REGULATIONS 2026

Syllabus for Courses affiliated to the

Kerala University of Health Sciences

Thrissur-680596

MASTER OF HOSPITAL ADMINISTRATION (MHA)

COURSECODE: 287

(2026-27Admission Year onwards)

2. COURSE CONTENT

2.1 Title of course: Master of Hospital Administration (MHA)

Nature and Scope of the course

The healthcare sector is one of the most rapidly growing industries in our nation. To ensure that healthcare is accessible to everyone and that patient care delivery meets high standards, the government has placed a great deal of attention on the healthcare sector nowadays. In recent years the contribution from private healthcare providers has increased industry competition. People now have more options for searching for better healthcare facilities because of the growth in healthcare delivery facilities. In this situation, healthcare delivery providers are in high demand. The creation of full-time administrators or healthcare managers is necessary to improve the management of healthcare facilities with an emphasis on innovation in healthcare and cost/quality concerns.

The hospital administrators play a critical role in financial management and strategic planning. They oversee budgeting, financial planning, and revenue cycle management, ensuring the hospital's financial sustainability. Administrators also lead quality improvement initiatives, enhance patient care, and implement best practices to improve patient outcomes and satisfaction. Their leadership and strategic direction enable hospitals to adapt to the ever-evolving healthcare landscape, ensuring long-term success and the ability to meet future challenges.

Qualified hospital administration professionals are essential in the hospital industry to ensure efficient operations and regulatory compliance. Hospitals are complex entities with numerous departments, services, and staff members that require careful coordination and management. Skilled administrators streamline processes, optimize resource allocation, and ensure that the hospital meets legal and ethical standards. Their knowledge and expertise in navigating regulatory requirements is crucial for maintaining compliance, avoiding legal issues, and upholding the hospital's reputation for quality care.

The hospital administration course is crucial to the hospital industry as it addresses the increasing complexity and demands of healthcare management. Hospitals and healthcare facilities require skilled administrators who can navigate regulatory requirements, manage finances, ensure patient safety, and improve overall operational efficiency.

The scope of the hospital administration course extends to various career opportunities such as hospital administrators, healthcare consultants, health information managers, and public health administrators. With the growing demand for efficient healthcare delivery systems and the expansion of healthcare services, professionals in this field are highly sought after. The course emphasizes a global perspective, preparing students for roles in international organizations and global health initiatives, and encourages contributions to healthcare research and policy development.

The hospital administration course is designed to equip students with a comprehensive understanding of managing healthcare organizations. The curriculum aims to develop efficient, intellectual, ethical, and innovative healthcare administrators who can make significant contributions to the advancement of the healthcare industry. It covers a range of interdisciplinary topics. The course aims to develop critical skills in leadership, problem-solving, communication, and strategic planning, specifically tailored to the healthcare environment. Through a blend of theoretical knowledge and practical application, students gain insights into the complexities of healthcare management, ensuring they are well-prepared to handle the dynamic nature of the healthcare industry.

As part of their curriculum, MHA students are encouraged to conduct original research on pertinent topics in the field of hospital and healthcare administration. The MHA Programme also aims to develop their research capacity and provides support in publishing manuscripts and presenting research findings at local and national conferences and seminars.

The MHA program is a two-year program comprising four semesters that is credit and semester-based. It is choice-based only for elective courses. Competency-based curriculum is the main approach. The courses are categorized into foundational courses, core courses and elective courses.

2.2 Course Objectives

PROGRAMME EDUCATIONAL OBJECTIVES (PEO):
Following are the PEOs for the MHA

PEO.1.	The Students of the Master of Hospital Administration (MHA) program exhibit extensive knowledge and requisite skills in healthcare management and administration, enabling them to manage the day-to-day operations of healthcare organisations and contribute to the growth of those organisations
PEO 2	Hospital administration students will gain and develop strategic thinking skills and leadership qualities throughout their education to develop and implement strategies that work for healthcare organisations and ensure their long-term growth and viability.
PEO 3	Students learn to navigate the ethical and legal aspects of healthcare system, manage human resources, and apply research and analytical skills to improve decision-making
PEO 4	The student will be capable of adapting to various healthcare contexts and participating in global healthcare efforts because they will possess a thorough awareness of national and international systems, the cultural diversity of the healthcare sector, and worldwide healthcare trends.
PEO5	Students become quality-driven managers who are truly motivated to meet the requirements of patients and the community while also being extremely cost-conscious and committed to maintaining service costs affordable for consumers.

PROGRAMME OUTCOMES (PO)

The expected programme outcome after successful completion of the two-year MHA programme are:-

PO 1	The programme prepares students with the leadership abilities to oversee and guide individuals and groups in healthcare settings.
PO2	Students will learn to manage human resources in healthcare sectors, including recruitment, retention, training and development for employees in rapidly changing settings.
PO3	Students will be able to apply the necessary skills to manage and lead healthcare institutions and develop well-rounded professionals capable of addressing the complex challenges faced by modern healthcare.
PO4	The students will be able to manage budgets, analyze financial statements, and understand financial management principles in healthcare and hospital settings to operate within their financial constraints while delivering high-quality care.
PO5	Students will understand and develop knowledge in implementing quality improvement methodologies, lead efforts to reduce medical errors, improve patient satisfaction, and achieve better health outcomes.
PO6	Students will be able to analyse and comprehend healthcare policies, regulations, and laws that affect healthcare organisations
PO7	Students will be able to develop marketing strategies for healthcare marketing and implement strategies for the sustainable development of healthcare organisations.
PO8	Students will learn the latest advancements in healthcare technology and information systems. Students develop skills in how to leverage technology to improve operational efficiency, enhance patient care, and support data-driven decision-making.
PO9	Students will be able to practice professional ethics, obligations, and standards of the healthcare sector's practice by putting ethical concepts into effect.
PO10	Students will learn to lead healthcare institutions, drive improvements in patient care, and contribute to the overall efficiency and effectiveness of the healthcare system.

2.3 Medium of instruction: Medium of instruction shall be in English

2.4 Course outline

Master of Hospital Administration programme			
First semester **Core Course**	**Second semester** **Core Course**	**Third semester** **Core Course**	**Fourth semester** **Core Course**
1. Principles & Practice of Management in Health Care 2. Public health administration and epidemiology 3. Research methodology & Biostatistics 4. Medical terminology and Basics of anatomy and physiology	1. Hospital planning and design of clinical services 2. Accounting for Hospitals 3. Human Resource Management & Organisational Behaviour 4. Hospital Equipment and Materials Management	1. Healthcare Marketing Management and Information System 2. Operations research 3. Health Economics & Finance 4. Hospital supportive services and medical documentation	1. Ethical and Legal aspects of healthcare 2. Quality management & Patient safety 3. Hospital Innovations and Strategic Management 4. Research Project 5. Viva Voce
Elective Courses 1. Human Values & Ethics 2. Health Psychology and Counseling	**Elective Courses** 1. Managerial Skill & Corporate Etiquette 2. Nutrition and dietetics	**Elective Courses** 1. Healthcare Entrepreneurship 2. Medical Tourism	**Elective Courses** 1. Big data analytics 2. Pharmaceutical Management
Foundation course Hospital Environment	**Foundation course** Business communication	**Foundation course** Healthcare Insurance	**Foundation course** Hospital Enterprise Resource Planning
Ability Enhancement Course Personality Development	**Ability Enhancement Course** First aid & BCLS	**Ability Enhancement Course** Health technology assessment	**Ability Enhancement Course** Scientific Writing skill
Professional Competency Course Time management	**Professional Competency Course** Problem-solving skills	**Professional Competency Course** Leadership skills	**Professional Competency Course** Process of court cases & and legal proceedings
Audited Course	**Audited Course**	**Audited Course**	**Audited Course**

Teaching Learning Methods

To develop efficient administrators the curriculum is framed with theory classes and also equally combined with practical and department postings.

