



MALLA REDDY VISHWAVIDYAPEETH

(Deemed to be University)

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**School of Public Health, Emerging Healthcare & Technology
(SPHEHT)**

**COURSE STRUCTURE
&
SYLLABUS DOCUMENT**

**Master of Hospital Administration
Year 2026–28 Batch**

Course Structure

SEMESTER - I							
S. No.	Category	Course Code	Course Name	L	T	P	Credits
1	MC		Fundamentals of Epidemiology	3	1	0	4
2	MC		Essentials of Biostatistics	2	2	0	4
3	MC		Health Systems, Policy, Bioethics and CSR	2	1	0	3
4	MC		Principles of Hospital Administration and Organization	2	0	0	2
5	MC		Organizational Behavior	3	0	0	3
6	MP		Hospital Immersion and Ward Observation (Practical)	0	0	6	3
7	VAC		AI in Healthcare: Foundation	1	0	0	1
			TOTAL CREDITS				20
			TOTAL CONTACT HOURS	13	4	6	23

SEMESTER - II							
S. No.	Category	Course Code	Course Name	L	T	P	Credits
1	MC		Health Economics and Financing	3	0	0	3
2	SEC		Artificial Intelligence and Digital Health Informatics	1	1	0	2
3	MC		Hospital Operations and Supply Chain Management	3	1	0	4
4	MC		Quality Assurance, Patient Safety, and Accreditation	3	1	0	4
5	MS		Healthcare Marketing and Public Relations	3	0	0	3
6	VAC		Life and Professional Skills	0	0	2	1
7	MP		Hospital Internship / Operations Placement	0	0	8	4
			TOTAL CREDITS				21
			TOTAL CONTACT HOURS	13	3	8	24

SEMESTER - III							
S. No.	Category	Course Code	Course Name	L	T	P	Credits
1	MC		Disaster Preparedness and Emergency Response	3	1	0	4
2	MC		Hospital Planning, Architecture, and Facility Management	3	1	0	4
3	MC		Healthcare and Human Resource Management in Hospitals	3	1	0	4

SEMESTER - III							
4	MC		Legal Framework in Healthcare and Medical Ethics	3	1	0	4
5	AEC		Strategic Management and Leadership in Healthcare	3	1	0	4
			TOTAL CREDITS				20
			TOTAL CONTACT HOURS	15	5	0	20

SEMESTER - IV							
S. No.	Category	Course Code	Course Name	L	T	P	Credits
1	MS		Health Insurance and Managed Care	2	1	0	3
2	MD		Data-Driven Decision Making and Lean Six Sigma	2	2	0	4
3	RP		Master's Dissertation / Capstone Project	0	0	26	13
			TOTAL CREDITS				20
			TOTAL CONTACT HOURS	4	3	26	33

Detailed Syllabus

Semester - I

Fundamentals of Epidemiology

Category: Major Core (MC) | L-T-P: 3-1-0 | Credits: 4

Course Objectives

- Introduce the foundational concepts, historical evolution, principles, and applications of epidemiology in healthcare and public health.
- Explain disease transmission dynamics, disease surveillance systems, outbreak investigation, and national health programmes such as IDSP.
- Apply concepts of disease prevention and screening, and evaluate the validity and reliability of screening tests.
- Analyse observational and experimental epidemiological study designs and apply measures of disease occurrence, risk, and association to healthcare research and practice.

Course Outcomes: On completion, students will be able to:

- CO1: Explain the foundational concepts, history, principles, natural history of disease, and transmission dynamics of epidemiology.
- CO2: Apply concepts of disease surveillance, outbreak investigation, and national health programmes in healthcare and public health practice.
- CO3: Analyse approaches to disease prevention and evaluate the validity and reliability of screening tests.
- CO4: Differentiate, design, and evaluate observational and experimental study designs used in epidemiological research.
- CO5: Calculate and interpret measures of disease occurrence, risk, and association, and apply epidemiological methods to real-world datasets and field investigations.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Healthcare Management Knowledge), GA2 (Critical Thinking & Problem Solving), GA4 (Research Aptitude & Evidence-Based Practice), GA8 (Quality, Patient Safety & Social Responsibility), GA10 (Lifelong Learning & Professional Growth)

Unit I: Introduction to Epidemiology and Disease Dynamics

- Definition, history, aims, scope, and fundamental principles of epidemiology
- Natural history of disease and its significance in epidemiological research and healthcare
- Epidemiological triad: agent, host, and environment
- Dynamics and modes of disease transmission and their practical significance

Unit II: Disease Surveillance, Outbreak Investigation, Prevention and Screening

- Principles and methods of disease surveillance
- Outbreak investigation: steps, approaches, and applications in public health practice
- Integrated Disease Surveillance Programme (IDSP) and its role in disease monitoring and control
- Primary, secondary, and tertiary prevention of disease

- Screening tests: principles, applications, validity, sensitivity, specificity, and reliability

Unit III: Epidemiological Study Designs

- Overview of epidemiological study designs: descriptive, analytical, observational, and experimental
- Descriptive observational studies: case reports, case series, ecological studies, and cross-sectional studies
- Ecological fallacy and its implications for epidemiological interpretation
- Analytical observational studies: cohort, case-control, and nested study designs
- Experimental and quasi-experimental studies, including phases of clinical trials
- Selection of appropriate study designs for healthcare and hospital-based research

Unit IV: Measures of Disease Occurrence, Association and Applied Epidemiology

- Measures of disease frequency: incidence, prevalence, and related measures
- Measures of association: risk ratio, odds ratio, and risk difference
- Interpretation of epidemiological findings and their application to healthcare decision-making
- Analytical and epidemiological exercises using real-world examples and datasets
- Application of epidemiological methods to field investigations and public health problems

Suggested Readings

- Celentano, D. D., Szklo, M., & Farag, Y. Gordis Epidemiology (7th edition). Elsevier, 2023.
- Aschengrau, A., & Seage, G. R. Essentials of Epidemiology in Public Health (4th edition). Jones & Bartlett Learning, 2018.
- Szklo, M., & Nieto, F. J. Epidemiology Beyond the Basics (4th edition). Jones & Bartlett Learning.

Essentials of Biostatistics

Category: Major Core (MC) | L-T-P: 2-2-0 | Credits: 4

Course Objectives

- Introduce fundamental concepts of biostatistics, probability theory, random variables, and statistical distributions relevant to healthcare research.
- Develop skills in organizing, summarizing, visualizing, and interpreting healthcare data using statistical software.
- Explain sampling techniques, sample size determination, statistical power, and principles of statistical inference.
- Apply appropriate descriptive and inferential statistical methods to healthcare datasets to support evidence-based decision-making.

Course Outcomes: On completion, students will be able to:

- CO1: Explain fundamental concepts of random variables, probability theory, and theoretical distributions in epidemiological and healthcare research.

- CO2: Use statistical software to manage, summarize, analyse, and visually present healthcare datasets.
- CO3: Select appropriate sampling methods and determine sample sizes and statistical power requirements for healthcare research.
- CO4: Conduct and interpret bivariate inferential statistical tests, critically evaluating hypotheses, p-values, and confidence intervals.
- CO5: Analyse real-world healthcare datasets using appropriate biostatistical methods and draw evidence-based conclusions for healthcare decision-making.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Healthcare Management Knowledge), GA2 (Critical Thinking & Problem Solving), GA3 (Digital & Technological Literacy), GA4 (Research Aptitude & Evidence-Based Practice), GA10 (Lifelong Learning & Professional Growth)

Unit I: Fundamentals of Biostatistics and Descriptive Statistics

- Introduction to biostatistics, its scope, applications, and importance in healthcare administration and research
- Types of variables, levels of measurement, data classification, and data distributions
- Random variables and fundamental concepts of probability
- Measures of central tendency: mean, median, and mode
- Measures of dispersion: range, variance, standard deviation, and interquartile range
- Standard deviation and standard error of the mean: concepts and interpretation
- Organization, tabulation, and summarization of healthcare data

Unit II: Probability, Statistical Distributions and Data Visualization

- Probability theory and its applications in healthcare research
- Discrete probability distributions: Binomial and Poisson distributions
- Continuous probability distributions and the normal distribution
- Standard normal scores (Z-scores) and their interpretation
- Central Limit Theorem and its significance in statistical estimation
- Data visualization: frequency distributions, histograms, bar charts, pie charts, box plots, and scatter plots
- Selection and interpretation of appropriate graphical methods for healthcare data
- Introduction to statistical software, including R and SPSS, for data management and analysis

Unit III: Sampling and Statistical Inference

- Population, sample, sampling frame, and sampling error
- Probability and non-probability sampling techniques
- Sample size determination and factors influencing sample size
- Statistical power and its importance in healthcare research
- Principles of statistical inference and hypothesis testing
- Null and alternative hypotheses, significance levels, and Type I and Type II errors
- P-values and confidence intervals: interpretation and applications
- Statistical significance versus practical and clinical significance

Unit IV: Bivariate Analysis and Applied Biostatistics

- Selection of appropriate statistical tests based on variable types and research objectives

- Parametric and non-parametric approaches to statistical analysis
- Independent and paired t-tests and their applications
- Chi-square test and analysis of categorical data
- Analysis of variance (ANOVA) and comparison of group means
- Correlation analysis and interpretation of relationships between variables
- Performing descriptive and inferential analyses using statistical software
- Practical exercises involving healthcare and hospital datasets
- Interpretation and presentation of statistical findings for evidence-based healthcare management decisions

Suggested Readings

- Rosner, B. Fundamentals of Biostatistics (8th edition). Cengage Learning.
- Zuur, A. F., Ieno, E. N., & Meesters, E. H. W. G. A Beginner's Guide to R. Springer.
- Singhal, Y. K. Methods in Biostatistics (11th edition). Jaypee Brothers Medical Publishers.
- Petrie, A., & Sabin, C. Medical Statistics at a Glance (4th edition). Wiley-Blackwell.
- Indrayan, A., & Malhotra, R. K. Medical Biostatistics (4th edition). CRC Press.
- Swinscow, T. D. V. Statistics at Square One (11th edition). BMJ Books.

