MBA(HC&HM) 5011	Medical Record Science	3	1	0	4
6	MBA(HC&HM) 5012	Biostatistics and Data Analytics	3	1	0	4
7		Internship I				6
			<b>Total Credits</b>			<b>30</b>


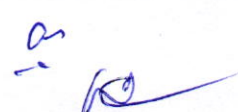
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Level 600: Semester – 3						
SI No	Course Code	Course Name	Credits			Total Credits
			L	T	P	
1	MBA(HC&HM) 6001	Hospital Architecture, Planning and Designing	3	1	0	4
2	MBA(HC&HM) 6002	Hospital Accounting	3	1	0	4
3	MBA(HC&HM) 6003	Logistics and Supply Chain Management in Healthcare	3	1	0	4
4	MBA(HC&HM) 6004	Hospital Service Marketing	3	1	0	4
	Minor 1	Minor/Specialization-Track 1 Healthcare Management	3	1	0	4
5	MBA(HC&HM) 6005	Health Informatics and Artificial Intelligence				
6	MBA(HC&HM) 6006	Health Insurance and Managed Care				
	Minor 2	Minor/Specialization-Track 2 Hospital Management	3	1	0	4
7	MBA(HC&HM) 6007	Health Safety and Risk Management				
8	MBA(HC&HM) 6008	Hospital Operations Management				
		Internship- II				6
<b>Total Credits</b>						<b>30</b>

Level 600: Semester – 4						
SI No	Course Code	Course Name	Credits			Total Credits
			L	T	P	
1	MBA(HC&HM) 6009	Strategic Management in Healthcare	3	1	0	4
2	MBA(HC&HM) 6010	Conflict Management and Negotiation for Healthcare Workers	3	1	0	4
3	MBA(HC&HM) 6011	Medical Ethics, Law and Etiquette	3	1	0	4
4	MBA(HC&HM) 6012	Hospital Finance	3	1	0	4
5	Minor 3	Minor 1-Healthcare Management	3	1	0	4
	MBA(HC&HM) 6013	National Health Policies and Programs				
	MBA(HC&HM) 6014	Project Management in Healthcare				
6	Minor 4	Minor -2 Hospital Management	3	1	0	4
	MBA(HC&HM) 6015	Entrepreneurship and New Venture Planning				
	MBA(HC&HM) 6016	Operations Research for Decision Making				
<b>Total Credits</b>						<b>24</b>
<b>Total Credits</b>						<b>108</b>

**Course Name: Health Economics and Health Policy**

**Course Code: MBA(HC&HM) 5001**

**Credits: 3 Lectures + 1 Tutorial**

**Hours: (45 Lecture Hours + 15 Tutorial Hours)**

**Objective:** To equip students with a comprehensive understanding of the economic principles and policies influencing healthcare systems.

**Outcomes:**

Students should be able to

1. Outline Microeconomics Tools for Health Economics, providing students with the foundational knowledge to apply microeconomic concepts in the healthcare context.
2. Construct Production and Cost of Healthcare, enabling students to analyse and evaluate the production processes and associated costs in the healthcare industry.
3. Analyse Markets and Market Failure in Healthcare, fostering an understanding of market dynamics and addressing instances of market failure within the healthcare sector.
4. Make use of the Concepts of Costs and Economic Evaluation, guiding students in the application of cost concepts and economic evaluation techniques relevant to healthcare decision-making.
5. Examine National Health Policy of India, encouraging students to critically assess and contribute to the development of health policies at the national level.

**Unit 1: Introduction and Microeconomic Techniques in Health Economics (9 Lecture Hours + 3 Tutorial Hours)**

**Economics Fundamentals:**

1.1 Definition, Significance, and Utilization in Healthcare; 1.2 Healthcare Production and Allocation; 1.3 Production Possibilities Curve & Scarcity 1.4 Consumer Demand, Producer Supply, and Pricing Mechanisms; 1.5 Meaning of Market Equilibrium 1.6 Production Function, 1.7 Isoquants and Isocosts

**Unit 2: Production and Cost of Healthcare (9 Lecture Hours + 3 Tutorial Hours)**

2.1 Cost Structure and Economies of Size; 2.2 Expenses Associated with Healthcare Delivery; 2.3 Technological Advancements and Adoption; 2.4 Impact of Aging Demographics on Long-term Healthcare Needs; 2.5 Supplier-Induced Demand; 2.6 Health Maintenance Organizations and Managed Care.

**Unit 3: Healthcare Markets and Market Inefficiency (9 Lecture Hours + 3 Tutorial Hours)**

3.1.1 Understanding the Functionality of Markets; 3.1.2 Application of Market Mechanisms in Healthcare; 3.2 Consideration of Public Goods and Merit Goods; 3.3 Externalities and Spillover Effects; 3.4 Government Intervention and the Market in Healthcare: Provision of Preventive, Curative, and Rehabilitative Care.

**Unit 4 : Fundamentals of Costing and Economic Evaluation. (9 Lecture Hours + 3 Tutorial Hours)**

4.1 Opportunity Costs 4.2 Economic Costs Vs Financial Costs, 4.3 Direct Cost Vs

Indirect Cost Vs Average Cost Vs Marginal Cost Vs Total Cost Vs Unit Cost, 4.4 Component of Costs: Capital and Recurrent Costs; Fixed and Variable, 4.5 Factors of Cost Calculation.

4.6 Meaning, and Types of Economic Evaluation: 4.7 Cost-Effectiveness Analysis (CEA) 4.8 Cost-Minimization Analysis (CMA) 4.9 C/E Ratio 4.10 Sensitivity Analysis, 4.11 Cost-Benefit Analysis (CBA), C/B Ratio 4.12 Cost-Utility Analysis (CUA) 4.13 Disability Adjusted Life Years (DALY) 4.14 Quality Adjusted Life Years (QALY), 4.15 Healthy Years Equivalent (HYE) 4.16 Concentration (C/U) Ratio.

#### **Unit 5: National Health Policy of India (9 Lecture Hours + 3 Tutorial Hours)**

5.1 Health Promotion and Disease Prevention 5.2 Organization of Public Health Care Delivery, 5.3 Population Stabilization, 5.4 Financing of Health Care, 5.5 Health Research.

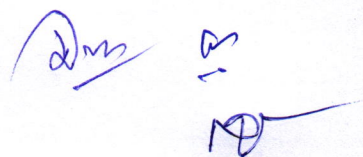
#### **Suggested Reading:**

##### **Text Books**

1. Drummond, M., & et al. Methods for the economic evaluation of health care programmes (2nd ed.). Oxford University Press.
2. Government of India, National Health Policy: <https://cdsco.gov.in/opencms/opencms/en/consumer/National-Health-Policy/>
3. Folland, S., Goodman, A. C., & Stano, M. The economics of health and health care. Prentice-Hall Inc.

##### **References**

1. Mills, A., & Gilson, L.. Health Economics for Developing Countries: A Survival Kit. London School of Hygiene and Tropical Medicine.
2. Santerre, R. E., & Neun, S. P.. Health Economics: Theories, Insights, and Industry Studies. The Dryden Press, Harcourt Brace & Co.