1. Assignment
2. Seminar Presentations
3. Group Discussions
4. Case Studies
5. Role play
6. Self-assessment
7. Workshops
8. Fieldwork & Camps
9. Department postings

Elective Courses

Elective Courses are mandatory courses and are to be offered by the institution. The elective shall be chosen from a pool of papers by the student; the papers may be discipline-centric or those that add generic proficiency to the students. They are supportive of the discipline of study / expand the scope of the subject / enable exposure to some other discipline/domain or enhance skill/proficiency.

The basic minimum content of the course is included with the syllabus and the institution can add additional content to the same, but cannot remove the minimum suggested. The institution has to conduct an internal examination for the courses and submit the marks by the Principal/ HOD to the university. A pass in the course is a requirement to be eligible to register for the particular university semester examination.

1st Semester	2nd Semester	3rd Semester	4the Semester
Elective Courses 1. Human Values & Ethics 2. Health Psychology and Counseling	**Elective Courses** 1. Managerial Skill & Corporate Etiquette **2.** Nutrition and dietetics	**Elective Courses** 1. Healthcare Entrepreneurship 2. Medical Tourism	**Elective Courses** 1. Big data analytics 2. Pharmaceutical Management

Foundation Course

The foundation course is based on content that leads to knowledge enhancement and is mandatory for the course. Completion of the foundation course is a requirement to be eligible to register for the university semester examination.

1st Semester	**2nd Semester**	**3rd semester**	**4th Semester**
Hospital Environment	Business communication	Healthcare insurance	Hospital Enterprise Resource Planning

Ability Enhancement Course

Ability Enhancement Courses (AEC) is a compulsory course and is mandatory for the course but the grades will not be counted for the computation of SGPA or CGPA. This course is to enhance the ability and skill in the concerned core area. AEC is a practice-oriented training to be offered by the institution. On completion of the course, the principal/ HOD shall issue a certificate in this regard and a copy of the same shall be submitted to the university. Completion of the AEC is a requirement to be eligible to register for the university semester examination.

1st Semester	**2nd Semester**	**3rd Semester**	**4th Semester**
Personality Development	First aid & BCLS	Health technology assessment	Scientific writing skill

Professional Competency Course

Professional Competency Course (PCC) is a compulsory course and is mandatory for the course, but its grade will not be counted for the computation of SGPA or CGPA. This course is for professional competency and exposure in the core area.

1st Semester	**2nd Semester**	**3rd Semester**	**4th Semester**
Time management	Problem-solving skills	Leadership skill	Process of Court cases & legal proceedings

Audited Course:

AC is a course in which the students can register without earning credits (zero credit course). Credit courses can be registered as zero credit courses if a student desires to.

Note: Modules of Elective/foundation/ability enhancement/professional competency courses shall be certified by the institution or an external agency

Semester	Course code	Course/ Subject	Theory credit	Theory contacts hours	Skill lab credits	Skill lab contact hours	Clinical credits	Clinical Contact hours	Total Credit	Total hours
First	PPM1001	Principles & Practice of Management in Health Care	4	60	1	30			5	90
	PHE-1002	Public health administration and epidemiology	4	60	1	30			5	90
	RMB-1003	Research Methodology & Biostatistics	4	60	1	30			5	90
	MAP-1004	Medical Terminology and Basics of anatomy and physiology	4	60	1	30			5	90
	ELC-1-1018	Elective courses	2	40					2	40
	FOC -1-1019	Foundation course	2	40					2	40
		Ability enhancement course	-	20					-	20
		Professional Competency	-	20					-	20
	SKD -1 1020	Skill development	-	-	-	-	-	-	-	-
	HTF-1-1030	Hospital Training & Field Visit	-	-	-	-	6	240	6	240
TOTAL			20	360	4	120	6	240	20+4+6 =30	360+120 +240 =720
Second	HPC-1005	Hospital planning and design of clinical services	4	60	1	30			5	90
	AFH-1006	Accounting for Hospitals	4	60	1	30			5	90

	HOB-1007	Human Resource Management &Organisational Behaviour	4	60	1	30			5	90
	MEM-1008	Medical equipment and materials management	4	60	1	30			5	90
	ELC-2-1018	Elective courses	2	40					2	40
	FOC -2-1019	Foundation course	2	40					2	40
		Ability enhancement course	-	20						20
		Professional Competency	-	20						20
	SKD 2-1020	Skill development in Hospital Administration	-	-			-	-	-	-
	HTF 2-1030	Hospital Training & Field Visit					6	240	6	240
	TOTAL		20	360	4	120	6	240	20+4+6=30	360+120+240=720
Third	HMI-1009	Healthcare Marketing Management and Information System	4	60	1	30			5	90
	OPR-1010	Operations research	4	60	1	30			5	90
	HEF-1011	Health Economics & Finance	4	60	1	30			5	90
	HSM-1012	Hospital supportive services and medical documentation	4	60	1	30			5	90
	ELC-3-1018	Elective courses	2	40					2	40
	FOC -3-1019	Foundation course	2	40					2	40
		Ability enhancement course	-	20						20

		Professional Competency	-	20						20
	SKD -3 1020	Skill development in Hospital Administration	-	-			-	-	-	-
	HTF-3 1030	Hospital Training & Field Visit					6	240	6	240
	TOTAL		20	360	4	120	6	240	20+4+6=30	360+120+240=720
Fourth	ELA – 1013	Ethical and Legal aspects of healthcare	4	60	1	30			5	90
	QMP-1014	Quality Management and patient safety	4	60	1	30			5	90
	ISM-1015	Hospital Innovations and Strategic Management	4	60	1	30			5	90
	RPW - 1016	Research Project					7	280	5	280
	VIV - 1017	Viva Voce								
	ELC-4-1018	Elective courses	2	40					2	40
	FOC -4-1019	Foundation course	2	40					2	40
		Ability enhancement course	-	20						20
		Professional Competency	-	20						20
	SKD-4 1020	Skill development in Hospital Administration	-	-			-	-		-
	HTF-4-1030	Hospital Training & Field Visit					6	240		240
	TOTAL		16	300	3	90	13	240	16+3+13=32	300+90+240+280=910

Teaching hours

The MHA program follows the credit system, and it involves a total of 3070 hrs. (122 credits). Each course is assigned a certain number of credit hours depending on lecture, practical and clinical hours. Each credit hour is equivalent to 15 hours of lecture, 30 hours of practical and 40 hrs. of Clinical

Calculation of credit hours:

One Semester = 20 weeks x 36 hrs per week = 720 hrs.