Health Systems, Policy, Bioethics and CSR

Category: Major Core (MC) | L-T-P: 2-1-0 | Credits: 3

Course Objectives

- Explain the organization, functions, financing, and governance of health systems at national and global levels.
- Analyse health policies, reforms, healthcare regulations, and policy implementation for effective health system management.
- Apply bioethical and professional ethics principles to healthcare administration and organizational decision-making.
- Develop an understanding of Corporate Social Responsibility (CSR), sustainability, and organizational accountability in healthcare.

Course Outcomes: On completion, students will be able to:

- CO1: Explain the organization, functions, financing, and governance of health systems at national and global levels.
- CO2: Evaluate health policies, reforms, healthcare regulations, and policy implementation for effective health system management.
- CO3: Apply principles of bioethics and professional ethics in healthcare administration and organizational decision-making.
- CO4: Analyse legal, ethical, and governance challenges in healthcare institutions and propose appropriate managerial solutions.
- CO5: Design CSR initiatives and sustainability strategies that improve organizational accountability and community health.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Healthcare Management Knowledge), GA2 (Critical Thinking & Problem Solving), GA7 (Ethical

Reasoning & Professional Integrity), GA8 (Quality, Patient Safety & Social Responsibility), GA10 (Lifelong Learning & Professional Growth)

Unit I: Foundations, Governance and Financing of Health Systems

- Concepts, objectives, functions, and components of health systems
- WHO Health System Building Blocks and health system performance
- Public, private, and mixed healthcare delivery models; primary, secondary, and tertiary care
- Universal Health Coverage (UHC) and global health systems
- Health governance, stewardship, decentralization, and accountability
- Health financing mechanisms, taxation, insurance, out-of-pocket expenditure, and strategic purchasing
- Public–Private Partnerships (PPP) in healthcare

Unit II: Health Policy, Regulation and Health System Management

- Concepts and evolution of health policy; the policy cycle, agenda setting, formulation, implementation, monitoring, and evaluation
- National Health Policy 2017, Ayushman Bharat, and National Health Mission
- Stakeholder analysis and evidence-informed policymaking
- Healthcare legislation, regulatory frameworks, and institutional compliance
- Clinical Establishments Act, Consumer Protection Act, and Biomedical Waste Management Rules
- Patient rights, healthcare quality standards, NABH accreditation, and governance mechanisms
- Policy implementation challenges and health system reform

Unit III: Bioethics and Ethical Healthcare Administration

- History and principles of bioethics: autonomy, beneficence, non-maleficence, and justice
- Confidentiality, informed consent, and ethical decision-making frameworks
- Ethics committees and their roles in healthcare institutions
- Clinical ethics, research ethics, organ transplantation, reproductive ethics, and end-of-life care
- Ethical issues in AI and digital health, allocation of scarce resources, and conflicts of interest
- Corporate governance, transparency, risk management, whistleblower policies, and organizational integrity
- Ethical leadership and professional accountability in healthcare management

Unit IV: Corporate Social Responsibility and Sustainable Healthcare

- Concepts, evolution, and significance of CSR in healthcare
- CSR provisions under the Companies Act, 2013, including Schedule VII
- CSR governance, planning, budgeting, stakeholder engagement, implementation, and reporting
- Hospital outreach programmes, preventive health initiatives, and community partnerships
- Environmental sustainability, green hospitals, occupational health, and Environmental, Social and Governance (ESG) principles

- Sustainable Development Goals (SDGs) and healthcare accountability
- Monitoring and evaluation of CSR initiatives, social impact assessment, and emerging challenges in health systems

Suggested Readings

- Buchbinder, S. B., & Shanks, N. H. Introduction to Health Care Management. Jones & Bartlett Learning.
- Beauchamp, T. L., & Childress, J. F. Principles of Biomedical Ethics. Oxford University Press.
- Pozgar, G. D. Legal and Ethical Issues for Health Professionals. Jones & Bartlett Learning.

Principles of Hospital Administration and Organization

Category: Major Core (MC) | L-T-P: 2-0-0 | Credits: 2

Course Objectives

- Introduce the fundamental concepts, principles, functions, and evolution of hospital administration.
- Explain hospital organizational structures, governance, leadership, communication, and decision-making.
- Describe operational coordination among clinical, diagnostic, and support departments.
- Analyse hospital resource management and the legal, ethical, and regulatory issues influencing administration.

Course Outcomes: On completion, students will be able to:

- CO1: Explain the fundamental concepts, principles, functions, and evolution of hospital administration and organization.
- CO2: Apply principles of hospital organization, governance, leadership, communication, and decision-making in healthcare settings.
- CO3: Explain operational and coordination principles supporting the effective functioning of clinical, diagnostic, and support departments.
- CO4: Analyse hospital resource-management practices and legal, ethical, and regulatory issues influencing healthcare administration.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Healthcare Management Knowledge), GA2 (Critical Thinking & Problem Solving), GA5 (Effective Communication & Stakeholder Engagement), GA7 (Ethical Reasoning & Professional Integrity), GA9 (Strategic Management, Innovation & Entrepreneurship)

Unit I: Foundations of Hospital Administration

- Definition, scope, evolution, and principles of hospital administration
- Hospitals as complex healthcare organizations; objectives and functions
- Types and classification of hospitals based on ownership, size, services, and level of care
- Hospital administration as a managerial function

- Core management functions: planning, organizing, staffing, directing, coordinating, and controlling
- Role and responsibilities of hospital administrators

Unit II: Hospital Organization, Governance and Leadership

- Hospital organizational structures, hierarchy, and reporting relationships
- Roles of hospital management, medical superintendent, department heads, nursing administration, and administrative staff
- Hospital governance, committees, and administrative decision-making
- Hospital policies, procedures, and administrative documentation

Unit III: Hospital Operations and Departmental Coordination

- Functions and coordination of outpatient departments (OPD), inpatient departments (IPD), and emergency services
- Roles of operation theatres, intensive care units, diagnostic services, and medical records departments
- Coordination among clinical, nursing, diagnostic, pharmacy, and support services
- Patient registration, admission, transfer, referral, and discharge processes
- Patient flow, service continuity, and administrative bottlenecks
- Introduction to hospital information systems and medical records management

Unit IV: Hospital Resources, Legal, Ethical and Regulatory Management

- Human resources, infrastructure, equipment, materials, and financial resources in hospitals
- Principles of resource allocation and utilization
- Patient rights, confidentiality, informed consent, and professional ethics
- Legal and regulatory responsibilities of hospital administrators
- Introduction to hospital quality standards, accreditation, and patient safety
- Risk management, institutional accountability, and administrative problem-solving

Suggested Readings

- Gupta, S., & Kant, S. Hospital Administration.
- Sakharkar, B. M. Principles of Hospital Administration and Planning. Jaypee Brothers Medical Publishers.

Organizational Behaviour

Category: Major Core (MC)

L-T-P: 3-0-0

Credits: 3

Course Objectives

- Explain the fundamental concepts, theories, and models of organizational behaviour and their relevance to hospital administration.
- Examine individual behaviour, personality, perception, attitudes, motivation, and job satisfaction in healthcare organizations.
- Apply organizational behaviour concepts to teamwork, communication, leadership, and conflict management in hospitals.

- Analyse organizational structure, culture, power, politics, and change management in healthcare institutions.
- Evaluate workplace challenges and recommend managerial interventions to improve employee performance and organizational effectiveness.

Course Outcomes

On completion of this course, students will be able to:

- **CO1:** Explain the fundamental concepts, theories, and models of organizational behaviour and their relevance to hospital administration.
- **CO2:** Analyse individual behaviour, personality, perception, attitudes, motivation, and job satisfaction in healthcare organizations.
- **CO3:** Apply organizational behaviour concepts to teamwork, communication, leadership, and conflict management in hospitals.
- **CO4:** Analyse organizational structure, culture, power, politics, and change management in healthcare institutions.
- **CO5:** Evaluate organizational and workplace challenges and recommend appropriate managerial interventions to improve employee performance and organizational effectiveness.

Graduate Attributes Addressed

- **GA1:** Disciplinary & Interdisciplinary Healthcare Management Knowledge
- **GA2:** Critical Thinking & Problem Solving
- **GA5:** Effective Communication & Stakeholder Engagement
- **GA6:** Teamwork & Collaborative Leadership
- **GA7:** Ethical Reasoning & Professional Integrity
- **GA8:** Quality, Patient Safety & Social Responsibility
- **GA9:** Strategic Management, Innovation & Entrepreneurship
- **GA10:** Lifelong Learning & Professional Growth

Unit I: Introduction to Organizational Behaviour

- Definition, nature, scope, and importance of organizational behaviour.
- Contributing disciplines and their relevance to organizational behaviour.
- Models of organizational behaviour.
- Challenges and opportunities in healthcare organizations.

Unit II: Individual Behaviour in Organizations

- Individual differences, personality, and the Big Five personality model.
- Values, perception, and attribution.
- Attitudes, job satisfaction, and organizational commitment.
- Emotions and emotional intelligence.
- Learning theories and workplace stress.

Unit III: Motivation and Employee Performance

- Concepts and theories of motivation.
- Maslow's hierarchy of needs, Herzberg's two-factor theory, and McClelland's theory.

- Expectancy theory, equity theory, and goal-setting theory.
- Employee engagement and performance.
- Incentives, absenteeism, employee turnover, and burnout.