**Course Title: Management Theories and Corporate Governance**

**Course Code: MBA(HC&HM) 5002**

**Credits: 3 Lecture + 1 Tutorial**

**Hours: (45 Lecture Hours + 15 Tutorial Hours)**

**Objective:** To provide a comprehensive understanding of foundational management theories, principles, and corporate governance practices. Impart insights into the evolution of management thought, its contemporary business applications, and the pivotal role of corporate governance in ensuring ethical and effective organizational management.

**Outcomes:**

Students should be able to

1. Infer various Management Theories and Paradigms.
2. Illustrate Organizational Structure, Design & Leadership Theories to showcase their understanding of organizational structures and leadership theories in practical scenarios.
3. Explain Group dynamics and Conflicts in organization, fostering an understanding of group behaviour and conflict resolution within organizational settings.
4. Examine Corporate Governance Overview, its principles and practices.
5. Compare Corporate Governance Mechanisms & Social Responsibility from various corporate governance mechanisms to comprehend the importance of social responsibility in corporate governance.

**Unit 1: Introduction to Management Theories (9 Lecture Hours + 3 Tutorial Hours)**

1.1 Overview of management and its evolution, 1.2 Classical Management Theories (Scientific Management, Administrative Management), 1.3 Behavioural Management Theories (Human Relations, Behavioural Science Approach), 1.4 Contemporary Management Theories (Systems Theory, Contingency Theory)

**Unit 2: Organizational Structure, Design & Leadership Theories (9 Lecture Hours + 3 Tutorial Hours)**

2.1 Different organizational structures (Functional, Divisional, Matrix), 2.2 Organizational Design Principles, 2.3 Impact of technology on organizational structure

**2.4 Leadership Theories:** 2.4.1 Trait theory, Behavioral theory, and Contingency theory, 2.4.2 Transformational and Transactional leadership, 2.4.3 Leadership styles and their effectiveness

**3. Group dynamics and Conflicts in organization (9 Lecture Hours + 3 Tutorial Hours)**

3.1 Group dynamics – 3.1.1 Characteristics of group, 3.1.2 types of group, 3.1.3 stages of group dynamics, 3.1.4 group decision making, 3.1.5 Terms in Organization

3.2 Conflicts in organization – 3.2.1 Source of conflicts, 3.2.2 Types of conflicts, 3.2.3 conflicts process, 3.2.4 Johari window, 3.2.5 conflict resolution, 3.2.6 Transactional analysis

**Unit 4: Corporate Governance Overview (9 Lecture Hours + 3 Tutorial Hours)**

4.1 Definition and importance of corporate governance, 4.2 Stakeholder theory, 4.3

Codes of corporate governance and their significance

**Unit 5: Corporate Governance Mechanisms & Social Responsibility (9 Lecture Hours + 3 Tutorial Hours)**

5.1. Board of Directors and its functions, 5.2 Executive compensation and its governance, 5.3 Auditing and internal controls, 5.4 Corporate social responsibility (CSR), 5.5 Balancing profit and social impact

**Suggested Reading:**

**Text Books**

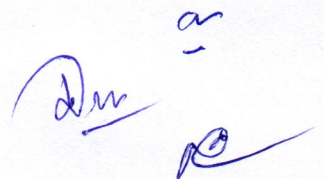
1. "Principles of Management" by Richard L. Daft
2. Management: "Leading & Collaborating in a Competitive World" by Thomas S. Bateman, Scott A. Snell, and Robert Konopaske
3. Organizational Behavior: "Improving Performance and Commitment in the Workplace" by Jason A. Colquitt, Jeffrey A. LePine, and Michael J. Wesson
4. "Leadership: Theory and Practice" by Peter G. Northouse
5. "Understanding Group Dynamics: Systems Theory, Interaction, and Interpersonal Relations" by Donelson R. Forsyth
6. "The Conflict Resolution Toolbox: Models and Maps for Analyzing, Diagnosing, and Resolving Conflict" by Gary T. Furlong
7. "Corporate Governance: Principles, Policies, and Practices" by Bob Tricker
8. "Corporate Governance: A Synthesis of Theory, Research, and Practice" by H. Kent Baker and Ronald Anderson

**Journals:**

Corporate Governance: An International Review  
Journal of Management Studies

**MOOCs:**

Some indicative references -  
Coursera - "Foundations of Management"  
edX - "Corporate Governance: Principles & Practices"  
Canvas Network - "Leadership and Influence"



**Course Title: Public Health and Epidemiology**

**Course Code: MBA(HC&HM) 5003**

**Credits: 3 Lecture + 1 Tutorial**

**Hours: 45 Lecture Hours + 15 Tutorial Hours**

**Objective:** To enable students to be part of or undertake public health and epidemiology projects

**Outcomes:**

Students should be able to

1. Make use of comprehensive understanding of epidemiological principles and methods in the context of healthcare management.
2. Plan the skills necessary for analyzing and interpreting health data.
3. Apply the skills for assessing the distribution of diseases.
4. Examine epidemiological concepts to improve decision-making in healthcare settings.
5. Develop necessary knowledge and understanding of demography and family planning

**Unit 1: Introduction to Epidemiology (9 Lecture Hours + 3 Tutorial Hours)**

1.1 Definition and scope of epidemiology in healthcare management 1.2 Epidemiology of communicable and non-communicable disease 1.3 Host, defense, immunizing agents.

**Unit 2: Measures of Disease Frequency and Association (6 Lecture Hours + 3 Tutorial Hours)**

Concept of measures, indicators related with health and healthcare e.g., morbidity rates, mortality rates, healthcare utilization rates, healthcare personnel and beneficiary ratios. Importance of these.

**Unit 3: Study Designs in Epidemiology (9 Lecture Hours + 3 Tutorial Hours)**

3.1 Epidemiological studies: 3.1.1 Observational studies (Case-control, cross-sectional, and cohort studies), 3.1.2 experimental studies.

3.2.1 Principles of causal inference in epidemiology. 3.2.2 Concept of causations, Epidemiological Triad, risk factors, ice-berg of disease. Importance of these concepts

3.3.1 Concept of validity, 3.3.2 reliability, 3.3.3 screening.

**Unit 4: Application of Epidemiology in Healthcare Management and Contemporary issues (9 Lecture Hours + 3 Tutorial Hours)**

4.1 Surveillance and monitoring. Importance of surveillance in healthcare. 4.2 Steps in outbreak investigation and control. Concept of control (control, elimination, eradication). 4.3 Epidemiology in healthcare planning and policy-making. 4.4 Understanding demand and disease trend. 4.5 Role of epidemiology in public health emergencies and preparedness

**Unit 5: Demography and Family Planning (9 Lecture Hours + 3 Tutorial Hours)**

5.1 Concept of Demographic Cycle 5.2 Understanding World Population Patterns 5.3 Demographic Patterns in India: 5.3.1 Population Growth rate, 5.3.2 Concept of Age Pyramid, 5.3.3 Sex Ratio, 5.3.4 Concept of Population Density, 5.3.5 Urbanization,

5.3.6 Literacy Rate, 5.3.7 Life Expectancy.

5.4 Fertility and Fertility Related Statistics. 5.5 Fundamentals of Family Planning and Family Size. 5.6 Concept of Population Policy. 5.7 National Demographic Goals of India.