Theory
1 credit theory = 15 Hours
@3 hours per week per semester (3 Hrs. X 20 weeks) = 60 hours (4 credits)
Practical
1 credit practical = 30 hrs.
@ 2 Hrs. per week per semester (2Hrs x 20 Weeks= 40 Hrs (2 credit)
Clinical
1 Credit clinical = 40 hrs.
@ 6 Hrs per week per Semester (6 Hrs x 20 Weeks =120 Hrs) 3 credit
Elective Course
1 Credit elective course 20 hrs.
@ 2 Hr per week per Semester (2 Hrs x 20 weeks= 40 hrs) 2 credit

4 Core subjects per semester for I, II & III semester, + 3 subjects and Research Project for IV semester

Credit Hours by Semester (theory, Practical & Clinical)

Semester I (30 Credits) + Semester II (30 Credits) + Semester III (30 Credits) + Semester IV (32 Credits) = 122 Credits.

Total 720 + 720 + 720 +910= 3070 hours (for four semesters)

2.5 Duration

The duration of the **MASTER OF HOSPITAL ADMINISTRATION (MHA)** shall be 2 years (4 Semesters) on a full-time basis. No candidate shall join any other course of study or appear for any other examination in this university or any other university during the period of study.

One Semester plan for the first to fourth semester
Total Weeks per Semester : 26 weeks per semester
Number of Weeks / Semester for instruction: 20 weeks X 36 Hours per week = 720 hours

Minimum Number of Working Days : 120 working days per Semester
@ 6 days per week. (6 × 20 weeks = 120 days)
Vacation : 1 weeks
Holidays : 1 week — 4 weeks
Examination & Preparatory Holidays : 2 weeks

2.6 Syllabus

Sem	Theory		Practical		Clinical		Total		Electives/ foundation/AEC/ PCC		Research Project	
	Hours	Credit	Hours	Credit	Hours	Credit	Hours	Credit	Hours	Credit	Hours	Credit
I	240	16	120	4	240	6	600	26	120	4	-	-
II	240	16	120	4	240	6	600	26	120	4	-	-
III	240	16	120	4	240	6	600	26	120	4	-	-
IV	180	12	90	3	240	6	510	21	120	4	280	7

A. CORE SUBJECTS

FIRST SEMESTER
PAPER -1
PRINCIPLES AND PRACTICES OF MANAGEMENT FOR HOSPITALS

Semester	FIRST SEMESTER
Course Title:	Principles And Practices of Management for Hospitals
Course Code	PPM-1001
Total Hours	90 Hours
Theory	60 Hours
Practice	30 Hours
Assessment Methods	Written, Practice, Oral

COURSE DESCRIPTION:
This module will introduce students to the field of management. It covers the historical emergence of management as a professional field and academic enterprise. Students will be confronted with the core competence areas of management.

COURSE OUTCOME (CO):
On the successful completion of the course, the student will be able to

CO.1. Understand the fundamentals of management while considering concepts for management.
CO.2. Develop skills in designing performance measurement systems to track and evaluate organizational performance.
CO.3. Analyze the organizational structure of different healthcare organizations
CO.4. Understand the implications of different structures on communication, decision-making, and overall organizational effectiveness
CO 5. Evaluate and assess the leadership styles and applications in healthcare industry

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1			X							X
CO2		X	X		X		X			X
CO3										
CO4			X			X		X		X
CO5	X		X						X	X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	12	**Introduction to Hospital Management** • Definition, Scope, Objectives & Importance • Key Areas: Clinical, Administrative, Financial, Support Services • Organizational Hierarchies in Hospitals • Roles of Key Personnel (Administrator, Medical Superintendent, etc.) • Reporting Relationships and Communication Channels • Financial and Budgetary Challenges	Hospital Management Simulation, Organizational Structure Analysis, Challenges in Management Workshop 6 hours	Written examination Case study Analysis, Simulation performance, Group discussions and presentation	Understand key concepts of hospital management, analyze organizational structures, Address practical management challenges.
2	12	**Management Theories & Evolution** • Growth of Management Concepts • Classical Theories: Scientific, Administrative, Bureaucracy • Neo-Classical Theories: Human Relations, Behavioral Science • Modern Theories: Systems Approach, Contingency Approach, Lean & TQM in Healthcare	Theoretical Concepts Application, Performance Measurement Design, Management Theories Discussion 6 hours	Written examination, Theoretical Application Case Studies, Class Participation and Discussions	Apply historical and theoretical management concepts, Design effective performance measurement systems, Evaluate management theories.

3	12	**Management Functions – Planning** • Importance of Planning in Hospitals • Types: Strategic, Tactical, Operational • Barriers to Planning **Organizing** • Process and Principles of Organizing • Hospital Departmentalization • Delegation and Decentralization	Strategic Planning Exercises, Organizational Design Workshop, Scenario-based Planning 6 hours	Strategic Plan, Presentation, Organizational Design Assignmet, Scenario-based Exercises	Develop and implement strategic plans, Conduct SWOT analyses and create organizational designs, Apply design principles to scenarios.
4	12	**Staffing** • Manpower Planning • Recruitment, Selection, Credentialing • Training & Development (CME, Onboarding, Soft Skills) **Directing** • Principles of Direction in Hospitals • Ensuring Compliance with SOPs • Enhancing Morale and Job Satisfaction **Controlling** • Characteristics and Need • Steps in Control Process • Techniques: Quality Audits, Dashboards, KPIs	Staffing and HR Management Simulation, directing and Controlling Techniques Workshop, Job Satisfaction and Morale Case Study 6hrs	HR management simulation performance, workshop Participation, case study analysis	Implement staffing and Management practices, apply directing and controlling techniques., improve job satisfaction and morale.
5	12	**Decision Making, Time Management & Discipline** • Types and Steps of Decision-Making • Tools and Techniques • Time Management in Hospital Settings • Discipline and Disciplinary Procedures **Innovation in Hospital Management** • Principles and Sources of Innovation • Process and Types: Technological, Service, Process	Decision-Making Simulations, innovation strategy development, creativity and Problem-Solving Workshop 6 hours	Decision-Making Simulation Performance, innovation Strategy Presentation, workshop Participation	Develop and apply decision-making skills, foster innovation and create strategies. Apply problem-solving techniques.

		• New Models in Healthcare Delivery			

Essential readings:

- L M Prasad: Principles and Practice of Management, Sulthan Chand & sons
- T N Chhabra, Principles and practice of Management, Dhanpath rai &Co
- V S P Rao, Management text and cases, Excel Books
- Harold Koontz, Heinz, Weilrich: Management, Tata McGraw Hill
- James A.F Stoner: Management, Pearson
- Tripathi P.C and Reddy P.N.: Principles of Management,7th edition, McGraw Hill
- C.R. Basu: Business Organisation and Management, McGraw Hill Education

FIRST SEMESTER
PAPER -II
PUBLIC HEALTH ADMINISTRATION & EPIDEMIOLOGY

Semester	FIRST SEMESTER
Course Title:	Public Health Administration & Epidemiology
Course Code	PHE-1002
Total Hours	90 Hours
Theory	60 Hours
Practice	30 Hours
Assessment Methods	Written, Practice, Oral

COURSE DESCRIPTION: To apply the tools of epidemiology for the prevention of disease, the promotion of public health and the formation of national policies of social relevance. To use epidemiological research to detect the association between modifiable, hereditary, social and Environmental factors and specific disease prevention

COURSE OUTCOME (CO):
On the successful completion of the course, the student will be able to