Unit IV: Group Behaviour, Teamwork, and Communication

- Group development, roles, norms, status, and cohesiveness.
- Group decision-making and team effectiveness.
- Interdisciplinary healthcare teams.
- Organizational communication and feedback.
- Conflict management, negotiation, and interdepartmental coordination.

Unit V: Leadership, Power, and Organizational Politics

- Trait, behavioural, and contingency theories of leadership.
- Transactional and transformational leadership.
- Leadership in hospitals and healthcare organizations.
- Sources of power, influence, empowerment, and delegation.
- Organizational politics, ethical leadership, and managerial decision-making.

Unit VI: Organizational Structure, Culture, and Change

- Organizational structure and design.
- Departmentalization, chain of command, and span of control.
- Centralization and decentralization.
- Organizational culture and resistance to change.
- Lewin's change model and organizational development.
- Hospital-based case studies on organizational change and management.

Suggested Readings

1. Robbins, S. P., & Judge, T. A. *Organizational Behavior*. Pearson.

Hospital Immersion and Ward Observation (Practical)

Category: Mini Project / Practicum (MP) | L-T-P: 0-0-6 | Credits: 3

Course Objectives

- Develop observational understanding of daily operational workflows across clinical and non-clinical hospital departments.
- Analyse patient journeys from admission to discharge and identify operational bottlenecks.
- Understand the roles, responsibilities, and interprofessional relationships of healthcare staff.
- Assess the observed implementation of hospital safety, quality, and infection-control procedures.

Course Outcomes: On completion, students will be able to:

- CO1: Map the physical layout, organizational hierarchy, and interdepartmental linkages of a functioning hospital.

- CO2: Document and analyse operational workflows in outpatient, inpatient, and emergency departments.
- CO3: Assess patient flow, bed management, and discharge-planning processes through direct observation.
- CO4: Prepare an immersion report documenting observations, gap analysis, and recommendations for workflow improvement.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Healthcare Management Knowledge), GA2 (Critical Thinking & Problem Solving), GA4 (Research Aptitude & Evidence-Based Practice), GA5 (Effective Communication & Stakeholder Engagement), GA7 (Ethical Reasoning & Professional Integrity)

Unit I: Orientation and Front-End Hospital Operations

- Hospital orientation, organizational structure, policies, and code of conduct
- Patient confidentiality, observer responsibilities, personal protective equipment, and infection-control precautions
- Observation of OPD registration, queue management, patient assessment, consultation, and patient flow
- Emergency department workflows, triage, ambulance reception, and emergency admissions
- Front-office operations, billing, insurance verification, and electronic medical records

Unit II: Inpatient Wards and Critical Care

- Ward administration, nursing duty rosters, shift handovers, and clinical coordination
- Observation of ward routines, clinical rounds, and multidisciplinary team interactions
- ICU organization, infection-control barriers, patient monitoring, and critical-care coordination
- Bed allocation, bed turnover, housekeeping, and patient-support services
- Patient and attendant communication, counselling, and coordination among healthcare professionals

Unit III: Diagnostic, Pharmacy and Support Services

- Patient movement between wards, diagnostic laboratories, and radiology services
- Laboratory workflow, specimen transport, urgent and routine investigations, and reporting turnaround times
- Pharmacy operations, medication dispensing, inventory control, and near-expiry stock management
- Central Sterile Supply Department (CSSD) workflows and biomedical waste segregation
- Support-service coordination, grievance handling, and patient feedback processes

Unit IV: Discharge Planning and Immersion Reporting

- Observation of discharge summaries, final billing, insurance approvals, and patient exit procedures
- Identification of bottlenecks in admission-to-discharge workflows
- Maintenance of observational logbooks and preparation of process flowcharts
- Basic time-motion observations and documentation of workflow gaps

- Preparation of a structured immersion report with observations, gap analysis, and recommendations
- Presentation of findings and viva voce

Suggested Readings

- Tabish, S. A. Hospitals and Nursing Homes: Planning, Organisations and Management. Jaypee Brothers Medical Publishers.
- Sakharkar, B. M. Principles of Hospital Administration and Planning. Jaypee Brothers Medical Publishers.
- National Accreditation Board for Hospitals & Healthcare Providers (NABH). Standards for Hospitals. Quality Council of India.

AI in Healthcare: Foundation

Category: Foundation | **Mode:** Lecture and hands-on demos (12 h) plus activities and assessment (4 h) | **Credits:** 1

Course Objectives

- Introduce core AI concepts and explain how they are applied across the healthcare system.
- Identify major healthcare use cases of AI and critically evaluate AI tools using basic performance measures.
- Apply ethical, legal, and regulatory principles to AI use in healthcare.
- Facilitate the responsible use of no-code AI tools to propose realistic healthcare solutions.

Course Outcomes: On completion, students will be able to:

- CO1: Explain core AI concepts (machine learning, deep learning, NLP, generative AI) and how they are applied across the healthcare system, in plain language.
- CO2: Identify and describe major healthcare use cases of AI, such as diagnostics and imaging, clinical decision support, drug discovery, public health surveillance, and hospital operations.
- CO3: Critically evaluate an AI tool's claims by interpreting basic performance measures (accuracy, sensitivity, specificity, false positives/negatives) and recognising bias, data-quality problems and limitations.
- CO4: Apply ethical, legal and regulatory principles (privacy, consent, fairness, accountability, transparency) to AI use in healthcare.
- CO5: Use no-code AI tools responsibly and propose a realistic AI solution for a healthcare problem in their own discipline.

Graduate Attributes Addressed: Disciplinary and interdisciplinary knowledge, Critical thinking and problem solving, Digital and technological literacy, Ethics, professionalism and social responsibility, Communication and teamwork, Innovation and entrepreneurship, Lifelong learning

Unit I: Introduction to AI and Health Data

- What AI is and isn't; AI vs ML vs deep learning; how machines "learn" from data (no maths).
- Types of health data (EHR, imaging, genomics, wearables); data quality and "garbage in, garbage out".

- Activity: train a simple image classifier using Teachable Machine.

Unit II: AI Applications in Healthcare

- Medical imaging (radiology, pathology, ophthalmology); clinical decision support and risk prediction.
- NLP for clinical notes; generative AI and chatbots; drug discovery; public health and epidemic surveillance; hospital operations and telemedicine.
- Activity: case demos and group discussion.

Unit III: Evaluating AI: Does It Actually Work?

- Reading performance metrics in plain terms; sensitivity vs specificity with clinical examples; overfitting.
- Validation and clinical trials of AI; bias and generalisability across populations; explainability.
- Activity: critique a published AI tool's claim.

Unit IV: Ethics, Law and Governance

- Patient privacy and consent (HIPAA/GDPR/India's DPDP Act at awareness level).
- Algorithmic bias and health equity; accountability when AI errs; regulation of AI as a medical device; human-in-the-loop principles.
- Activity: ethical dilemma role-play.

Unit V: Using AI Responsibly and Capstone

- Prompting generative AI for clinical and academic work; hallucinations and verification; future trends.
- Final group presentation proposing an AI solution to a healthcare problem.

Prerequisites

- None. No coding or mathematics beyond basic statistics is needed.
- Hands-on work uses no-code tools (e.g., ChatGPT/Claude, Teachable Machine, Orange Data Mining, Google Colab notebooks run as pre-built demos, public AI-demo sites for imaging and symptom checkers).

Teaching Methods

- Interactive lectures, live demonstrations, case-based learning, group discussions, role-play and short guided no-code exercises.

Recommended Readings

Key Textbooks & Reference Books

1. **Topol, E.** (2019). *Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again*. Basic Books.
2. **Bohr, A., & Memarzadeh, K.** (Eds.). (2020). *Artificial Intelligence in Healthcare*. Academic Press.
3. **Agrawal, A., Gans, J., & Goldfarb, A.** (2018). *Prediction Machines: The Simple Economics of Artificial Intelligence*. Harvard Business Review Press.

Regulatory Reports & Ethical Guidelines

1. **World Health Organization.** (2021). *Ethics and governance of artificial intelligence for health: WHO guidance*. Geneva: World Health Organization.
2. **Ministry of Law and Justice, Government of India.** (2023). *The Digital Personal Data Protection Act, 2023 (DPDP Act)*. Gazette of India.
3. **U.S. Food and Drug Administration (FDA).** (2021). *Artificial Intelligence/Machine Learning (AI/ML)-Based Software as a Medical Device (SaMD) Action Plan*.

Online Interactive & No-Code Resources

1. **Google Teachable Machine:**
[<https://teachablemachine.withgoogle.com/>] (<https://teachablemachine.withgoogle.com/>)
2. **Orange Data Mining (Visual Programming & Interactive Workflows):**
[<https://orangedatamining.com/>] (<https://orangedatamining.com/>)
3. **WHO / ITU Focus Group on Artificial Intelligence for Health (FG-AI4H) Resources:**
[<https://www.who.int/initiatives/cih>] (<https://www.who.int/initiatives/cih>)

Semester II

Health Economics and Financing

Category: Major Core (MC) | L-T-P: 2-0-0 | Credits: 2

Course Objectives

- Introduce basic concepts, principles, and terminology of health economics, including the economic burden of disease.
- Explain healthcare financing mechanisms and economic evaluation methods relevant to healthcare.
- Describe health insurance systems, public–private partnerships, and national and global health-financing initiatives.
- Apply health economics and financing principles to healthcare programmes and practical management cases.