### **Suggested Reading:**

#### **Text Books**

1. Beaglehole, R., Bonita, R., & Kjellström, T. *Basic Epidemiology*. Geneva: World Health Organization.
2. Park, K. *Park's Preventive and Social Medicine*. Bhanott.
3. Gordis, L. *Epidemiology*. Philadelphia, PA: Elsevier.
4. Kleinbaum, D. G., Kupper, L. L., & Morgenstern, H. *Epidemiologic Research: Principles and Quantitative Methods*. New York, NY: John Wiley & Sons.
5. Friis, R. H., & Sellers, T. A. *Epidemiology for Public Health Practice*. Burlington, MA: Jones & Bartlett Learning.

#### **Journals:**

1. *American Journal of Epidemiology*
2. *Epidemiology*
3. *International Journal of Epidemiology*
4. *Journal of Clinical Epidemiology*
5. *Journal of Population Research*

#### **Online Resources: (indicative)**

1. World Health Organization (WHO) - Epidemiology:  
<https://www.who.int/topics/epidemiology/en/>
2. Centers for Disease Control and Prevention (CDC) - Epidemiology:  
<https://www.cdc.gov/ophss/csels/dsepd/ss1978/index.html>
3. Census. Govt. of India. <https://censusindia.gov.in/census.website/>

**Course Title: Quality Management in Healthcare**

**Course Code: MBA(HC&HM) 5004**

**Credits: 3 Lecture + 1 Tutorial**

**Hours: (45 Lecture Hours + 15 Tutorial Hours)**

**Objective:** To develop effective quality management skills tailored for the healthcare industry. By emphasizing the significance of quality and making it accessible for all equitably, compassionately, and ethically.

**Outcomes:**

Students will be able to -

1. Instill professional quality practice as an integral aspect of the institutional philosophy in healthcare organizations, fostering effective communication practices throughout.
2. Determine the quality process, emphasizing Leadership Commitment, Managing Change, Training, Communication and Team Work for cultural change within healthcare settings.
3. Design and implement quality management tools and techniques, aligning with the principles developed by communication experts, to achieve operational excellence in healthcare organizations.
4. Distinguish quality, considering clinical outcomes and meeting patients' expectations and satisfaction levels in the healthcare communication process.
5. Formulate professional standard operating procedure (SOP) for institutional strategic development, establishing Benchmarks/ Standards and utilizing Quality Audit to measure the Outcome of Care against the Benchmarks/ Standards set.

**Unit 1: Fundamentals Quality Management [9 Lecture Hours + 3 Tutorial Hours]**

1.1 Dimensions of Quality, 1.2 Principles of Quality Management: Structure, Process and Outcome, 1.3 Quality Vs Productivity Vs Profitability, 1.4 Cost of conformance and non-conformance to Quality, 1.5 Leadership Commitment in Quality

**Unit 2: Quality Management Process [9 Lecture Hours + 3 Tutorial Hours]**

2.1 Corporate Framework on Quality, 2.2 Transformation of Corporate Culture, 2.3 Customer Focus, 2.4 Process Focus, 2.5 Training and Development 2.6 Learning by Practice and Teaching, 2.7 Benchmarking, 2.8 Quality Measurement and Statistical Report at all Levels, 2.9 Recognition and Reward.2.10 Major Components in Quality: 2.10.1 Setting Objectives, 2.10.2 Quality Investment, 2.10.3 Activity Monitoring, 2.10.4 Performance Assessment

**Unit 3: Quality Foundation, Tools and Techniques [9 Lecture Hours + 3 Tutorial Hours]**

3.1 Problem Solving, 3.2 Team Work, 3.3 Leadership 3.4 Communication 3.5 Managing Time, 3.6 Demming's Principle, 3.7 Juran's Triology, 3.8 Kiazen, 3.9 Philip Crosby's Principles.

**3.10 Tools and Techniques:** Flow Chart, Cause and Effect Diagram, Pareto Diagram, Statistical Process Control (SPC), Fishbone, Ishikawa, Gantt chart, Lean, Six Sigma.

#### **Unit 4: Healthcare Quality [9 Lecture Hours + 3 Tutorial Hours]**

**4.1 Quality Customer Service:** Define Customer and Identify Customers,

**4.2 Customer Experience:** Core Service & Delivery of Service, Excellent Customer Service; Caring Service,

**4.3 Patient Satisfaction:** Rights and Responsibilities of Patients, Satisfaction and Delight, Quality Indicators of Patient Satisfaction

**4.4 Clinical Quality:** Complication and Infection Rate, Admission, Follow Up and Continuity of Care, Medical audit.

**4.5 Measuring Quality:** Setting Objectives and Agreeing upon Standards, Develop Key Result Areas and Performance Indicators,

**4.6 Feedback:** Customers, Staff, Suppliers, etc. Model feedback questionnaire, Quality Audit and Review Technique.

#### **Unit 5: Quality Policy [9 Lecture Hours + 3 Tutorial Hours]**

5.1 Commitment to Patients and Staff, 5.2 Job Description of Quality Manager, 5.3 Quality Steering Committee, 5.4 Quality Council, 5.5 Quality Teams: 5.5.1 Task Force 5.5.2 Quality Circle 5.6 Obstacles to Practice Quality

#### **Suggested Reading:**

##### **Text Books**

1. Wilson, C. R. M.. Hospital Wide Quality Assurance. Ontario, Canada: Saunders.
2. Ellis, R., & Whittington, D. Quality Assurance in Health Care – A Handbook. London, England: Edward Arnold. ISBN 0-340-55273-5.
3. Hugh C.H. Kogh, Total Quality Management in Health Care (Longman Publicaiton) ISBN 0582 04696

##### **References**

1. Deming, E. W. Out of the Crisis. Cambridge, UK: Cambridge University Press.
2. Nankemp and Eileen Richardson, Quality Assurance in Nursing Practice (Butterworth Heinemann Ltd., London, Second Edition) ISBN 0-7506-2326-8)
3. Richard Smith (ed.) Audit in Action (British Medical Journal, London) ISBN 0-7279-0317-9
4. Drummond, H.. The TQM Movement – What Total Quality Management is Really All About. New Delhi, India: UBSPD.

**Course Title: Hospital Support Service and Facilities Management**

**Course Code: MBA(HC&HM) 5005**

**Credits: 3 Lecture + 1 Tutorial**

**Hours: (45 Lecture Hours + 15 Tutorial Hours)**

**Objective:** To equip students with comprehensive knowledge, skills, and abilities necessary for effectively managing supportive services and facilities in healthcare settings. Besides, to develop professional competencies and capabilities in optimizing resource utilization, ensuring efficient planning and layout of supportive services, and adapting the latest developments in this field.

**Outcomes:**

Students will be able to -

1. Apply the knowledge, skills and abilities in managing supportive services in hospitals.
2. Justify the role of administrator in directly managing the supportive services and facilities
3. Develop the “skills of planning the location, design and layout of supportive services”.
4. Take part in planning and managing the organization resources like, staff, space, equipment, facilities, supplies, etc.
5. Evaluate the functioning and latest developments in supportive service.