CO 1. Understand the concept of health History of public health, Policy, services and Healthcare infrastructure in India.
CO 2. Identify the health programmes, planning and management in India
CO 3. Understanding the functions of international health agencies and national health programmes and various health policies
CO 4. Identify Epidemiological measurement and methods, and epidemiological research
CO 5. Evaluate disease frequency, risk factors and epidemiological study designs

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X					X			X	
CO2		X	X						X	X
CO3	X	X				X	X		X	X
CO4					X			X		
CO5				X	X			X		

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	10	**Concept of Health and Disease** • Health Overview: Definition, dimensions, well-being, determinants, and responsibility for health • Health Indicators and Philosophies of Health Services • Disease Concepts: Causation, natural history, control, prevention, and modes of intervention **Evolution of Modern Medicine in India** • Key recommendations and impact of major health committees: Bhore, Mudaliar, Jain, Chaddha, Kartar Singh, Srivastava, Bajaj, and Rao Committees	Visit nearby PHC and learn the functions and programmes 3 hrs	Written examination	The student should acquire the Concept of disease, disease control, prevention and modes of interventions. The student will gain knowledge of various committee and their functions.
2	05	**International Health**: • WHO (objectives, structure, functions), other UN agencies (UNICEF, UNDP, FAO, ILO), bilateral agencies (SIDA, DANIDA), and NGOs (Red Cross, CARE, ISOP, ICH, CIOMS, EMA, PMDA, MHDP, All India Blind Relief Society, Rockefeller Foundation)	Visit NGO's or any other health agencies. Discussion of their activities 5 hrs	Written examination	The student should obtain knowledge of international health agencies and non-governmental agencies
3	5	**Health Policy in India**: • Evolution of National Health Policy (NHP 1983–2015), Health for All 2000, MDGs, Five-Year Plans, National Population Policy, and Health Budget	Assessment on the national health policy and discussion on Sustainable Development Goals 4 hrs.	Written examination	The students will be able to evaluate the health policy, Health for all, Millennium Development Goals and Sustainable Development Goals.

4	6	**Health Programmes in India**: • National Malaria Control Programme, National Leprosy Eradication Programme, National Tuberculosis Control Programme and National AIDS Control Programme, National Rural Health Mission and Reproductive and Child Health Programme.	Group discussion on the various national health programmes Visit to District Tuberculosis Centre, District Malaria control office, Anganwadi -5 hrs	Written examination	The students will learn the different national health programmes and the activities.
5	05	**Health planning and management**: • **Indian Health System**: Structure at central, state, district, block levels • **Health Planning**: Planning of sub-centres, principles of primary health care, Indian Public Health Standards (IPHS), role of medical officers • **Health Services Evaluation**: Steps and elements in evaluating healthcare delivery	Visit nearby PHC and learn the standards of PHC, functions and programmes 5 hrs	Written examination	The student will learn the Indian health care system, sub centre, Elements and principles of Primary Health care
6	15	**Epidemiology**: • **Core Concepts**: Aims, methods (descriptive, analytical, experimental), surveillance, and monitoring • **Disease Transmission**: Chain of infection, transmission modes, host defenses, disease prevention and control • **Disinfection**: Natural, physical, chemical agents, and hospital roles in outbreak control. • **Applied Epidemiology**: Epidemiological tools and analysis in hospital settings	Schedule a personnel interaction with HI / JPHN / DMO/ other public health personnel on disease prevention and control 3 hrs	Written examination	The student will acquire knowledge in Epidemiology, disease transmission, prevention and control. Disinfection and role of hospitals in control of epidemics.
7	9	**Disease classification** • **Disease Categories**: Infectious vs. Non-infectious, Communicable vs.	The students can prepare a chart on the classification of diseases with the mode of	Written examination	Students will be aware of all types of diseases and mode of infections,

		Non-communicable, Vaccine-preventable, Emerging & Re-emerging Diseases (Students have to learn basic knowledge of diseases in all classifications, cause of disease, transmission, prevention and risk factors)	infections, transmission and prevention. 3 hrs		transmission and prevention.
8	05	**Health Research and Epidemiological Study Designs** • **Scope and Importance**: Role of health and epidemiological research in modern healthcare • **Measurements**: Incidence, prevalence, risk, relative risk, odds ratio, attributable risk • **Study Designs**: Cross-sectional, cohort, case-control, experimental studies	review the related article and data 2 hrs	Written	Students will analyse the Disease frequency, risk factors and epidemiological study designs

Essential readings:

- Robert L. Heatal: Principles of Epidemiology – A self teaching guide. Academic Press London
- Morris J.N, Uses of Epidemiology, Churchill. Livingstone London
- Benean SMAS: Control of communicable disease to man American PH Association, New York
- Holland W.W., Detels R, Oxford Text Book of Public Health: Method of Public Health. London
- Kelsey J.L: Methods of Observational Research, Oxford University Press, London
- Abeline T. Measurement in Health Promotion & Protection, WHO Regional Publications Karis
- S. Lankimen et al; Health and Disease in Developing Countries, Macmillan press. London
- J E Park & K Park(2017) – Text Book of Preventive and Social Medicine, BanarisdasBhanot, Jabalpur. 24th edition.
- Sunder Lal, Adarsd, Pankaj. (2009) Textbook of community medicine – preventive and social medicine. CBS Publishers & distributors Pvt Ltd.

FIRST SEMESTER
PAPER -III
RESEARCH METHODOLOGY & BIOSTATISTICS

Semester	FIRST SEMESTER
Course Title:	Research Methodology & Biostatistics
Course Code	RMB-1003
Total Hours	90 Hours
Theory	60 Hours
Practice	30 Hours
Assessment Methods	Written, Practice, Oral

COURSE DESCRIPTION:
The topic is intended to provide adequate knowledge about research methods and statistics to help them in research work settings wherever survey design and secondary data analysis are involved in the health system. Understand the need, purpose, objectives, types of research and research process in healthcare organisations for the growth of the organisation. It also enables to analysis of the performance of the hospital.

COURSE OUTCOMES:
CO 1. Identify the research problem, formulation of hypothesis data collection and preparation of research report
CO 2. Students learn to develop research design and choose sampling technique
CO 3. Develop probability and nonprobability sampling techniques while collecting samples collection in healthcare research.
CO 4. Develop skills in preparing an effective questionnaire.
CO 5. Learn different data collection methods and analysis methods in research; by that students will propose solutions to hospital problems and apply parametric and non-parametric tests in various data and conclude data.