Course Outcomes: On completion, students will be able to:

- CO1: Explain the basic concepts, principles, and terminology of health economics, including the economic burden of disease.
- CO2: Describe healthcare financing mechanisms and apply economic evaluation methods in healthcare.
- CO3: Explain health insurance systems, public–private partnerships, and national and global health-financing initiatives.
- CO4: Apply principles of health economics and financing to analyse healthcare programmes and real-world case studies.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Healthcare Management Knowledge), GA2 (Critical Thinking & Problem Solving), GA4 (Research Aptitude & Evidence-Based Practice), GA8 (Quality, Patient Safety & Social Responsibility), GA11 (Healthcare Economics, Financing & Strategic Management)

Unit I: Foundations of Health Economics and Healthcare Costs

- Basic economic concepts and terminology
- Microeconomics, macroeconomics, and the scope of health economics
- Healthcare as an economic good and the characteristics of healthcare markets
- Direct, indirect, and intangible costs of illness
- Out-of-pocket expenditure and catastrophic health expenditure
- Economic burden of disease and its implications for households and healthcare systems

Unit II: Economic Evaluation and Health Financing

- Principles and applications of economic evaluation in healthcare
- Cost analysis, cost-effectiveness analysis, cost-benefit analysis, and cost-utility analysis
- Concepts, objectives, and sources of healthcare financing
- Tax-based financing, health insurance, private expenditure, and donor funding
- Comparing healthcare interventions using economic evidence
- Application of economic evaluation to healthcare planning and resource allocation

Unit III: Health Insurance, Financial Risk Protection and Partnerships

- Health insurance concepts, risk pooling, and financial risk protection

- Universal Health Coverage (UHC) and healthcare affordability
- Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (PM-JAY)
- Health systems financing and resource allocation
- National Health Accounts and healthcare expenditure
- Public–Private Partnerships (PPP): models, advantages, challenges, and applications

Unit IV: Health Financing Policies and Applied Case Studies

- Overview of healthcare financing in India
- National and global health-financing initiatives
- WHO health-financing frameworks
- Priority setting, budgeting, and resource allocation
- Health financing and Sustainable Development Goals (SDGs)
- Case studies applying health economics and financing concepts to healthcare programmes

Suggested Readings

- Park, K. Park's Textbook of Preventive and Social Medicine. Banarsidas Bhanot Publishers.
- Bhattacharya, J., Hyde, T., & Tu, P. Health Economics. Red Globe Press.
- Drummond, M. F., Sculpher, M. J., Claxton, K., Stoddart, G. L., & Torrance, G. W. Methods for the Economic Evaluation of Health Care Programmes. Oxford University Press.

Artificial Intelligence and Digital Health Informatics

Category: Skill Enhancement Course (SEC) | L-T-P: 1-1-0 | Credits: 2

Course Objectives

- Explain digital health architectures, health information standards, and electronic health record interoperability.
- Introduce applications of AI, machine learning, and natural language processing in healthcare data analysis.
- Evaluate digital health interventions, telemedicine, and mobile health technologies.
- Analyse algorithmic bias, privacy, data governance, and ethical requirements for responsible AI implementation.

Course Outcomes: On completion, students will be able to:

- CO1: Explain digital health architectures, health information standards, and EHR/EMR interoperability frameworks.
- CO2: Describe applications of AI, machine learning, and natural language processing in healthcare and population health.
- CO3: Evaluate digital health interventions, telemedicine tools, and mobile health applications.
- CO4: Analyse algorithmic bias, privacy regulations, data governance, and ethical considerations in healthcare AI.
- CO5: Develop a conceptual AI-enabled digital health strategy or dashboard proposal addressing a healthcare challenge.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Healthcare Management Knowledge), GA2 (Critical Thinking & Problem Solving), GA3 (Digital & Technological Literacy), GA4 (Research Aptitude & Evidence-Based Practice), GA7 (Ethical Reasoning & Professional Integrity)

Unit I: Digital Health Architectures and Interoperability

- Digital transformation in healthcare and public health
- WHO Global Strategy on Digital Health
- Electronic Health Records (EHRs), Electronic Medical Records (EMRs), and Health Information Exchanges (HIEs)
- Health information standards: HL7, FHIR, ICD-11, and SNOMED CT
- Health data management, interoperability, and information exchange across healthcare systems

Unit II: AI, Machine Learning and Natural Language Processing

- Fundamentals of AI and machine learning in healthcare
- Supervised and unsupervised learning, deep learning, and predictive analytics
- Applications of AI in epidemiological analysis and population health
- Natural language processing for extracting information from clinical notes
- NLP for disease surveillance and generative AI in healthcare communication
- AI applications in epidemiological surveillance, outbreak prediction, spatial analytics, GIS, and syndromic surveillance

Unit III: Digital Health Interventions and Implementation

- Mobile health (mHealth), telemedicine, and remote patient monitoring
- Digital therapeutics, wearable health technologies, and Internet of Things (IoT) applications
- Digital tools for community health workers
- Evaluation frameworks for digital health interventions
- Clinical efficacy, usability testing, implementation considerations, and return-on-investment analysis

Unit IV: Data Governance, Responsible AI and Applied Digital Health

- Data privacy and governance frameworks, including HIPAA, GDPR, and India's DPDP framework
- Data ownership, cybersecurity, and regulatory considerations for Software as a Medical Device (SaMD)
- Algorithmic bias, health equity, explainable AI, and model transparency
- WHO guidance and ethical principles for AI in healthcare
- Evaluation of real-world healthcare AI applications
- Conceptual dashboard prototyping and development of a digital health project proposal

Hospital Operations and Supply Chain Management

Category: Major Core (MC) | L-T-P: 3-1-0 | Credits: 4

Course Objectives

- Explain the principles and strategic frameworks of hospital operations and supply chain management.

- Analyse capacity planning, patient flow, facility layout, and resource scheduling.
- Apply procurement, strategic sourcing, and materials-management principles in hospitals.
- Evaluate inventory control, logistics, supply-chain risks, and technology integration in hospital administration.

Course Outcomes: On completion, students will be able to:

- CO1: Explain fundamental principles, core concepts, and strategic frameworks of hospital operations and supply chain management.
- CO2: Examine capacity planning, patient flow optimization, and facility layout design in healthcare service delivery.
- CO3: Apply procurement strategies, strategic sourcing, and materials-management principles within healthcare organizations.
- CO4: Evaluate inventory control models, supply-chain logistics, risk mitigation, and technological integration in hospital administration.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Healthcare Management Knowledge), GA2 (Critical Thinking & Problem Solving), GA3 (Digital & Technological Literacy), GA6 (Teamwork & Collaborative Leadership), GA9 (Strategic Management, Innovation & Entrepreneurship)

Unit I: Foundations of Hospital Operations Management

- Scope, theories, and strategic role of hospital operations
- Process management and service-system design
- Operational efficiency, productivity, and performance measurement
- Decision-making frameworks in healthcare operations
- Coordination of hospital services and administrative processes

Unit II: Capacity Planning, Patient Flow and Facility Operations

- Demand forecasting and capacity management
- Patient-flow optimization and bottleneck analysis
- Hospital facility layout and departmental planning
- Resource scheduling and operational coordination
- Queuing models, waiting-time management, and service efficiency

Unit III: Healthcare Procurement and Materials Management

- Principles and functions of materials management in hospitals
- Procurement cycles, strategic sourcing, and purchasing decisions
- Vendor identification, evaluation, selection, and performance monitoring
- Contract management and supplier relationships
- Ethics, transparency, and regulatory compliance in healthcare purchasing

Unit IV: Supply-Chain Logistics, Inventory and Quality Control

- Healthcare supply-chain structures and distribution models
- Inventory classification, stock tracking, and replenishment systems
- Cold-chain management and specialized storage requirements
- Supply-chain risk management and continuity of essential supplies
- Supply-chain performance indicators and technology applications

- Evaluation of operational and supply-chain challenges through hospital case studies

Suggested Readings

- McLaughlin, D. B., & Hays, J. M. Healthcare Operations Management. Health Administration Press.
- Schneller, E. S., & Smeltzer, L. R. Strategic Management of the Healthcare Supply Chain. Jossey-Bass/Wiley.

Quality Assurance, Patient Safety, and Accreditation

Category: Major Core (MC) | L-T-P: 3-1-0 | Credits: 4

Course Objectives

- Explain the principles, dimensions, and frameworks of quality management in healthcare organizations.
- Apply quality improvement tools, clinical audits, and performance indicators to evaluate hospital services.
- Analyse patient safety risks, medical errors, adverse events, and clinical risk management strategies.
- Evaluate healthcare accreditation standards, regulatory requirements, and hospital preparedness for accreditation.