**Unit 1: Front Office and Medical Records [9 Lecture Hours + 3 Tutorial Hours]**

**1.1 Front Office:** Objectives and Functions, Location, Staffing, Information and Communication

**1.2 Medical Records:** Objectives and Functions, Characteristics, and OPD Medical Record Management.

**Unit 2: Diagnostic Services [9 Lecture Hours + 3 Tutorial Hours]**

**2.1 Radiology Services** Objectives and Functions, Location, Design and Layout, Staffing: Duties of Radiologist, Radiation Safety Officers and Technicians,

**2.2 Laboratory Services:** Objectives and Functions, Location, Design and Layout, Staffing; Duties of Pathologists and Lab Technicians, Types of Medical Laboratory Service

**Unit 3: Other Supportive Services [9 Lecture Hours + 3 Tutorial Hours]**

**3.1 CSSD:** Objectives and Functions, Advantages of Centralized System, Distribution System, Location, Design and Layout, Air Pressure and Circulation, Zoning, Staffing, Duties of CSSD In-charge, TSSD, Types of sterilization, Equipment: Autoclave, ETO, Plasma, Ultrasonic Machine:

**3.2 Housekeeping:** Objectives and Functions, Staffing, Systematic and Standard Procedures of Cleaning, Required Materials for Cleaning

**3.3 Linen and Laundry:** Objectives and Functions, Location and Space, Staffing, Bed Linen Ratio, Automation,

**3.4 Security Services:** Objectives and Functions, Staffing; Responsibilities of Security Guard, Gate-Pass; Physical Verification; Movement Register

**Unit 4: Sales Outlets [9 Lecture Hours + 3 Tutorial Hours]**

**4.1 Pharmacy,** Objectives and Functions, Location, Design and Layout, Staffing; Duties of Chief Pharmacist; Therapeutic Committee, Hospital Formulary,

**4.2 Dietary Services:** Objectives and Functions Staffing, Equipment and Physical Facilities, Purchases, Stores and Issues, Location, Design and Layout.

**Unit 5: Maintenance Management [9 Lecture Hours + 3 Tutorial Hours]**

5.1 Objectives and Functions of Civil, Biomedical, electrical and Fire and Safety Department 5.2 Different types of Hospital Sewage Treatment Plant 5.3 Organogram and Staffing, 5.4 Location and Space, 5.5 Policy and Procedures. 5.6 Facilities and Equipment 5.7 Purchase, Inspection and Installation, 5.8 Records and Registers 5.9 Levels of Maintenance; 5.10 Service Contracts and Disposition.

**Suggested Reading:**

**Text Books**

- 1.C.M. Francis and et al.,Hospital Administration(Jaypee Brothers Medical Publishers Pvt. Ltd., New Delhi)
- 2.NHS, Guide to Good Practices in Hospital Administration(Department of Health and Social Security: National Health Services, London)
3. Kunders, G. D.. Hospitals: Planning, Design, and Management. Bangalore, India: Prism Books Pvt. Ltd.

**References**

1. Tabish, S. A. Hospital and Health Services Administration: Principles and Practice. New Delhi, India: Oxford University Press.
2. Sakharkar, B. M.. Principles of Hospital Administration and Planning. New Delhi, India: Jaypee Brothers Medical Publishers Pvt. Ltd.
3. *Hospital Operations Management: Principles of High Efficiency Healthcare* by Wallace J. Hopp and William S. Lovejoy
4. *Healthcare Management: Text and Cases* by K. K. Goyal
5. *Quality Management in Health Care: Principles and Methods* by Donald E. Lighter, Douglas J. Fair and C. Joseph McCannon

**Massive Open Online Courses (MOOCs): (indicative)**

1. Healthcare Operations Management - Offered by the University of Pennsylvania.
  2. Hospital Operations: Improving Patient Experience- offered by Deakin University.
- etc.

**Course Title: Research Methodology in Healthcare and Hospital Management**

**Course Code: MBA(HC&HM) 5006**

**Credits: 3 Lectures + 1 Tutorial**

**Hours: 45 Lecture Hours + 15 Tutorial Hours**

**Course Objective:** This course aims to equip the students with comprehensive proficiency in research methodology and scientific report writing. It seeks to instill a robust understanding of research paradigms relevant to the healthcare sector, enabling students to conceptualize, design, and execute research projects effectively. By the end of the course, “students will be adept at formulating research questions, selecting appropriate methodologies, collecting and analyzing data, and interpreting findings”. Furthermore, students will develop advanced skills in synthesizing research outcomes into coherent and persuasive scientific reports tailored to the needs of stakeholders in the healthcare industry.

**Course Outcome:** Upon completing of this course, the student will be able to

1. Make use of the foundational understanding of research principles and methodologies applicable to healthcare administration.
2. Develop critical thinking skills in evaluating research.
3. Explain key qualitative and quantitative research concepts.

Design and conclude basic research projects.

**Unit 1: Introduction to Research Methodology (9 Lecture Hours + 3 Tutorial Hours)**

1.1 Meaning, Objective and Research 1.2 Significance of Research, 1.3 Research Methods Vs Methodology 1.4 Research and Scientific Method 1.5 Research Process 1.6 Criteria of Good Research, 1.6.1 Literature Review, 1.6.2 Research Gap, 1.7 Defining the Research Problem: 1.7.1 Definition, 1.7.2 Selecting the Problem, 1.7.3 Technique Involved in Defining a Problem

**Unit 2: Research Design and Sampling Design (9 Lecture Hours + 3 Tutorial Hours)**

2.1 Research Design: Meaning, Need, Features, Important Concepts & Different Research Designs. 2.2 Census Vs Sampling 2.3 Sampling Design: Implications, Steps, Characteristics, Different Types of Sample Designs

**Unit 3: Measurement and Scaling Techniques (9 Lecture Hours + 3 Tutorial Hours)**

3.1 Measurement in Research, 3.2 Measurement Scales, 3.3 Sources of Error in Measurement, 3.4 Tests of Sound Measurement, 3.5 Technique of Developing Measurement Tools, 3.6 Scaling, 3.7 Meaning of Scaling, 3.8 Scale Classification Bases, 3.9 Important Scaling Techniques, 3.10 Scale Construction Techniques.

**Unit 4: Methods of Data Collection (9 Lecture Hours + 3 Tutorial Hours)**

4.1 Collection of Primary Data, 4.2 Observation Method 4.3 Interview Method 4.4 Collection of Data through Questionnaires 4.5 Collection of Data through Schedules 4.6 Difference between Questionnaires and Schedules 4.7 Some Other Methods of Data Collection 4.8 Collection of Secondary Data, 4.9 Selection of Appropriate Method for Data Collection 4.10 Case Study Method 4.11 Guidelines for Constructing Questionnaire/Schedule 4.12 Guidelines for Successful Interviewing 4.13 Difference between Survey and Experiment

## **Unit 5: Interpretation and Scientific Report Writing (9 Lecture Hours + 3 Tutorial Hours)**

5.1 Meaning & Need of Interpretation, 5.2 Technique & Precaution of Interpretation  
5.3 Significance of Report Writing 5.4 Different Steps in Writing Report 5.5 Layout  
of the Research Report 5.6 Types of Reports 5.7 Oral Presentation 5.8 Mechanics  
of Writing a Research Report 5.9 Precautions for Writing Research Reports 5.10  
Prescribed Guidelines: MLA (Modern Language Association), APA (American  
Psychological Association), Harvard, Vancouver and IEEE.