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1		X	X		X	X			X	X
CO2		X	X		X					X
CO3		X	X		X	X				X
CO4		X	X		X	X				X
CO5	X	X	X	X	X	X		X	X	X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	8 hrs	**Research Fundamentals:** o Meaning, definitions, historical perspective, nature, objectives, characteristics, and purpose o Criteria of good research, significance, and ethics **Types of Research:** o Qualitative vs. Quantitative o Scientific vs. Non-scientific research **Theoretical Framework:** o Theory building, role of theory, components of theory o Operational definitions, methods vs. methodology **Research Process:** o Identifying and defining the research problem o Setting objectives, literature survey, and hypothesis formulation **Statistics & Probability:** o Statistics and biostatistics: definitions, branches, applications in health management and epidemiology o Probability theory: basic concepts, binomial and normal distribution, standard normal variate o Sampling distribution and standard error	Read the Review paper and identify research problem (2 hrs)	Written examination	Students should be able to understand types of research and the importance of theory in research Familiar with the research process and the difference between methods and methodology
2	15 hrs	**Research Design:** o Meaning, features, nature, importance, and concepts o Types: Explorative, descriptive & diagnostic, experimental o Principles and types of experimental design **Sample Design:** o Meaning of sample, universe, population, sources o Criteria for a good sample and sample size determination	students will identify a problem (college/ Hospital) develop a study - Group study	Written examination	students learn to develop research design and choose sampling technique

		○ Steps in sampling process ○ Sampling types: Probability & non-probability ○ Sampling errors **Measurement & Scaling:** ○ Quantitative vs. qualitative data ○ Measurement scales: classification, validity, reliability, practicality, and accuracy ○ Errors in measurement and tool development ○ Scaling techniques: Likert, Semantic Differential, Stapel, and Multidimensional Scales	calculation of sample size (5 hrs)		
3	12 hr	**Collection, Processing of data** **Types of Data:** Primary and secondary data **Methods of Data Collection:** ○ **Primary Data:** Observation, interview, questionnaire (types, design, sequencing), schedule method ○ **Secondary Data:** Sources and case study method ○ Other relevant data collection methods **Data Preparation Process:** ○ Steps: Editing, coding, classification, tabulation ○ Principles of tabulation and frequency distribution ○ Data presentation techniques	Prepare data collection tool/instrument and collect data. tabulation of data (3 hrs) Data entry using microsoft excel (3 hours)	Written examination	Students will have in-depth knowledge on data collection and processing of data
4	10 hr	**Measures of Central Tendency:** • Mean (individual, discrete, and continuous series – calculations) • Median and Mode (theory) • Empirical relationship: Mean, Median, Mode **Measures of Dispersion:** • Range, Mean Deviation, Quartile Deviation (theory) • Standard Deviation and Coefficient of Variation (calculations for individual, discrete, and continuous series)		Written examination	Students should be able to comprehend the importance of data integrity when calculating and interpreting measures of central tendency and dispersion.
5	15 hrs	**Data Analysis:** • Types: Descriptive (univariate, bivariate), multivariate analysis • Hypothesis testing:	Data Analysis using Microsoft Excel,	Written examination	Students acquire knowledge on descriptive statistics and hypothesis testing. Well-versed

		○ **Parametric:** Z-test, T-test, F-test ○ **Non-parametric tests** • Estimation: Point & interval estimation, population mean & proportion • Correlation: Types, scatter diagram, Pearson's & Spearman's coefficients • Linear regression analysis • Tools: Excel, SPSS, R **Report Writing:** • Structure: Steps, layout, abstract, glossary, bibliography, referencing • Referencing style: APA, footnotes **Ethics in Research:** • Principles, plagiarism, citation, researcher accountability • Importance of ethical conduct in research	SPSS or R. Rehearsing presentations Report writing and present in the classroom (05hrs)		with research writing style.

Essential readings

1. Prabhakara GN (2006). Biostatistics: Jaypee.
2. Visweswara Rao K (2010).Biostatistics In Brief Made Easy: Jaypee.
3. Potti L R. A Full course in statistics: Yamuna Publications.
4. Kulkarni AP (2020). Basics of Biostatistics.2nd edition: CBS publishers and distributors.
5. Mahajan BK (2016). Methods in Biostatistics for Medical Students and Research Workers. 8th edition: Jaypee.
6. Angeles: Sage Publications Inc
7. Levin Richard I & Rubin David S. Statistics for Management: Prentice Hall of India
8. Agarwal BL (2006). Basic Statistics: New Age International Publishers.
9. Gupta S P. Statistical Methods: Sultan Chand & Sons.
10. Daniel Wayne W & Cross Chad L (2013). Biostatistics basic concepts and methodology for the health sciences. 10th edition: Wiley.
11. Pagano, M.,& Gauvreau, K. (2007). Principles of Biostatistics 2nd ed. Duxbury, Australia.
12. Gale, M., & Robert, D. (ed). (1997). Context and Method in Qualitative Research. New Delhi: Sage Publication.
13. Bryman, Alan.,& Bell, Emma. (2010). Business Research Methods. 2nd ed. Oxford University Press. 4. Creswell, John W . (2009).Research Design: Qualitative, Quantitative, and Mixed Methods Approaches 3rd ed. Los Angeles: Sage Publications Inc
14. Abbas, Tashakkori.,& Charles, Teddlie. (2002). Handbook of Mixed Methods in Social and Behavioural Research. Sage Publication Inc.
15. Abbas, Tashakkori.,& Charles, Teddlie. (2008). Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioural sciences. Sage Publication.

16. Kothari, C.R .(1985).Research Methodology : methods and techniques. New Delhi:Willey Eastern Ltd.
17. Gupta, S. (1999). Research Methodology and Statistical Techniques. New Delhi: Deep & Deep Publications.
18. Harry F. Wolcott. (2009).Writing up qualitative. 3rd Ed. Sage Publication.
19. Jacques, T. (1997). Multivariate Analysis techniques in Social Sciences Research from problem to analysis. Sage Publication.
20. Dr Priti R Majhi& Dr Prafull K Khatua (2016) Research Methodology (concepts, Methods, Techniques and SPSS), Himalaya Publishing House
21. Creswell, John W . (2009).*Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* 3rd ed. Los

FIRST SEMESTER
PAPER -IV

MEDICAL TERMINOLOGY AND BASICS OF ANATOMY AND PHYSIOLOGY

Semester	**FIRST SEMESTER**
Course Title:	**MEDICAL TERMINOLOGY AND BASICS OF ANATOMY AND PHYSIOLOGY**
Course Code	**MAP-1004**
Total Hours	**90 Hours**
Theory	**60 Hours**
Practice	**30 Hours**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION: To understand the function and importance of different systems of the human body. To familiarize with the medical terminology used in the hospital sector. The course enables the students to get a general understanding of the biological structure and basis of human biology and pathogens and to understand the spectrum of health and disease to evolve health promotion strategies in health system management. The student is not expected to have a detailed study of the subjects

COURSE OUTCOMES:
CO 1. The student will be familiar with medical jargon and the human body system so that he can effective member of the operational team.
C O 2. Understand the basic terms, concepts and systems of the human body.
CO 3. Familiar with the terms root, suffix, and prefixes and name the languages from which most medical word parts are derived
CO 4. Apply new vocabulary and language usage in human medical conditions and reports.
CO5. Students will understand the variations in various pathological conditions

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X	X								X
CO2	X		X							
CO3									X	
CO4					X				X	
CO5					X			X		

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	12	**Medical Terminology**: • Objectives - Basic concepts - Elements of medical terms - Root/stem Prefixes - Suffixes - Colours - Numerals - Symbols – Abbreviation- words and phrases on operative terminology - Terms pertaining to body as a whole	Divide students into groups and distribute lists of medical terms. students will go to the board and draw a picture to represent the word on their list. Once a classmate correctly guesses the term, the student can add the medical abbreviation below the image. Review and correct them. 6 hours	Written examination	Students will define general medical terms. Learn to comprehend combinations of roots, suffixes and prefixes in common medical applications. Apply new vocabulary and language usage in human medical conditions and reports. Students will define general medical terms associated with movement, the Integumentary, skeletal, muscular, nervous, special senses, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems.
2	07	**General Anatomy** (Cell Structure, Cell division, Primary Tissues – Epithelium, Connective Tissue, Cartilage, Lymphatic tissue, Nervous tissue, Vascular tissue, Muscular tissue, Skin & appendages)	Demonstration of cell, tissues and glands. Explanation using Charts, models, microscopic slides, and skeleton 7 hours.	Written examination	Students will be able to understand and identify various body tissues Students will comprehend the pathological variations & their clinical importance