Course Outcomes: On completion, students will be able to:

- CO1: Explain the fundamental concepts, dimensions, and frameworks of healthcare quality management.
- CO2: Apply quality improvement tools, clinical audits, and performance indicators to assess hospital performance.
- CO3: Analyse patient safety incidents, healthcare-associated risks, and strategies for preventing adverse events.
- CO4: Interpret healthcare accreditation standards and evaluate hospital compliance and accreditation readiness.
- CO5: Develop evidence-based quality improvement and patient safety plans for healthcare facilities.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Healthcare Management Knowledge), GA2 (Critical Thinking & Problem Solving), GA3 (Evidence-Based Decision-Making & Analytical Skills), GA6 (Leadership & Organizational Management), GA7 (Ethical Reasoning & Professional Integrity)

Unit I: Foundations of Quality Management in Healthcare

- Concepts, definitions, evolution, and importance of quality in healthcare
- Dimensions of healthcare quality: safety, effectiveness, patient-centredness, timeliness, efficiency, and equity
- Quality assurance, quality control, quality improvement, and total quality management
- Quality management philosophies: Deming, Juran, Crosby, and Ishikawa
- Donabedian's Structure–Process–Outcome model
- Continuous Quality Improvement (CQI), Kaizen, Lean management, Six Sigma, and Plan–Do–Study–Act (PDSA) cycles

- Clinical governance, quality management systems, standard operating procedures, and the role of hospital quality committees

Unit II: Quality Improvement Tools, Audits, and Performance Measurement

- Healthcare quality indicators: structure, process, and outcome indicators
- Development, monitoring, and interpretation of hospital performance indicators
- Quality improvement tools: flowcharts, check sheets, Pareto charts, cause-and-effect diagrams, run charts, and control charts
- Root Cause Analysis (RCA), Failure Mode and Effects Analysis (FMEA), and gap analysis
- Clinical audits, medical record audits, prescription audits, and departmental quality audits
- Benchmarking, quality dashboards, statistical quality control, and performance reporting
- Corrective and Preventive Actions (CAPA), internal assessments, and continuous compliance monitoring

Unit III: Patient Safety and Clinical Risk Management

- Concepts, principles, and dimensions of patient safety; national and global patient safety initiatives
- Medical errors, adverse events, near misses, sentinel events, and preventable patient harm
- Patient safety culture, human factors, systems thinking, and the Swiss Cheese Model
- Incident reporting, event investigation, root cause analysis, and organizational learning
- Medication safety, patient identification, safe clinical handovers, and surgical safety checklists
- Prevention of healthcare-associated infections, patient falls, pressure injuries, and transfusion-related errors
- Clinical risk assessment, risk registers, FMEA, disclosure of adverse events, and a just culture
- Patient rights, informed consent, confidentiality, grievance redressal, and patient and family engagement in safety

Unit IV: Healthcare Accreditation, Standards, and Regulatory Compliance

- Concepts, objectives, benefits, and processes of healthcare accreditation and certification
- National Accreditation Board for Hospitals and Healthcare Providers (NABH): standards, assessment processes, and accreditation requirements
- National Accreditation Board for Testing and Calibration Laboratories (NABL): relevance to hospital laboratories and diagnostic services
- Joint Commission International (JCI) accreditation principles and international hospital standards
- ISO standards relevant to healthcare quality management and laboratory services
- Hospital-wide quality systems: patient care, medication management, infection prevention, facility management, human resources, and information management

- Accreditation preparation: gap assessment, document control, mock surveys, evidence collection, and corrective action plans
- Legal and regulatory compliance, quality committees, internal assessments, and mechanisms for sustaining accreditation

Suggested Readings

- Joshi, M. S., Ransom, E. R., Nash, D. B., & Ransom, S. B. *The Healthcare Quality Book: Vision, Strategy, and Tools*. Jossey-Bass.
- McLaughlin, C. P., & Kaluzny, A. D. *Continuous Quality Improvement in Health Care: Theory, Implementation, and Applications*. Jones & Bartlett Learning.
- World Health Organization. *Global Patient Safety Action Plan 2021–2030: Towards Eliminating Avoidable Harm in Health Care*.
- National Accreditation Board for Hospitals & Healthcare Providers (NABH). *Accreditation Standards for Hospitals* — latest applicable edition.

Healthcare Marketing and Public Relations

Category: Major Core (MC) | L-T-P: 3-0-0 | Credits: 3

Course Objectives

- Explain the concepts, strategic roles, and ethical considerations of marketing and public relations in healthcare.
- Apply market research, environmental analysis, segmentation, targeting, and positioning to healthcare services.
- Analyse healthcare service mix, pricing, hospital branding, and digital communication channels.
- Evaluate public relations, stakeholder relations, media management, and crisis communication in healthcare organizations.

Course Outcomes: On completion, students will be able to:

- CO1: Explain fundamental concepts, strategic roles, and ethical considerations of marketing and public relations in healthcare organizations.
- CO2: Apply market research, environmental analysis, segmentation, targeting, and positioning strategies to healthcare service delivery.
- CO3: Analyse healthcare service mix, pricing models, hospital branding, and digital communication channels.
- CO4: Evaluate public relations strategies, stakeholder relations, media management, and crisis communication frameworks.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Healthcare Management Knowledge), GA2 (Critical Thinking & Problem Solving), GA5 (Effective Communication & Stakeholder Engagement), GA7 (Ethical Reasoning & Professional Integrity), GA9 (Strategic Management, Innovation & Entrepreneurship)

Unit I: Foundations of Healthcare Marketing and Consumer Behaviour

- Concepts, scope, and evolution of healthcare marketing
- Differences between traditional marketing and healthcare marketing
- Ethical considerations, patient-centred marketing, and professional responsibilities
- Patient decision-making, expectations, satisfaction, and service experience
- Consumer behaviour and factors influencing healthcare-service selection

Unit II: Strategic Marketing Planning and Market Analysis

- Healthcare market analysis and environmental scanning
- Market segmentation, targeting, and positioning
- Healthcare demand forecasting and service-market assessment
- Primary and secondary market research methods in healthcare
- Using market research to inform healthcare service planning and management

Unit III: Healthcare Service Mix, Branding and Digital Strategy

- Healthcare services marketing mix and service characteristics
- Service quality, capacity management, and pricing strategies
- Hospital branding, brand positioning, and brand equity
- Digital marketing, social media presence, and online reputation management
- Ethical communication and patient engagement through digital channels

Unit IV: Public Relations, Media Relations and Crisis Communication

- Scope and functions of public relations in healthcare organizations
- Internal and external stakeholder communication
- Media relations, public information, and community outreach
- Crisis communication planning and response protocols
- Corporate Social Responsibility and organizational reputation
- Case studies involving hospital communication, public trust, and reputation management

Suggested Readings

- Kotler, P., Shalowitz, J., & Stevens, R. J. Strategic Marketing for Health Care Organizations. Jossey-Bass/Wiley.
- Fortenberry, J. L. Health Care Marketing: Tools and Techniques. Jones & Bartlett Learning.

Life and Professional Skills

Category: Value Added Course (VAC) | **L-T-P:** 0-0-2 | **Credits:** 1

*(Note: Students can choose either **Track A: Classical Dance (Bharatanatyam)** or **Track B: Media and Design** for Units II–IV after completing the common foundational module in Unit I.)*

Course Objectives

- Develop foundational life skills, emotional intelligence, personal discipline, and professional etiquette.
- Cultivate body awareness, posture, rhythm, and artistic expression (Track A) OR master visual literacy, graphic design principles, and media tools (Track B).
- Apply non-verbal communication and expressive storytelling techniques (Track A) OR construct impactful digital visual content for health communication (Track B).
- Build self-confidence, teamwork, and aesthetic appreciation through practical performance or digital portfolio presentation.

Course Outcomes: On completion, students will be able to:

- **CO1:** Demonstrate self-management, emotional intelligence, professional etiquette, and workplace ethics.

- **CO2:** Perform fundamental Bharatanatyam movements (*Adavus*), hand gestures (*Hastas*), and rhythmic cycles (Track A) OR apply core principles of design, color theory, typography, and visual hierarchy (Track B).
- **CO3:** Express emotional nuances and storytelling using *Abhinaya* and *Rasas* (Track A) OR design digital posters, infographics, and visual campaign assets using graphic software (Track B).
- **CO4:** Present a collaborative classical dance performance (Track A) OR construct a professional digital media portfolio showcasing creative communication skills (Track B).

Graduate Attributes Addressed: GA5 (Effective Communication), GA6 (Interpersonal & Teamwork Skills), GA7 (Ethical Reasoning & Professional Integrity), GA9 (Creative & Innovative Thinking), GA10 (Lifelong Learning & Self-Directed Growth)

Unit Syllabus

Unit I: Core Life Skills and Professional Etiquette (Common to All Students)

- Self-awareness, emotional intelligence, stress management, and personal resilience
- Goal setting, time management, personal discipline, and self-directed growth
- Professional workplace etiquette, active listening, body language, and grooming
- Principles of creative expression, aesthetic appreciation, and holistic well-being

Unit II: Foundational Track Skills (Elective Track Choice)

- **Track A (Bharatanatyam):** Origins and philosophy of Bharatanatyam, basic standing posture (*Araimandi*), fundamental feet and hand movements (*Adavus*), single and combined hand gestures (*Asamyutta & Samyutta Hastas*), and basic rhythmic cycles (*Tala*).
- **Track B (Media & Design):** Introduction to visual literacy, core design elements (line, shape, color, texture, space), color theory, typography fundamentals, layout balance, and principles of visual hierarchy.

Unit III: Expressive Practice and Communication (Elective Track Choice)

- **Track A (Bharatanatyam):** Facial expressions (*Mukhabhinaya*), exploration of the nine classical emotions (*Navarasas*), expressive storytelling (*Abhinaya*), rhythmic coordination, and developing stage presence.
- **Track B (Media & Design):** Digital design software (Canva / Adobe Express / Illustrator basics), visual storytelling, designing public health awareness posters, creating infographics, and digital layout optimization.

Unit IV: Performance, Portfolio, and Synthesis (Elective Track Choice)

- **Track A (Bharatanatyam):** Group choreography, synchronisation, stage entry/exit etiquette, public performance, peer review, and reflection on dance as a stress-relief practice.
- **Track B (Media & Design):** Principles of visual brand identity, executing a health awareness media campaign, portfolio assembly, digital presentation skills, and peer design critique.

Suggested Readings

- **Common Life Skills:**
 - Cottrell, S. *Skills for Success: Personal Development and Employability*. Palgrave Macmillan.
- **Track A (Bharatanatyam):**
 - Vatsyayan, K. *Classical Indian Dance in Literature and the Arts*. Sangeet Natak Akademi.
 - Kothari, S. *Bharata Natyam*. Marg Publications.
- **Track B (Media & Design):**
 - Lupton, E. *Thinking with Type: A Critical Guide for Designers, Writers, Editors, & Students*. Princeton Architectural Press.
 - Lidwell, W., Holden, K., & Butler, J. *Universal Principles of Design*. Rockport Publishers.