### **Suggested Reading:**

#### **Text Books**

- Kothari, C. R. (2008). *Research Methodology: Methods and Techniques*. New Delhi: New Age International.
- Das, J.K. (Latest Edition) *Statistics for Business Decision*. Academic Publishers.
- Sundar Rao, P. S., & Richard, J.. *An Introduction to Biostatistics: A Manual for Students in Health Sciences*. New Delhi, India: Prentice-Hall of India Pvt. Ltd.
- Saha, I., Paul, B. (2021). *Essentials of Biostatistics & Research Methodology*. Kolkata: Academic Publishers
- *Research Methodology by Basu and Nandi (Latest Edition)* , New Delhi Publication.

#### **Journals:**

*Journal of Healthcare Management*

*International Journal of Healthcare Management*

*Research in Healthcare Management*

#### **Online Resources:**

Research Methods Knowledge Base: <https://www.socialresearchmethods.net/kb/>

Research Methods in Healthcare:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3390128/>

**Course Title: Clinical Services Planning and Management**

**Course Code: MBA(HC&HM) 5007**

**Credits: 3 Lecture + 1 Tutorial**

**Hours: (45 Lecture Hours + 15 Tutorial Hours)**

**Objective:** To equip students with comprehensive knowledge and practical skills in planning and managing clinical services in healthcare settings. Besides, emphasize the integration of accreditation standards, infection control practices, and a customer-centric approach to enhance the quality and efficiency of clinical services. Thereby, develop professionals capable of navigating the complexities of outpatient and inpatient service planning, considering the evolving landscape of patient care management.

**Outcomes:**

Students should be able to

1. Develop the skills of planning outpatient service from accreditation and customer point of view, ensuring alignment with industry standards and addressing customer needs.
2. Outline the emerging concept in patient care management, incorporating contemporary practices and advancements in healthcare delivery.
3. Develop the skills to efficiently and effectively utilize the available resources of trauma care, including emergency and casualty services, ensuring efficient and effective responses to critical situations.
4. Take part in planning inpatient service from accreditation, infection control practices, and customer point of view, emphasizing a holistic and patient-centered approach.
5. Take part in planning inpatient service from accreditation and infection control practices, ensuring a safe and compliant healthcare environment for both patients and staff.

**Unit 1: Outpatient Services [9 Lecture Hours + 3 Tutorial Hours]**

1.1 Objectives and Functions, 1.2 Location, Layout and Design 1.3 Policy and Procedures, 1.4 Organogram and Staffing, 1.5 Facilities and Equipment, 1.6 Key Result Areas (KPA), 1.7 Quality Indicators, 1.8 Operations (Daily Planning and Scheduling of Work) 1.9 "OPD Clinics (Sub-Specialty, Specialty and Super Specialty Clinics, Diagnosis, Health Check-ups, Physiotherapy and Occupational Therapy)". 1.9 Management of Waiting Time & Total Time Spent by Patients,

**Unit 2: Emerging Concepts [9 Lecture Hours + 3 Tutorial Hours]**

2.1 Day Care, 2.2 Polyclinics, 2.3 Diagnostic Chain, 2.4 Online Appointment, 2.5 Homecare Service 2.6 Medico-social Works, 2.7 Patient Counselling, 2.8 Gifts Shop, Prayer and Meditation Room, AYUSH and Wellness Centers

**Unit 3: Trauma Care: Casualty and Emergency Services [9 Lecture Hours + 3 Tutorial Hours]**

3.1 Objectives and Functions, 3.2 Location, Layout and Design 3.3 Policies and Procedures 3.4 Organogram and Staffing, 3.5 Facilities and Equipment 3.6 Life Saving Drugs 3.7 Key Result Areas (KPA) 3.8 Quality Indicators, 3.9 Ambulance Services, 3.10 Medico-Legal Cases and Procedures, 3.11 Forms and Registers to be maintained 3.12 Management of Brought-Dead

Patient.

**Unit 4: Inpatient Services** [9 Lecture Hours + 3 Tutorial Hours]

**4.1 Inpatient Care:** 4.1.1 “Objectives and Functions, 4.1.2 Location, Design and Layout, 4.1.3 Policy and Procedures, 4.1.4 Organogram and Staffing, 4.1.5 Facilities and Equipment 4.1.6 Key Result Areas (KPA) 4.1.7 Quality Indicators, 4.1.8 Admission, Transfer, Billing and Discharge Procedures, 4.1.9 Managing Deaths”.

**4.2 Intensive Care Units:** 4.2.1 “Objectives and Functions, 4.2.2 Location, Design and Layout, 4.2.3 Policy and Procedures, 4.2.4 Organogram and Staffing, 4.2.5 Facilities and Equipment 4.2.6 Key Result Areas (KPA)”. 4.2.7 Quality Indicators, 4.2.8 Concept of HDUs, 4.2.9 Different types of ICUs, 4.2.10 Infection Control Practices.

**Unit 5: Operation Theatre** [9 Lecture Hours + 3 Tutorial Hours]

5.1 Objectives and Functions, 5.2 “Location, Design and Layout, 5.3 Policy and Procedures, 5.4 Organogram and Staffing, 5.5 Facilities and Equipment” 5.6 Key Result Areas (KPA) 5.7 “Quality Indicators 5.8 Daily Planning and Scheduling, 5.9 Zoning and Aseptic / Sterile Techniques, 5.10 Clinical Protocols for Operation Theater Complex”, 5.11 TSSD 5.12 Sub-stores, 5.13 Postoperative Recovery Rooms 5.14 Infection Control Practices.

**Suggested Reading:**

**Text Books**

1. Syed Amin Tabish, Hospital and Health Services Administration Principles and Practice (Oxford University Press, New Delhi)
2. R. Llewelyn Davies and HMC Macaulay, Hospital Planning and Administration (Jaypee Brothers Medical Publishers P. Ltd., New Delhi)
3. NHS, Guide to Good Practices in Hospital Administration ( Department of Health and Social Security: National Health Services, London)

**References**

1. B.M. Sakharkar, Principles of Hospital Administration and Planning (Jaypee Brothers Medical Publishers Pvt. Ltd., New Delhi)
2. G.D. Kundurs, Designing for Total Quality in Health Care (Prism Books Pvt. Ltd., Bangalore)
3. C.M. Francis and et al., Hospital Administration (Jaypee Brothers Medical Publishers Pvt. Ltd., New Delhi)

**Massive Open Online Courses (MOOCs):** (indicative)

1. Healthcare Operations Management - Offered by the University of Pennsylvania.
2. Hospital Management: Healthcare Leadership - Udemy course.