3	20	**Systemic Anatomy** **Cardio vascular system** (Pericardium, Structure of heart, Heart valves, Blood supply, names of blood vessels, Applied importance **Respiratory System** (Parts of respiratory tract, Lungs, Pleura, Diaphragm, Applied importance) **Gastro-intestinal System** (Parts of digestive tract , Accessory glands, Applied importance) **Lymphatic System** (Lymph node, thymus, spleen, tonsils, Applied importance) **Endocrine System** (Thyroid, Parathyroid, Pituitary, Adrenal glands, Applied Importance) **Nervous System** (Classification, Brain, Spinal cord, Blood supply, Applied importance) **Excretory System** (Kidneys, Ureters, Urinary bladder, Urethra, Applied importance) **Reproductive System** (Parts of Male & Female reproductive System, Applied importance	Explanation using Charts and models Video presentation Lecture discussion 20 hours	Written examination	Students know the position, size, shape and parts of various organs in the body. Students will understand the variations in various pathological conditions
4	11	**Physiology of Blood (**Introduction of Haematology: RBC–WBC–Platelets, Coagulation of Blood–Blood Groups),	Video is more effective to introduce Blood elements, process of Coagulation, determination of Blood Group by demonstration	Written examination	Know the significance of Blood, blood cell parameters, physiological and pathological variations, aware about abnormalities .

		Cardiovascular System (Conducting System, Cardiac Cycle, Cardiac output, Blood pressure, ECG.),	Demo specimen analysis, playing video about conducting system, circulations and cardiac cycle, demonstration for BP and ECG.		Position of heart, how the heart works, normal parameters like heart beat, heart sound, ECG, BP, aware about physiological and pathological variations of parameters.
		Respiratory System (Mechanism of respiration, Transport of Gases, Regulation of respiration.),	Demo specimen analysis for lung physiology, video lectures is most effective for Transport of Gases and regulations.		How can we respire, how will change the respiratory parameters, respiratory changes when we move from above or below the atmosphere, diseases related respiratory tract.
		Digestive system: (Primary and accessory digestive organs and functions.)	Video lectures can use to introduce the digestive organs, how the food is digested and assimilated to the body (6 hours)		Composition of our food, how and where the digestion starts, role of digestive secretions, how the assimilation takes place, metabolism, aware the disease like vomiting, constipation, diarrhea, jaundice etc.
5	10	**Renal Physiology (**Basic functions of kidney and mechanism of urine formation),	Pictoral demonstration to know the physiological structure of the kidney, functions easily explained with the help of simulation.	Written examination	Excretory role of kidney, malfunctioning of kidney, hormones which secreted by kidney, water balancing role of kidney
		Central Nervous System (Synapse-Receptor–Reflex arc-Higher functions and disorders,	With the use Well defined wall chart can explain the		Functions of higher centers, areas of special senses, how can we see,hear, taste and smell the things.

		Special senses: Olfaction–Taste–Audition–Vision.), **Endocrine System**: (Pituitary hormones–Thyroid hormones–endocrine Pancreas–Adrenal hormones)	wide range of CNS. Tracts explained with the help of online sources, parts described by the specimen. With the help of Labelled diagram can explain the endocrine glands understanding their location, downloaded pictures can helps to understand the disorders related to hormonal imbalance, do ppt to describe actions, metabolism, deficiency of a particular hormone. 6 hours		Significance of Reflex arc, some of the nervous system disorders. The study of hormones student can understand- each hormone secreted by which gland, differentiate the inhibitory and stimulating functions of hormones, easily identify the life style disorders due to hormonal imbalancing.

Essential readings:

1. Essentials of Medical Physiology - K. Sembulingam & Prema Sembulingam.
2. Text book of physiology for BDS students - Prof. Jain A.R.
3. Text book of physiology - choudhary
4. Text book of physiology - Ganong
5. Text book of physiology - G.K.Pal.
6. Anatomy and Physiology for Nurses, - Physiolgoy: K. Madhavan Kutty
7. Human Anatomy :Vol. 1, 2, 3 & 4 – BD Chaurasia
8. General Anatomy – BD Chaurasia
9. Histology – Inderbir Singh
10. Manipal Manual of Anatomy for AHS courses – Dr. Sampath Madhyastha
11. Human Anatomy – Prof. A K Datta

SECOND SEMESTER
PAPER - I
HOSPITAL PLANNING AND DESIGNING OF CLINICAL SERVICES

Semester	**SECOND SEMESTER**
Course Title:	**HOSPITAL PLANNING AND DESIGNING OF CLINICAL SERVICES**
Course Code	**HPC -1005**
Total Hours	**90 Hours**
Theory	**60 Hours**
Practice	**30 Hours**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION:
To develop a basic understanding of planning and designing of hospitals and clinical services in the hospital sector. To understand the standards and statutory permission and license for the hospital services.

COURSE OUTCOMES:
CO 1. Students will understand the hospital planning and designing perspectives
C O 2. Students will gain knowledge to plan for general and specialty hospital architecture and design including hospital location, size, site selection building and quality of facilities.
C O 3. Students will understand the standards for designing hospital facilities.
C O 4. Students will develop knowledge in the planning of specialty departments, and clinical, diagnostic & therapeutic services.
CO 5. Student shall analyze and discuss recent trends in hospital planning, including innovations in design, technology integration and patient- centered care approaches

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X		X			X				X
CO2			X				X	X		X
CO3			X	X	X	X		X	X	
CO4		X	X					X		X
CO5	X	X	X				X	X		X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	4	**Hospital:** • Definition and history of hospitals • Changing concepts and evolution of hospitals • Types and classification of hospitals • Overview of the healthcare system in India **Utilization Indices:** • Indices for measuring hospital utilization • Hospital census indices: daily and monthly analysis • Indices related to population at risk • Factors influencing hospital utilization .	Students shall analyze different concepts of classification of hospitals and healthcare system in India. Students shall apply the concepts of hospital indices during hospital posting. 3 hours	Written examination, Group discussions and presentations	At the end of the lesson students will be able to: Develop an understanding about the healthcare system in India. Understand and appreciate the importance of hospital utilization indices. Equip students with the application of the statistical tools in real world situations.
2	10	**Planning and designing perspective of hospital:** **Guiding Principles:** • High Quality patient care • Community orientation • Economic viability • Sound architectural design **General Principles:** • Patient safety • Efficient traffic flow • Functional zoning • Operational control **Influencing Factors:** • Architectural design • Site, location, and resources • Legal and regulatory norms • Technological integration **Hospital planning team**: • Role of hospital consultant, Hospital architect, engineers and interior design team. • Architect's brief	Students shall visit the project planning department of the hospital and get an insight on the planning aspects of a hospital. 4 hours.	Written examination, Group discussions and presentations	At the end of the lesson students will be able to: Demonstrate a comprehensive understanding of the factors to be considered while planning a hospital. Develop an understanding about the role of key stakeholders of the planning team. Gain an overview of the initial level activities to be considered while