Hospital Internship / Operations Placement

Category: Summer Internship (SI) | L-T-P: 0-0-8 | Credits: 4

Course Objectives

- Develop practical experience in hospital administration and the functioning of clinical, diagnostic, and support departments.
- Apply principles of hospital operations, quality improvement, patient safety, and healthcare service delivery.
- Examine administrative, financial, human resource, and support-service functions in healthcare organizations.
- Identify operational challenges and propose evidence-based management improvements while demonstrating professional conduct.

Course Outcomes: On completion, students will be able to:

- CO1: Apply hospital administration principles by participating in the management and functioning of hospital departments.
- CO2: Demonstrate competencies in hospital operations, quality improvement, patient safety, and healthcare service delivery.
- CO3: Evaluate administrative, financial, human resource, and support-service functions within healthcare organizations.
- CO4: Analyse hospital workflows, identify operational challenges, and recommend evidence-based management solutions.
- CO5: Demonstrate professionalism, ethical practice, communication, teamwork, and leadership in healthcare settings.

Graduate Attributes Addressed: GA2 (Critical Thinking & Problem Solving), GA4 (Research Aptitude & Evidence-Based Practice), GA5 (Effective Communication & Stakeholder Engagement), GA6 (Teamwork & Collaborative Leadership), GA7 (Ethical Reasoning & Professional Integrity), GA10 (Lifelong Learning & Professional Growth)

Unit I: Hospital Operations and Departmental Orientation

- Hospital orientation, organizational structure, and governance
- OPD, IPD, emergency, ICU, and operation theatre workflows
- Diagnostic services, pharmacy, blood bank, and medical records department
- Patient registration, admission, transfer, discharge, and patient-flow processes
- Coordination of clinical and administrative services

Unit II: Quality, Patient Safety and Support Services

- NABH standards, quality indicators, and patient safety practices
- Infection prevention and control and clinical audits
- Risk management, incident reporting, and quality improvement
- Housekeeping, CSSD, laundry, dietary services, and biomedical waste management
- Observation of safety procedures and departmental compliance

Unit III: Hospital Administration and Resource Management

- Human resource management, staffing, and departmental coordination
- Hospital finance, billing, insurance processing, and revenue-cycle management
- Health information systems, medical records, and documentation
- Procurement, inventory control, pharmacy operations, and material management
- Coordination of facility services, equipment, and administrative support functions

Unit IV: Operational Analysis, Reporting and Evaluation

- Identification of hospital workflow challenges and administrative bottlenecks
- Observation and documentation of operational processes
- Basic analysis of service-delivery and quality-improvement opportunities
- Preparation of an internship logbook and structured report
- Development of evidence-based recommendations for operational improvement
- Presentation of internship findings and viva voce

Suggested Readings

- Sakharkar, B. M. Principles of Hospital Administration and Planning. Jaypee Brothers Medical Publishers.
- Goel, S. L., & Kumar, R. Hospital Administration and Management: Theory and Practice. Deep & Deep Publications.
- National Accreditation Board for Hospitals & Healthcare Providers (NABH). Standards for Hospitals. Quality Council of India.
- World Health Organization. Hospital Care Documentation & Patient Safety Guidelines.

Semester III

Disaster Preparedness and Emergency Response

Category: Major Core (MC) L-T-P: 3-1-0 Credits: 4

Course Objectives

- Explain disaster risk management, disaster epidemiology, and emergency preparedness in healthcare systems.
- Develop hospital disaster preparedness and emergency operations plans.
- Apply emergency response, mass casualty management, logistics, and inter-agency coordination principles.
- Evaluate communication, continuity, recovery, and resilience strategies for healthcare organizations.

Course Outcomes

On completion of this course, students will be able to:

- CO1: Explain the principles of disaster risk management, disaster epidemiology, and emergency preparedness within healthcare systems.
- CO2: Develop hospital disaster preparedness plans using national and international frameworks, the Hospital Incident Command System (HICS), and emergency operations planning.
- CO3: Apply emergency response, mass casualty management, emergency logistics, surge capacity planning, and inter-agency coordination principles.
- CO4: Evaluate disaster communication systems, business continuity planning, recovery strategies, and psychosocial support for resilient healthcare organizations.
- CO5: Design disaster preparedness, simulation, and quality improvement strategies to strengthen hospital emergency management.

Graduate Attributes Addressed

- GA1: Disciplinary & Interdisciplinary Healthcare Management Knowledge
- GA2: Critical Thinking & Problem Solving
- GA5: Effective Communication & Stakeholder Engagement
- GA6: Teamwork & Collaborative Leadership
- GA7: Ethical Reasoning & Professional Integrity
- GA8: Quality, Patient Safety & Social Responsibility

Unit I: Foundations of Disaster Management and Governance

- Concepts and definitions of disasters and disaster management.
- Disaster management cycle; hazard, vulnerability, and risk assessment.
- Classification of natural, biological, technological, and human-induced disasters.
- Disaster epidemiology, health impacts of disasters, and disaster risk reduction.
- Role of hospitals in disaster management.
- Disaster Management Act, 2005; National, State, and District Disaster Management Authorities.
- National Disaster Management Plan, Sendai Framework, International Health Regulations (2005), WHO Health Emergency Programme, and Sphere Standards.
- NABH and JCI emergency preparedness requirements; ethical and legal issues during disasters.

Unit II: Hospital Preparedness, Planning and Coordination

- Hospital Disaster Management Plan (HDMP) and Hospital Emergency Operations Plan (HEOP).
- Hazard Vulnerability Assessment (HVA), preparedness committees, and emergency resource planning.
- Infrastructure and utility preparedness, evacuation planning, continuity of essential services, and disaster documentation.
- Incident Command System (ICS), Hospital Incident Command System (HICS), and Emergency Operations Centre (EOC).
- Command and control, roles and responsibilities, leadership, and decision-making during disasters.
- Coordination with emergency medical services, police, fire services, NDRF, SDRF, NGOs, and local administration.

Unit III: Emergency Response and Resource Management

- Hospital emergency activation and emergency department preparedness.
- Surge capacity management, patient triage systems (START and SALT), casualty reception, and patient flow.
- Referral systems, evacuation procedures, emergency medical services, and coordination of critical care.
- Emergency procurement, inventory and stockpile management, and supply chain continuity.
- Oxygen and blood management, pharmaceutical logistics, biomedical equipment readiness, and transportation management.
- Volunteer and workforce management; financial management during emergencies.

Unit IV: Communication, Continuity, Recovery and Resilience

- Risk and crisis communication, media management, and emergency communication systems.
- Health information management and emergency documentation.
- Biological emergencies, pandemic preparedness, infection prevention and control, biosafety, and occupational health.
- Emergency vaccination logistics.
- Business Continuity Planning (BCP), continuity of hospital operations, and restoration of essential services.
- Recovery of healthcare infrastructure, utility restoration, financial recovery, insurance considerations, and human resource continuity.
- Post-disaster healthcare recovery, rehabilitation services, psychosocial support, community recovery, and health system strengthening.
- Disaster simulations and quality improvement strategies for hospital emergency management.

Suggested Readings

- Koenig, K. L., & Schultz, C. H. — source document lists the authors and Cambridge University Press, but does not provide the book title.
- Haddow, G. D., Bullock, J., & Coppola, D. P. — source document lists the authors and Elsevier, but does not provide the book title.

Hospital Planning, Architecture, and Facility Management

Category: Major Core (MC) L-T-P: 3-1-0 Credits: 4

Course Objectives

- Explain the principles and stages of hospital planning and feasibility assessment.
- Apply architectural and spatial planning principles to hospital design and workflow.
- Describe engineering services and infrastructure requirements for hospital operations.
- Evaluate facility maintenance, biomedical equipment management, and operational safety.

Course Outcomes

On completion of this course, students will be able to:

- CO1: Explain foundational concepts, stages, and feasibility assessments required for planning new and upgraded healthcare facilities.
- CO2: Examine architectural design principles, space allocation, functional zoning, and workflow optimization in hospital environments.
- CO3: Apply engineering service principles and technical infrastructure requirements essential for efficient hospital operations.
- CO4: Evaluate healthcare facility management practices, biomedical equipment lifecycle systems, safety codes, and maintenance protocols.

Graduate Attributes Addressed

- GA1: Disciplinary & Interdisciplinary Healthcare Management Knowledge
- GA2: Critical Thinking & Problem Solving
- GA8: Quality, Patient Safety & Social Responsibility
- GA9: Strategic Management, Innovation & Entrepreneurship

Unit I: Foundations of Hospital Planning and Feasibility Analysis

- Concepts, principles, and phases of hospital planning.
- Health service demand estimation.
- Site selection criteria and environmental impact assessment.
- Project planning, commissioning, and statutory approvals.

Unit II: Healthcare Architecture and Spatial Planning

- Architectural design principles and facility layouts.
- Space allocation guidelines and functional zoning.
- Patient, staff, and material traffic-flow design.
- Physical integration of clinical, administrative, and support zones.

Unit III: Hospital Engineering Services and Utilities Infrastructure

- Planning and operational requirements for core engineering services.
- Environmental controls, including HVAC, lighting, and acoustics.
- Medical gas systems.
- Water supply, power backup, and sanitation infrastructure.

Unit IV: Facility Management, Medical Equipment and Operational Safety

- Principles of healthcare facility administration and maintenance management.
- Medical equipment planning, procurement, and lifecycle maintenance.
- Disaster preparedness, fire safety, and hazard control.
- Green facility standards.

Suggested Readings

- Kunders, G. D. Hospitals: Planning, Design and Management. Tata McGraw-Hill.
- Sakharkar, B. M. Principles of Hospital Administration and Planning. Jaypee Brothers.