**Course Title: Human Resource Management**

**Course Code: MBA(HC&HM) 5008**

**Credits: 3 Lecture + 1 Tutorial**

**Hours: (45 Lecture Hours + 15 Tutorial Hours)**

**Objective:** To provide students with a comprehensive understanding of Human Resource Management (HRM) principles, practices, and emerging trends on an international scale. Besides, to equip students with the necessary knowledge and skills to navigate the complexities of HRM by focusing on key areas such as the basic concepts of HRM, training and development, performance indicators, compensation management, and the utilization of modern tools in performance management, including Human Resources Information Systems (HRIS)

**Outcomes:**

Students will be able to -

1. Interpret the basic concepts of human resource management using foundational principles and their applications in organizational settings.
2. Apply the principles of training and development with the skills to design and implement effective training programs that contribute to organizational growth and employee development.
3. Determine the skills in compensation management, focusing on the strategic design and administration of compensation structures to attract and retain talent.
4. Examine “performance indicators and analyse” the latest tools in “performance management, including the study of Human Resources Information Systems (HRIS)” for efficient HR practices.
5. Evaluate emerging concepts of HRM from an international perspective, exploring global trends and best practices in human resource management

**Unit 1: Basics of HRM and Sourcing [9 Lecture Hours + 3 Tutorial Hours]**

1.1 Introduction to HRM 1.2 Objectives of HRM, 1.3 Short term and Long term HR Planning 1.4 Productivity Analysis in Healthcare, 1.5 HR Policies and Procedures, 1.5.1 Recruitment, 1.5.2 Selection, 1.5.3 Placement/Joining, 1.5.4 Induction / Orientation.

**Unit 2: Training and Development [9 Lecture Hours + 3 Tutorial Hours]**

2.1 Concept of Training and Development, 2.2 Assessing Training Needs, 2.3 Evaluating Training Program, 2.4 Career Growth and Development 2.5 Succession Planning 2.6 Management Development Program 2.7 Organizational Development.

**Unit 3: Compensation Management [9 Lecture Hours + 3 Tutorial Hours]**

3.1 Fixed Pay and Incentive System, 3.2 Wage and Salary Policy, 3.3 Components of Wages and Salary Administration.

**Unit 4: Performance Management and Human Resource Information [9 Lecture Hours + 3 Tutorial Hours]**

4.1 Performance Indicators: Individual and Organization, 4.2 360 Degree Feedback, 4.3 Behaviorally Anchored Rating Scale (BARS) 4.4 Management By Objective (MBO) 4.5 Human Resource (cost) Accounting Method 4.6 Competency Assessment 4.7 Periodic Reports

on Manpower Management 4.8 Employee Turnover rate and Compensation, 4.9 Absenteeism  
4.10 Labour Market.

**Unit 5: Emerging Concepts in HRM [9 Lecture Hours + 3 Tutorial Hours]**

t5.1 Leadership and Learning Organization, 5.2 Organizational Hierarchy 5.3 Organization Culture and Change Management, 5.4 Staff Communications, 5.5 Succession Planning, 5.6 Values and Work Ethics 5.7 Code of Conduct 5.8 Occupational Hazards of Healthcare Workers 5.9 Employee Welfare Programmes and Counselling.

**Suggested Reading:**

**Text Books**

- 1.R.C .Goyal, Handbook of Hospital Personnel Management(Prentice-Hall India Pvt. Ltd., New Delhi)
- 2.David A. DeCenzo and Stephen P. Robbins, Human Resource Management(John Wiley & Sons Inc., New York)
3. Human Resource Management by Sarkar and Chakraborty (Blue Rose One Publishers, New Delhi)

**References**

- 1.Vincent K. Omachonu, Healthcare Performance Improvement(Engineering & Management Pr, USA)
2. DeCenzo, D. A., & Robbins, S. P. Personnel/Human Resource Management. New Delhi, India: Prentice-Hall of India Pvt. Ltd.

**MOOCs: (indicative)**

List of HRM MOOCs at My MOOC. <https://www.my-mooc.com/en/categorie/human-resources>

Management of Human Resource. SWAYAM.

[https://onlinecourses.swayam2.ac.in/nou20\\_mg02/preview](https://onlinecourses.swayam2.ac.in/nou20_mg02/preview)

**Course Title: Healthcare Marketing and Public Relations**

**Course Code: MBA(HC&HM) 5009**

**Credits: 3 Lecture + 1 Tutorial**

**Hours: (45 Lecture Hours + 15 Tutorial Hours)**

**Objective:** To equip students with a profound understanding of marketing and public relations principles, tailored specifically for the healthcare sector. Through a comprehensive exploration of various components for effective decision-making and strategic planning in healthcare marketing and public relations

**Outcomes:**

Students will be able to -

1. Make use of the concept of marketing and public relations within the unique context of healthcare organizations.
2. Take part in market analysis in relation to market segmentation and targeting to address specific healthcare market needs and demographics.
3. Estimate market trends through “analysis, product development, pricing strategies, promotional tactics, and distribution channels” with a holistic view of the strategic elements essential for successful healthcare marketing.
4. Design and evaluate “service marketing mix decisions, encompassing product, price, promotion, place, people, physical evidence, and process”, ensuring a comprehensive approach to healthcare service delivery.
5. Examine the public relation process and tools in healthcare organizations, emphasizing effective communication strategies, stakeholder engagement, and the management of public perceptions.

**Unit 1: Application of Marketing in Healthcare** [9 Lecture Hours + 3 Tutorial Hours]

1.1 Marketing Concept of Marketing. 1.2 Importance and Challenges in Practicing Marketing in Healthcare Industry. 1.3 Marketing Intelligence and Information and Research System

**Unit 2: Market Analysis: Market Segmentation and Targeting** [9 Lecture Hours + 3 Tutorial Hours]

**2.1 Market Segmentation and Targeting:** Steps in Segmentation and Targeting, Target Marketing, Consumer Analysis, Consumer Buying Process, Organization Buyer Behaviour, Consumer Adoption Process

**Unit 3: Marketing Mix Decisions** [9 Lecture Hours + 3 Tutorial Hours]

**3.1 Product (Service) Decisions:** Nature and Characteristics of Services, Marketing Approaches to New Services Development, Five levels of product, Service Mix Decision, Service Item Decision, Service Life Cycle Decision, Demand Generation

**3.2 Pricing Decisions:** Pricing Objectives in Healthcare, Pricing Strategy, Present and Future Situation

**3.3 Place Decisions:** Major Distribution Decisions, Strengthening Referral Systems,

**3.4 Promotion Decisions:** Sales Force in Healthcare Organizations, Advertising in Healthcare Industry, Sales Promotion Practices in Healthcare Organizations, Publicity Practices

**3.5 Service Marketing:** 3 Ps of Service Marketing: People, Physical Evidence and Process, Gap Model of Service Quality by Parsuraman.

**Unit 4: Marketing Strategies** [9 Lecture Hours + 3 Tutorial Hours]

4.1 Service Portfolio Strategy, 4.2 Market Expansion Strategy, 4.3 Target Market Strategy, 4.4 Price Quality Strategy, 4.5 Competitive Positioning Strategy, 4.6 Marketing Mix Strategy

**Unit 5: Public Relations** [9 Lecture Hours + 3 Tutorial Hours]

**5.1 Introduction to Public Relations:** Meaning of Public Relations, Classification of Public from Healthcare Marketing Perspective

**5.2 Public Relations Process:** Identifying the Relevant Publics, Measuring Images and Attitude of the Relevant Public, Establishing Image and Attitude Goals for the Key Publics, Developing Cost Effective Public Relations Strategies, Implementing Actions and Evaluating Results

**5.3 Public Relations Tools:** Materials: Written and Audio-visual, Media: News, Events, Speeches and Telephone Information Services, Profile of Public Relations Officer, Changing Role and Responsibilities of Health Service PRO

**Suggested Reading:**

**Text Books**

1. Kotler, P., & Clarke, R. N. Marketing for Healthcare Organizations.
2. Silver, R. Health Service Public Relations. ISBN 1-85775-028-4.