		Hospital planning: ▪ **Needs Assessment & Feasibility**: Measuring community needs, evaluating required vs. available services, analyzing external and internal factors, feasibility studies ▪ **Planning Process**: Defining hospital size, securing funding, site selection and survey, determining land and space requirements ▪ **Design and Infrastructure**: o Master planning, zoning, climate-based considerations, future growth planning o Space planning, circulation flow, working drawings, and documentation ▪ **Regulatory and Utility Planning**: Plan approvals, water and power requirements, sewage disposal ▪ **Procurement and Execution**: o Tendering process, hospital equipping, interior design, signage and graphics o Commissioning process, taking over, and shake-down period			planning a hospital.
3	5	**NOC/PERMIT/CERTIFICATE/ LICENSE OF HEALTHCARE ORGANIZATION -** **(General Awareness only)** **Patient care:** Registration from Local Administration. License for PNDT, MTP, Blood bank, psychiatry/nuclear medicine, and license to operate CT/MRI/X-ray. Organ transplantation registration. **Occupational safety:** NOC from NBC, NOC from Ground water authority, License from Fire & Safety, AERB, PCB, BMW Management & Handling Authorization. **Traffic & movements**: Lift license, vehicle registration, ambulance registration; Electrical/ mechanical/ thermal etc- License from Electrical	Students shall visit the project management department as well as consult the hospital project consultant and get an overview about the formalities of obtaining the NOC/Permit/License and other required certificates. They shall submit a report for the same. 3 hours	Written examination, Group discussions and presentations	At the end of the lesson students will be able to: Demonstrate an in-depth understanding of the certificates and licenses required for a hospital. Gain a solid understanding of the methods of obtaining the required certificates

		inspectorate for electrical installations, License from Inspectorate of Indian Boiler Regulation, Explosive license for medical gas (storage for compressed gas) **Toxicity:** Drug bulk/retail license, Canteen/FSSAI Registration.			
4	10	**Planning of clinical, diagnostic & therapeutic services** Comprehensive planning and organization of key hospital services including Outpatient, Emergency & Trauma, Nursing, and Inpatient Departments (ward types and design). Layout and management of Intensive Care Units and Operation Theatres. Overview of diagnostic and support services such as Laboratory, Radiology, ECG, ECHO, TMT, NCV, EEG, & Sleep Lab. Planning and administration of Pharmacy, Blood Transfusion, Audiology & Speech Therapy, Physiotherapy, and Rehabilitative Services.	Students shall visit various clinical, diagnostic & therapeutic departments in the hospital and study the planning, facilities requirement, and organization as well as identify the administrative work flow and issues in the departments. understand the licensing requirements and legal challenges related to the units A detailed report shall be submitted based on the study. 5 hours	Written examination, Group discussions and presentations	At the end of the lesson students will be able to: Understand the planning requirements of the clinical, diagnostic & therapeutic services in the hospital. Relate theoretical knowledge with real-world scenarios in the hospitals Analyze common challenges faced in these departments from an administrative point of view.
5	8	**Planning and Administration of Specialty Services** Design, organization, and management of specialty clinical units including Ophthalmology, Psychiatry, Paediatrics & Neonatology, Obstetrics & Gynaecology, Dental Services, Urology, Plastic Surgery, and Burns Unit.	Students shall visit various specialty services/departments in the hospital and study the planning, facilities requirement, and organization as well as identify the administrative	Written examination, Group discussions and presentations	At the end of the lesson students will be able to: Understand the planning requirements of the specialty services in the hospital.

			work flow and issues in the departments. A detailed report shall be submitted based on the study. 6hours		Relate theoretical knowledge with real-world scenarios in the hospitals Analyze common challenges faced in these departments from an administrative point of view.
6	8	**Planning and Administration of Super specialty Services** Organizational planning and operational management of super specialty departments including Cardiology, Nephrology, Neurology, Pulmonology, Gastroenterology, Oncology, Nuclear Medicine, and Transplantation Services.	Students shall visit various super specialty services/departments in the hospital and study the planning, facilities requirement, and organization as well as identify the administrative work flow and issues in the departments. A detailed report shall be submitted based on the study. 3 hours	Written examination	At the end of the lesson students will be able to: Understand the planning requirements of the super specialty services in the hospital. Relate theoretical knowledge with real-world scenarios in the hospitals Analyze common challenges faced in these departments from an administrative point of view.
7	10	**Standards for designing hospital facilities** **General Infrastructure Standards** • Mechanical and electrical systems	Students shall visit the project planning and facilities department as well as the	Written examination	At the end of the lesson students will be able to: Demonstrate a comprehensive

		• HVAC (Heating, Ventilation, and Air Conditioning) • Lighting design and wayfinding **Safety & Risk Management** • Fire safety and disaster preparedness • Safety and security systems • Occupational safety and nosocomial infection control **Specialized Facility Standards** • Centralized medical gas systems • Biomedical waste management (including radioactive and pharmaceutical waste)	departments concerned with these facilities of the hospital and get an insight on the planning and functioning aspects of a hospital. A detailed report shall be submitted based on the study. 5 hours		understanding of the factors to be considered while designing hospital facilities services. Gain an understanding of the safety measures to be incorporated while hospital planning. Gain an overview of the initial level activities to be considered while planning facility services in a hospital.
8	5	**Recent trends in hospital planning** Emerging concepts in hospital infrastructure including: • Green Hospital Design and Sustainable Strategies. • Planning and integration of value-added healthcare services. • Design and implementation of Telemedicine facilities.	Students shall visit hospitals following green protocol or refer literature pertaining to it and prepare a report on it. Students shall visit hospitals having telemedicine facility or refer literature pertaining to it and prepare a report on it. Prepare a detailed report on value added services	Written examination	At the end of the lesson students will be able to: Develop a creative idea for planning green hospital. Gain an understanding of telemedicine facility in a hospital. Gain an overview of the initial level activities to be considered while planning value added services in a hospital.

			that shall be implemented in a hospital. 3 hours		

Essential readings:

- Kunders, G D.(2002) - Designing for Total Quality in Healthcare, Prism Books Pvt Ltd,Bengaluru
- Kunders, G D (2004) – Facilities Planning and Arrangement in Healthcare, Prism Books Pvt Ltd, Bengaluru. Davies Llewellyn R & Macaulay H M C(1995) – Hospital Planning and Administration, Jaypee Brothers, New Delhi
- CharneyWilliam(1999)- Handbook of Modern Hospital Safety -Lewis Publishers Pvt Ltd, London.
- Sakharkar B M(1998)- Principles of Hospital Admisnitration& Planning – Jaypee Publishers New Delhi
- Joshi DC,Mamta Joshi (2009) – Hospital Administration,Jaypee Brothers Medical Publishers (P) LTD.
- Desai VA ,Hospital Administration Vol -1,Madurai,1989
- Huss Carol ,Indian Hospitals ,Planned Organisational changes in their structure and functioning ,VHAI, New Delhi
- ParthasarathyS.K,Hospital services Management, KJ Hospitals, Madras Sharma, Madhurai (2003),Essentials of Hospital Supportive services, Jaypee Brothers, New Delhi
- Tabish ,Syed Amin ,Hospital planning ,Organisation and Management
- Sharma KR, SharmaYashpal(2003), A hand book on Hospital Administration, Durga Printers, Jammu
- Park K,Text book of Preventive and social Medicine ,Bhanot Publishers .
- Francis CM, Hospital Administration, Jaypee Publishers

SECOND SEMESTER
PAPER –II
ACCOUNTING FOR HOSPITALS

Semester	SECOND SEMESTER
Course Title:	ACCOUNTING FOR HOSPITALS
Course Code	AFH-1006
Total Hours	90 Hours
Theory	60 Hours
Practice	30 Hours
Assessment Methods	Written, Practice, Oral

COURSE DESCRIPTION: To familiarize the students with the concepts, principles and techniques of cost accounting and its application in managerial decision making in hospitals.