Healthcare and Human Resource Management in Hospitals

Category: Major Core (MC) | L-T-P: 3-1-0 | Credits: 4

Course Objectives

- Explain the principles, organization, governance, and functioning of healthcare organizations and hospital systems.
- Apply concepts of hospital operations, human resource management, quality improvement, and patient safety to improve healthcare service delivery.
- Evaluate financial, material, information, and infrastructure management systems used for efficient hospital administration.
- Analyse legal, ethical, accreditation, and regulatory requirements governing healthcare organizations.
- Integrate managerial principles to develop strategies for effective, patient-centred, and quality-driven hospital management.

Course Outcomes: On completion, students will be able to:

- CO1: Explain the principles, organization, governance, and functioning of healthcare organizations and hospital systems.
- CO2: Apply concepts of hospital operations, human resource management, quality improvement, and patient safety to improve healthcare service delivery.
- CO3: Evaluate financial, material, information, and infrastructure management systems used for efficient hospital administration.
- CO4: Analyse legal, ethical, accreditation, and regulatory requirements governing healthcare organizations.
- CO5: Integrate managerial principles to design strategies for effective, patient-centred, and quality-driven hospital management.

Graduate Attributes Addressed:

- GA1: Disciplinary & Interdisciplinary Healthcare Management Knowledge
- GA2: Critical Thinking & Problem Solving
- GA3: Evidence-Based Decision-Making & Analytical Skills
- GA4: Digital Literacy & Healthcare Information Management
- GA5: Effective Communication & Stakeholder Engagement
- GA6: Leadership & Organizational Management
- GA7: Ethical Reasoning & Professional Integrity
- GA8: Quality Improvement & Patient Safety
- GA9: Strategic Management, Innovation & Entrepreneurship

Unit I: Introduction to Healthcare Management and Hospital Systems

- Evolution of hospitals and healthcare management
- Healthcare delivery systems; public and private healthcare sectors; levels of healthcare

- Types of hospitals and healthcare organizations
- Principles, functions, and scope of hospital management
- Roles and responsibilities of hospital administrators and managers
- Hospital departments, organizational structures, and interdepartmental coordination
- Hospital governance, leadership, decision-making, and organizational culture
- Vision, mission, strategic planning, hospital committees, stakeholder management, and change management

Unit II: Human Resource Management and Hospital Operations

- Human resource planning, recruitment, selection, and workforce deployment in hospitals
- Job analysis, job descriptions, competency mapping, and performance appraisal
- Staff motivation, employee welfare, training and development, conflict management, and team building
- Labour laws, professional conduct, and human resource policies in healthcare organizations
- Management of OPD, IPD, emergency services, intensive care units, and operation theatres
- Management of diagnostic services, pharmacy, blood bank, medical records, and discharge planning
- Patient flow, appointment systems, bed management, waiting-time reduction, and coordination of clinical and support services
- Hospital operational planning, resource utilization, and service delivery efficiency

Unit III: Quality Management, Patient Safety, and Healthcare Information Systems

- Concepts of healthcare quality, quality assurance, Total Quality Management, and Continuous Quality Improvement
- Clinical governance, patient safety culture, incident reporting, root cause analysis, clinical audit, and risk management
- Infection prevention and control, quality indicators, and patient safety improvement strategies
- Hospital Information Systems (HIS), Electronic Health Records (EHR), electronic medical records, and health informatics
- Telemedicine, clinical decision support systems, and digital health initiatives
- Healthcare data management, information security, privacy, confidentiality, and access control
- Application of healthcare data and performance indicators in hospital decision-making

Unit IV: Hospital Finance, Resource Management, Legal Framework, and Accreditation

- Healthcare financing, hospital budgeting, costing methods, revenue cycle management, and financial reporting
- Health insurance, third-party administration, resource allocation, and financial performance indicators
- Procurement, inventory control, vendor management, logistics, and hospital supply chain optimization

- Biomedical equipment planning, maintenance, calibration, asset management, and biomedical waste management
- Hospital laws, patient rights and responsibilities, informed consent, medical negligence, and professional ethics
- Clinical Establishments Act, consumer protection, medico-legal documentation, biomedical waste regulations, and statutory compliance
- NABH standards, Joint Commission International (JCI), accreditation processes, and quality documentation
- Key performance indicators, Balanced Scorecard, benchmarking, and hospital performance evaluation
- Hospital planning, infrastructure, engineering services, facility maintenance, fire safety, utilities management, and environmental sustainability
- Patient-centred care, patient satisfaction, grievance redressal, healthcare marketing, public relations, branding, and community engagement

Suggested Readings

- Sakharkar, B. M. *Principles of Hospital Administration and Planning*. Jaypee Brothers Medical Publishers.
- Agarwal, A. K. *Essentials of Hospital Administration and Management*. CBS Publishers & Distributors.
- Joshi, M. S., Ransom, E. R., Nash, D. B., & Ransom, S. B. *The Healthcare Quality Book: Vision, Strategy, and Tools*. Jossey-Bass.
- McLaughlin, C. P., & Kaluzny, A. D. *Continuous Quality Improvement in Health Care: Theory, Implementation, and Applications*. Jones & Bartlett Learning.

Legal Framework in Healthcare and Medical Ethics

Category: Major Core (MC) L-T-P: 3-1-0 Credits: 4

Course Objectives

- Explain legal principles, statutory requirements, and regulatory structures governing healthcare organizations.
- Examine medical liability, negligence, duty of care, and legal dispute resolution.
- Apply patient rights, informed consent, privacy, and medico-legal compliance requirements.
- Use bioethical principles and professional codes to support ethical healthcare administration.

Course Outcomes

On completion of this course, students will be able to:

- CO1: Explain fundamental legal principles, statutory requirements, and regulatory structures governing healthcare organizations.
- CO2: Examine medical liability, legal duty of care, negligence concepts, and judicial dispute resolution processes in healthcare.
- CO3: Analyze patient rights, informed consent requirements, health data privacy laws, and medico-legal compliance protocols.
- CO4: Apply bioethical theories, professional codes of conduct, and ethical decision-making frameworks to healthcare administrative practices.

Graduate Attributes Addressed

- GA1: Disciplinary & Interdisciplinary Healthcare Management Knowledge
- GA2: Critical Thinking & Problem Solving
- GA5: Effective Communication & Stakeholder Engagement
- GA7: Ethical Reasoning & Professional Integrity
- GA8: Quality, Patient Safety & Social Responsibility

Unit I: Foundations of Healthcare Law and Statutory Regulations

- Principles of jurisprudence and healthcare law.
- Statutory requirements for hospital establishment and licensing.
- Statutory compliance in facility management.
- Labour laws and environmental safety regulations.

Unit II: Medical Liability, Negligence and Risk Governance

- Concepts of medical negligence and professional liability.
- Legal standards of care and duty of care.
- Consumer rights and grievance redressal mechanisms.
- Legal risk management and court procedures in medical disputes.

Unit III: Patient Rights, Medico-Legal Issues and Statutory Compliance

- Patient rights, autonomy, and informed consent principles.
- Confidentiality, health record documentation, and data privacy legislation.
- Medico-legal protocols and statutory reporting.
- Legal obligations in emergency care.

Unit IV: Bioethics, Professional Codes and Ethical Governance

- Principles of bioethics and ethical decision-making frameworks.
- Professional codes of conduct and administrative ethics.
- Institutional ethics committees and ethics governance.
- Ethical dilemmas in clinical care and end-of-life decision-making.

Suggested Readings

- Pozgar, G. D. Legal and Ethical Aspects of Health Care Administration. Jones & Bartlett Learning.
- Vaughn, L. Bioethics: Principles, Issues, and Cases. Oxford University Press.

Strategic Management and Leadership in Healthcare

Category: Ability Enhancement Courses (AEC) L-T-P: 3-1-0 Credits: 4

Course Objectives

- Explain strategic management principles, theories, and frameworks relevant to healthcare organizations.
- Analyse healthcare environments and apply strategic tools to organizational decision-making.
- Evaluate leadership theories, governance structures, and organizational culture.
- Apply strategic planning, change management, innovation, and quality improvement principles.

Course Outcomes

On completion of this course, students will be able to:

- CO1: Explain the principles, theories, and strategic frameworks applicable to healthcare organizations.
- CO2: Analyze internal and external healthcare environments using strategic management tools for organizational decision-making.
- CO3: Evaluate leadership theories, governance structures, and organizational culture in healthcare systems.
- CO4: Apply strategic planning, change management, innovation, and quality improvement principles to healthcare organizations.
- CO5: Develop evidence-informed strategic solutions for improving organizational performance, healthcare delivery, and health system sustainability.

Graduate Attributes Addressed

- GA1: Disciplinary & Interdisciplinary Healthcare Management Knowledge
- GA2: Critical Thinking & Problem Solving
- GA5: Effective Communication & Stakeholder Engagement
- GA6: Teamwork & Collaborative Leadership
- GA7: Ethical Reasoning & Professional Integrity
- GA8: Quality, Patient Safety & Social Responsibility
- GA9: Strategic Management, Innovation & Entrepreneurship
- GA10: Lifelong Learning & Professional Growth

Unit I: Foundations of Strategic Management and Environmental Analysis

- Concept and evolution of strategic management.
- Characteristics of healthcare organizations and healthcare as a complex adaptive system.
- Levels of strategy, strategic thinking, and strategic challenges in healthcare.
- Public and private healthcare organizations.
- Internal and external environmental analysis.
- PESTLE analysis, Porter's Five Forces, stakeholder analysis, and SWOT analysis.
- Organizational capabilities, strategic intelligence, and competitive advantage in healthcare.