**References**

- 1.G.D. Kunder, How to Market Your Hospital Without Selling Your Philosophy(Prism Books Pvt. Ltd., Bangalore.
2. O'Malley, J. F.. Healthcare Marketing Sales and Services: An Executive Companion. ISBN 1-56793-150-2.

**Course Name: Hospital and Healthcare Accreditation**

**Course Code: MBA(HC&HM) 5010**

**Credits: 3 Lectures + 1 Tutorial**

**Hours: (45 Lecture Hours + 15 Tutorial Hours)**

**Objective:** To provide students with a thorough understanding of the principles, standards, and processes involved in hospital and healthcare accreditation, including NABH, NABL and JCI regulatory requirements, and accreditation standards. Besides, to equip them with the knowledge and skills necessary to facilitate accreditation processes, implement quality improvement initiatives, and ensure compliance with accreditation standards, thereby enhancing the quality and safety of healthcare delivery within institutional settings.

**Outcomes:**

Students should be able to

1. Explain Hospital & Healthcare Accreditation, its fundamental concepts and significance in quality healthcare.
2. Apply the principles of “National Accreditation Board for Hospitals & Healthcare Providers standards”.
3. Examine Patient-Centered Standards and make use of insights for enhancing patient care and experience.
4. Make use of standards that contribute to effective organizational management in healthcare.
5. Identify Essential Documentation & Hospital Committees for accreditation to implement necessary documentation and committee structures for successful accreditation.

**Unit-1 Introduction to Hospital & Healthcare Accreditation (9 Lecture Hours + 3 Tutorial Hours)**

1.1 NABH, 1.2 NABL, 1.3 JCI, 1.4 ISO, 1.5 ISQua, 1.6 “The Australian Commission on Safety and Quality in Health Care (the Commission)”, 1.7 WHO Guidelines, 1.8 BIS. 1.9 CPQIH

**Unit 2: Introduction to NABH (9 Lecture Hours + 3 Tutorial Hours)**

2.1 Quality council of India (QCI), 2.2 Organizational structure of NABH, 2.3 Standards, Preparing for NABH Accreditation, 2.3.1 (HCO) Hospital Accreditation, 2.3.2 SHCO Accreditation, 2.3.3 Blood Bank Accreditation, 2.3.4 AYUSH Hospital Accreditation, 2.4 Digital Health Standards for Hospitals.

**Unit3: Patient-Centered Standards (9 Lecture Hours + 3 Tutorial Hours)**

1. Access, Assessment and Continuity of Care (AAC) 2. Care of Patients (COP) 3. Management of Medication (MOM) 4. Patient Rights and Education (PRE) 5. Hospital Infection Control (HIC)

**Unit 4: Organization–Centred Standards (9 Lecture Hours + 3 Tutorial Hours)**

1. Patient Safety and Quality Improvement (PSQ) 2. Responsibilities of Management (ROM) 3. Facility Management and Safety (FMS) 4. Human Resource Management (HRM) 5. Information Management System (IMS)

**Unit 5: Essential Documentation & Hospital Committees** (9 Lecture Hours + 3 Tutorial Hours)

1. Sentinel Events 2. Clinical Audit 3. Quality Indicators 4. Incident Report 5. Internal Audit

**Committees for NABH Accreditation:** 1. Quality Improvement/ Core Committee, 2. CPR Committee (Code Blue Team), 3. Hospital Infection Control Committee, 4. Pharmacotherapy Committee, 5. Safety Committee, 6. Hospital Ethics Committee, 7. Anti-Sexual Harassment Committee, 8. Disaster Management Committee, 9. Management Review Committee

**NABH Application Filing:** 1. Eligibility for applying for NABH Accreditation 2. Accreditation Procedure 3. Maintaining Accreditation 4. Surveillance 5. Reassessment and Renewal of Accreditation.

**Suggested Reading:**

**Text Books**

1. NABH Guide Book to Accreditation Standards for Hospitals latest edition
2. Health Care Quality Management: Tools and Applications - Thomas K. Ross
3. Hospital and Healthcare Accreditation (As Per the Guidelines of NABH, NABL, JCI)
4. NABL: Specific Criteria for Accreditation of Calibration Laboratories

Note: QCI and its divisions offer several courses on quality, so ISO and its affiliates.

**Course Title: Medical Record Science**

**Course Code: MBA(HC&HM) 5011**

**Credits: 3 Lecture + 1 Tutorial**

**Hours: (45 Lecture Hours + 15 Tutorial Hours)**

**Objective:** To equip students with the critical aspects of managing patient health information, which encompasses various filing methods, storage techniques, and retention policies essential for effective medical records management. Additionally, in the implementation of Unique Health Identifier (UHID) within the Indian healthcare system, emphasizing its significance and implications for patient data management and healthcare delivery.

**Outcomes:**

Students will be able to -

1. Explain the fundamental principles of medical records management, including the importance of accuracy, confidentiality, and accessibility in maintaining patient health information.
2. Examine various filing methods, storage techniques, and retention policies relevant to medical records management, enabling them to organize and maintain health records effectively.
3. Utilize the concept of Unique Health Identifier (UHID) in the Indian healthcare system, including its significance, implementation, and implications for patient data management and healthcare delivery.
4. Assess statistical methods for analyzing healthcare data, ensuring quality control in data collection, and effectively presenting healthcare statistics to support evidence-based decision-making in healthcare management and policy.
5. Design centralized admitting services in healthcare facilities to contribute effectively to the patient-centered management of admissions and discharge processes.

**Unit 1: Fundamentals of Medical Records [9 Lecture Hours + 3 Tutorial Hours]**

1.1 Characteristics of medical Records, 1.2 Source-oriented, 1.3 Problem-oriented, and Integrated medical records, 1.3.1 ICD-10 Coding, 1.4 Medical Record Forms and Its Content, 1.5 Standard Order of Arrangement of Medical Record forms (Assembling), 1.6 Analysis of Medical Record-Quantitative & Qualitative, 1.7 Incomplete Record Control (Deficiency check.). 1.8 Electronic Medical Records Ecosystem, 1.9 Components of EMR Web App of ABDHM.

**Unit 2: Filing Methods, Storage, and UHID [9 Lecture Hours + 3 Tutorial Hours]**

**2.1 Numbering and Filing Systems:** Numeric Filing System, Alphabetic Filing System, Alphanumeric Filing System, Terminal Digit Filing System, Color-Coded Filing System, Registers & Indexes used in MRD, Record movement control & Tracking system.

**2.2 UHID:** Unique Identification, Centralized Database, Interoperability, Privacy and Security, Patient Empowerment, Healthcare Delivery Improvement

**Unit 3: Health Data Retention Policy [9 Lecture Hours + 3 Tutorial Hours]**

3.1 Concept & Scope of Consultation Paper, 3.2 Importance of Health Data Retention, 3.3 Digital Information Security in Healthcare Act (DISHA), 3.4 Storage and Maintenance of Health Data Retention, 3.5 Modes of Retention of Health Data, 3.6

Maintenance and Exchange of Health Data, 3.7 Data Classification for Health Data  
3.8 Country Comparison on Health Data Retention (Canada, USA, UK, Australia)  
includes Inpatient-Outpatient-Deceased Patients-Exception Cases which include –  
Mental Disease, Suicide, Maternity/Fertility, Genetic, Radiotherapy, etc.  
3.9 Proposed Approach for Health Data Retention Guideline/Policy of India.

**Unit 4: Health Care Statistics, Quality control of Data Collection & Presentation** [9 Lecture Hours + 3 Tutorial Hours]

4.1 Incomplete Record Control, 4.2 Inpatient census, 4.3 Ambulatory care statistics, 4.4 Long term Care Statistics, 4.5 Reproductive Health Statistics, 4.6 Reporting of Notifiable Diseases to Public Health Authorities

**Unit 5: Centralized Admitting Services** [9 Lecture Hours + 3 Tutorial Hours]

5.1 Principles of Identification of a Patient, 5.2 Types of Central Admitting Services, 5.3 Admitting Policies, 5.4 Procedure Outlines for Admissions 5.5 Financial Counselling during Admission 5.6 Flow of Records following Admissions, 5.7 Pre-Requisites for smooth & efficient functioning of the Centralized Admitting Services

### **Suggested Reading:**

#### **Text Books**

1. The medical records book by Guy Gratton, 2015
2. Medical records: organization and management, G.D Mogli, 2017
3. Health Information Management Sixth Edition: Concepts, Principles by Pamela Oachs, Amy Watters
4. [https://abdm.gov.in:8081/uploads/Consultation\\_Paper\\_on\\_Health\\_Data\\_Retention\\_Policy\\_21\\_28557f9a6a.pdf](https://abdm.gov.in:8081/uploads/Consultation_Paper_on_Health_Data_Retention_Policy_21_28557f9a6a.pdf)

**Course Title: Biostatistics and Data Analysis**

**Course Code: MBA(HC&HM) 5012**

**Credits: 3 Lectures + 1 Tutorial**

**Hours: 42 Lecture Hours + 24 Tutorial Hours**

**Objective:** Develop comprehensive skills and knowledge in data processing, analysis, hypothesis testing, sampling techniques, ethical research conduct, and utilization of diverse business research tools to proficiently conduct and report research in the field of business and data analytics.

**Outcomes:**

Students should be able to

1. Ability to process and analyze data effectively using appropriate statistical measures and techniques for descriptive and inferential analysis.
2. Proficiency in designing and executing sampling procedures, estimating population parameters, and interpreting sampling distributions.
3. Competence in formulating hypotheses, conducting parametric tests, and interpreting results while considering the significance levels and potential errors.
4. Awareness of ethical considerations in research, demonstrating integrity in conducting and reporting research findings, and respecting intellectual property rights.
5. Capability to utilize various business research tools for data analysis, visualization, literature review, citation management, AI assistance, proofreading, accessing research resources, and conducting surveys efficiently.

**Unit 1: Processing and Analysis of Data (9 Lecture Hours + 3 Tutorial Hours)**

1.1 Processing Operations, 1.2 Elements/Types of Analysis 1.3 Measures of Central Tendency (Mean, median and Mode) 1.4 Measures of Dispersion ((a) range, (b) mean deviation, and (c) standard deviation) 1.5 Measures of Asymmetry (Skewness) 1.6 Measures of Relationship 1.7 Simple Regression Analysis 1.8 Multiple Correlation and Regression 1.9 Partial Correlation 1.10 Time series analysis 1.11 Summary Chart Concerning Analysis of Data

**Unit 2: Sampling Fundamentals (9 Lecture Hours + 3 Tutorial Hours)**

2.1 Need for Sampling 2.2 Some Fundamental Definitions (1. Universe/Population, 2. Sampling frame: 3. Sampling design, 4. Statistic(s) and parameter(s): 5. Sampling error, errors. errors.6 Precision, 7. Confidence level and significance level, 8. Sampling distribution) 2.3 Important Sampling Distributions (used, are: (1) sampling distribution of mean; (2) sampling distribution of proportion; (3) student's 't' distribution; (4) F distribution; and (5) Chi-square distribution) 2.4 Sampling Theory 2.6 Concept of Standard Error 2.7 Estimating the Population Mean (m) 2.10 Estimating Population Proportion 2.11 Sample Size and its Determination..

**Unit 3: Parametric or Standard Tests of Hypotheses (9 Lecture Hours + 3 Tutorial Hours)**

3.1 Definition of a Hypothesis 3.2 Basic Concepts Concerning Testing of Hypotheses ((a) Null hypothesis and alternative hypothesis, (b) The level of significance, (c) Decision rule or test of hypothesis, (d) Type I and Type II errors, (e) Two-tailed and One-tailed tests) 3.3 Procedure for Hypothesis Testing 3.4 Flow Diagram for Hypothesis Testing 3.5 Important Parametric Tests ((1) z-test; (2) t-test; (3) Chi Square test, and (4) F-test) 3.6 Limitations of the Tests of Hypotheses

#### **Unit 4: Ethics in Research (9 Lecture Hours + 3 Tutorial Hours)**

4.1 Ethics in research 4.2 Intellectual honesty and research integrity 4.3. Falsification, Fabrication, and Plagiarism (FFP) 4.4 Redundant publications: duplicate and overlapping publications. Publication ethics, Publication misconduct 4.5 intellectual property Rights 4.6 Citation and Acknowledgement 4.7 Consortium for Academic and Research Ethics (CARE) 4.8 SCOPUS

#### **Unit 5 Introduction to Business Research Tools (3 Lecture Hours + 9 Tutorial Hours)**

5.1 Data analysis tools: Spreadsheet apps like MS Excel, SPSS, Nvivo. 5.2 Survey tools like Google Forms.

#### **Suggested Reading:**

##### **Text Books**

- Kothari, C. R. (2008). *Research Methodology: Methods and Techniques*. New Delhi: New Age International.
- Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill-Building Approach*. Chichester, UK: Wiley.
- Sundar Rao, P. S., & Richard, J. An Introduction to Biostatistics: A Manual for Students in Health Sciences. New Delhi, India: Prentice-Hall of India Pvt. Ltd.
- Business Research Methods by Murthy and Bhojannya (Excel Publications)
- Saha, I., Paul, B. (2021). *Essentials of Biostatistics & Research Methodology*. Kolkata: Academic Publishers
- Business Mathematics and Statistics by N.G. Das and J.K. Das.

##### **Journals:**

*Journal of Healthcare Management*

*International Journal of Healthcare Management*

*Research in Healthcare Management*

##### **Online Resources:**

Research Methods Knowledge Base: <https://www.socialresearchmethods.net/kb/>

Research Methods in Healthcare:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3390128/>