Unit II: Strategic Planning, Decision-Making and Leadership

- Mission, vision, values, strategic objectives, and the strategic planning process.
- Strategy formulation and implementation.
- Balanced Scorecard, strategic performance indicators, and evidence-informed decision-making.
- Leadership versus management; leadership theories.
- Transformational, transactional, servant, adaptive, and authentic leadership.
- Emotional intelligence, leadership competencies, and ethical leadership.

Unit III: Governance, Organizational Culture and Change

- Corporate and clinical governance, accountability, and organizational culture.
- Organizational behaviour, multidisciplinary teams, communication, conflict management, and negotiation.
- Professional ethics in healthcare organizations.
- Workforce planning, talent management, competency-based human resource management, and employee motivation.

- Performance management, succession planning, employee engagement, and strategic workforce development.
- Drivers of change, Lewin's Change Model, and Kotter's Eight-Step Model.
- Resistance to change, organizational learning, innovation management, and digital transformation in healthcare.

Unit IV: Quality, Sustainability and Health Systems Leadership

- Strategic quality management, patient safety, and quality improvement.
- Accreditation, including NABH and JCI; risk management, clinical governance, benchmarking, and key performance indicators.
- Strategic resource allocation, organizational sustainability, and value-based healthcare.
- Public-private partnerships, strategic partnerships, healthcare competitiveness, and resource optimization.
- Leadership during public health emergencies, disasters, and pandemics.
- Crisis communication, resilience, health system strengthening, policy leadership, and intersectoral coordination.

Suggested Readings

- Ginter, P. M., Duncan, W. J., & Swayne, L. E. Strategic Management of Health Care Organizations. Wiley.
- McAlearney, A. S., & Kovner, A. Healthcare Management. Health Administration Press.

Semester IV

Health Insurance and Managed Care

Category: Minor Stream (MS) L-T-P: 2-1-0 Credits: 3

Course Objectives

- Explain risk, health insurance principles, and regulatory frameworks governing health financing.
- Analyse managed care structures, provider payment mechanisms, and cost-containment strategies.
- Examine insurance operations, claims processing, Third-Party Administrator (TPA) functions, and hospital revenue cycle integration.
- Evaluate insurance product design, risk assessment, and regulatory governance.

Course Outcomes

On completion of this course, students will be able to:

- CO1: Explain concepts of risk, core principles of health insurance, and regulatory frameworks governing health financing systems.
- CO2: Analyze managed care organizational structures, provider payment mechanisms, and cost-containment strategies in health delivery.
- CO3: Evaluate insurance operational workflows, including underwriting, claims administration, TPA functions, and hospital revenue cycle integration.
- CO4: Assess product design principles, risk evaluation methods, solvency requirements, and regulatory governance in health insurance.

Graduate Attributes Addressed

- GA1: Disciplinary & Interdisciplinary Healthcare Management Knowledge
- GA2: Critical Thinking & Problem Solving
- GA4: Research Aptitude & Evidence-Based Practice
- GA7: Ethical Reasoning & Professional Integrity
- GA9: Strategic Management, Innovation & Entrepreneurship

Unit I: Risk Principles, Insurance Foundations and Regulations

- Concepts and management of risk in healthcare.
- Foundational principles of life and non-life insurance.
- Regulatory frameworks, including IRDA guidelines.
- Solvency margins and ombudsman grievance mechanisms.

Unit II: Managed Care Frameworks and Provider Compensation

- Managed care concepts and organizational structures.
- Healthcare provider reimbursement mechanisms.
- Utilization management and care coordination.
- Cost-containment frameworks in healthcare delivery.

Unit III: Insurance Operations, TPA Functions and Claims Processing

- Operational management in insurance, including underwriting and claims processing.
- Policy servicing and the role of Third-Party Administrators.
- Integration of TPAs with healthcare facilities.
- Pre-authorization, hospital revenue cycle integration, and denial management.

Unit IV: Product Design, Risk Evaluation and Governance

- Principles of health insurance product design and development.

- Risk evaluation and pricing mechanisms.
- Regulatory financial reporting and ethical compliance.
- Emerging market trends in health coverage.

Suggested Readings

- Kongstvedt, P. R. Essentials of Managed Health Care. Jones & Bartlett Learning.
- Sakharkar, B. M. An Introduction to Health Insurance. Jaypee Brothers.

Data-Driven Decision Making and Lean Six Sigma

Category: Multidisciplinary (MD) L-T-P: 2-2-0 Credits: 4

Course Objectives

- Explain data-driven decision-making, quantitative management, and quality methodologies in healthcare.
- Apply analytics to evaluate operational performance and strategic health outcomes.
- Use Lean principles to analyse hospital workflows and identify operational waste.
- Apply Six Sigma and DMAIC tools to support process improvement and organizational performance governance.

Course Outcomes

On completion of this course, students will be able to:

- CO1: Explain fundamental principles of data-driven decision making, quantitative management, and quality methodologies in healthcare.
- CO2: Apply descriptive and predictive analytics models to evaluate operational performance and strategic health outcomes.
- CO3: Analyze Lean thinking methodologies, value streams, and waste elimination frameworks to optimize hospital workflows.
- CO4: Evaluate Six Sigma principles and the DMAIC framework to reduce process variation and improve healthcare delivery.
- CO5: Integrate Lean Six Sigma tools with data analytics dashboards for organizational performance governance.

Graduate Attributes Addressed

- GA1: Disciplinary & Interdisciplinary Healthcare Management Knowledge
- GA2: Critical Thinking & Problem Solving
- GA3: Digital & Technological Literacy
- GA4: Research Aptitude & Evidence-Based Practice
- GA8: Quality, Patient Safety & Social Responsibility
- GA9: Strategic Management, Innovation & Entrepreneurship

Unit I: Foundations of Data-Driven Healthcare Management

- Role of data in executive decision-making.
- Health data types, governance, and quality assurance.
- Quantitative decision frameworks.
- Data management and reporting architectures in hospital administration.

Unit II: Healthcare Analytics and Performance Modelling

- Descriptive and inferential data analytics methods.
- Operational performance metrics and key performance indicators.
- Data visualization and executive dashboard design.

- Predictive analytics in health operational planning.

Unit III: Lean Principles and Hospital Process Optimization

- Philosophy and core concepts of Lean in healthcare.
- Identification and classification of operational waste.
- Value stream analysis and process mapping.
- Workplace organization and workflow streamlining.

Unit IV: Six Sigma Methodology and Continuous Improvement

- Six Sigma principles and the DMAIC methodology.
- Statistical process control and variation analysis.
- Root cause analysis methods.
- Implementation strategies and change management.
- Lean Six Sigma project governance and integration with data analytics dashboards.

Suggested Readings

- Arthur, J. Lean Six Sigma for Hospitals. McGraw-Hill Education.
- Strome, T. L. Healthcare Analytics for Quality and Performance Improvement. Wiley.

Master's Dissertation / Capstone Project

Category: Major Core (MC) | L-T-P: 0-0-26 | **Credits:** 13

Course Objectives

- Enable students to apply theoretical knowledge and managerial skills acquired during the MHA program to a real-world healthcare administration problem.
- Foster independent research capabilities, including literature review, study design, and data analysis within a clinical or administrative setting.
- Develop critical thinking and problem-solving skills to propose actionable, evidence-based solutions for hospital operations or healthcare delivery.
- Enhance professional communication skills through the drafting of a comprehensive dissertation report and an oral defense.

Course Outcomes: On completion, students will be able to:

- CO1: Formulate a relevant research question and develop a comprehensive project proposal in the field of hospital administration.
- CO2: Design and execute an appropriate research methodology, adhering to ethical standards for data collection in healthcare settings.
- CO3: Analyze qualitative or quantitative data to generate meaningful insights, identifying operational bottlenecks and proposing actionable recommendations for healthcare institutions.
- CO4: Defend the research findings effectively through a formally formatted dissertation report and a comprehensive viva voce presentation.

Graduate Attributes Addressed: GA1 (Disciplinary & Interdisciplinary Knowledge), GA2 (Critical Thinking & Problem Solving), GA5 (Communication & Teamwork), GA10 (Lifelong Learning & Self-Directed Growth)

Unit I: Project Inception and Proposal Development

- Identification of a research problem, quality improvement initiative, or capstone project within a hospital or healthcare organization.
- Conducting a comprehensive literature review to establish the rationale, context, and research gap.
- Formulation of research objectives, hypotheses (if applicable), and submission of the formal project synopsis/proposal.

Unit II: Research Methodology and Ethical Clearance

- Selection of appropriate study design (e.g., observational, cross-sectional, case study, or operational intervention).
- Development and validation of data collection tools (questionnaires, interview schedules, audit checklists).
- Obtaining Institutional Ethics Committee (IEC) clearance and securing formal permission from the host hospital or facility.

Unit III: Data Collection, Analysis, and Interpretation

- Execution of the project: systematic data collection through field observations, hospital records, patient feedback, or stakeholder interviews.
- Application of appropriate statistical tools and software (e.g., SPSS, Excel) for quantitative or qualitative data analysis.
- Interpretation of results, correlation with hospital administration principles, and synthesis of key operational findings.

Unit IV: Dissertation Formatting, Submission, and Defense

- Drafting the dissertation report chapters: Introduction, Literature Review, Methodology, Results, Discussion, Recommendations, and Conclusion.
- Ensuring adherence to academic integrity, proper referencing/citation styles (e.g., Vancouver, APA), and mandated plagiarism checks.
- Final submission of the approved dissertation and professional presentation/defense of the project during the final Viva Voce examination.

Suggested Readings & Guidelines

- Kothari, C.R. Research Methodology: Methods and Techniques. New Age International Publishers.
- Creswell, J.W. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. SAGE Publications.
- Relevant institutional guidelines and manuals for MHA Master's Dissertations, Capstone Projects, and formatting standards.