The students to acquaint themselves with the basic concepts of financial and management accounting and the practical applications in decision making, supervision, management and control of a health system

COURSE OUTCOMES:

CO 1: Understand and Apply Fundamental Accounting Principles and Techniques.
CO 2: Analyze and Prepare Financial Statements Including Adjustments
CO 3: Evaluate and Prepare Accounts for Non-Trading Concerns
CO 4: Develop and Apply Costing Techniques for Hospital Financial Management
CO 5: Implement Overhead Costing and Control Techniques in Healthcare Settings

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1			X	X						
CO2			X	X						X
CO3	X		X	X		X			X	X
CO4	X		X	X	X			X		X
CO5	X		X	X	X			X		X

Course Content:

Unit No	Hours	Content	Practical learning & Hours	Assessment method	Teaching learning outcome
1	10 hours	**Fundamentals of Accounting** Meaning, need, functions, and importance Systems of accounting Accounting equations **Accounting Principles** Concepts and conventions Journal, Ledger, and Trial Balance (Theory & Problems) **Subsidiary Books** Importance and types Petty Cash Book: Meaning, advantages, and format (Theory) **Bank Reconciliation Statement** Meaning and need Preparation (Theory & Problems	Provide students with various transactions and ask them to prepare journal entries, ledger accounts and trial balances. Set up a petty cash fund in the classroom and Have students record petty cash transactions in a petty cash book and reconcile the fund periodically. Provide students with bank statements and transaction records and ask them to reconcile the bank statement (6 Hours)	Written examination	Students should be able to understand the basic accounting principles, concepts, and practices enabling them to apply this knowledge in practical scenario.
2	15 Hours	**Depreciation**-Meaning-Objects- Methods (Straight line and diminishing method.- Theory and Problems) **Financial Statement** – Trading and Profit and Loss Account & balance Sheet: Meaning, need and preparation - (theory and problems) Use of further adjustments in the preparation of final accounts:- • Depreciation • Provision for Doubtful Debts	Provide students with a list of assets (e.g., machinery, vehicles, and furniture) and their purchase costs. Ask them to calculate depreciation using the straight-line method and the diminishing balance method for each asset. Provide students with a set of trial balance data that includes items requiring further	Written examination	Students should have a solid understanding of depreciation, financial statement preparation, and adjustments needed to ensure accurate reporting of a company's financial performance and position.

		• Outstanding and Pre-paid expenses • Income received in Advance • Accrued Income • Clos-ing Stock .	adjustments. Ask them to prepare the final accounts (Trading and Profit and Loss Account and Balance Sheet). (6Hours)		
3	15 Hours	**Non-Trading Concerns Accounting:** (Theory and problems) • Meaning and format of Receipts & Pay-ments Account, In-come & Expenditure Account, and Bal-ance Sheet • Preparation of In-come & Expenditure Account and Bal-ance Sheet from Re-ceipts & Payments with adjustments **Ratio Analysis:** • Meaning, signifi-cance, applications, and limitations • Types of ratios: **(**Theory and prob-lems) o Liquidity ratios o Solvency ratios o Operating effi-ciency ratios o Profitability ra-tios	Develop case studies that combine both accounts of non-trading concerns and ratio analysis. For example, provide students with financial data of a club or society and ask them to prepare financial statements, calculate ratios, and interpret the results. (6 Hours)	Writte n exami nation	To equip students with the knowledge and skills to analyze financial statements of non-trading concerns and apply ratio analysis techniques to assess the financial performance and health of businesses.
4	10 Hours	• **Nature and Scope of Costing** • **Cost Classification and Concepts** • **Cost Sheet Prepara-tion and Hospital Applications** • **Inventory Costing & Models** o FIFO, LIFO, Aver-age Cost (simple problems) o Scientific inven-tory techniques	Conduct hands-on activities like role-playing where students act as managers, employees, or accountants dealing with various cost-related scenarios. (6 Hours)	Writte n exami nation	To provide students with a comprehensive understanding of cost accounting principles, techniques, and their applications in various industries, including healthcare and manufacturing.

		• **Labour Costing (Theory Only)** o Labour remuneration: Time rate, piece rate, bonus plans o Cost of idle time, overtime, holiday pay, labour turnover o Measuring labour efficiency and accounting performance o Gross and net wage calculation			
5	10 Hours	**Overheads:** o Classification, allocation, and apportionment o Basis of apportionment o Costing of service and production departments o Overhead absorption: Actual, predetermined, blanket rate, multiple rate **Cost Control Techniques:** o Cost control vs. cost reduction o Operating costing and its application in hospitals **Costing Methods (with simple illustrations):** o Standard costing o Marginal costing o Budgetary control (theory only)	Create problem-solving exercises where students have to calculate overhead costs, allocate them to different departments, and determine absorption rates. Assign homework assignments where students have to apply standard costing, marginal costing, and budgetary control techniques to analyze and improve the financial performance of a hypothetical company. (6 Hours)	Written examination	To provide students with a comprehensive understanding of overhead costing, cost control, cost reduction techniques, and various costing methods used in different industries. Students will be equipped with the knowledge and skills to analyze costs, control expenses, and make informed decisions to improve organizational performance

Essential readings:

- S. P. Jain and K.L. Narang –Advanced Accounting vol.1, kalyani Publishers
- R.S. N.Pillai and Bagavathi: Management Accounting, S. Chand
- Accounting for XI, Kalyani Publishers
- S. N.Maheswary: Management Accounting, Sultan Chand
- Dr P.K Lazar: Accounting I,excel publications

- B.S Raman; Financial accounting
- A.Vinod; Cost accounting
- Management and cost accounting;S P Jain and Narang
- Cost Accounting by Jawahar Lal (McGraw Hill)
- Cost Accounting (Test & Problems); S. Chand & Co. Ltd., New Delhi

SECOND SEMESTER
PAPER -III
HUMAN RESOURCE MANAGEMENT & ORGANIZATIONAL BEHAVIOR

Semester	**SECOND SEMESTER**
Course Title:	**Human Resource Management & Organizational Behavior**
Course Code	**HOB -1007**
Total Hours	**90 Hours**
Theory	**60 Hours**
Practice	**30 Hours**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION: Develop an understanding of the concept and importance of Human Resource Management in organizations. To familiarize the students with the behavioural patterns in various contexts in an organization like a hospital and to develop insight into one's self and the functioning of others.

COURSE OUTCOMES:

CO 1: Analyze the Scope, Functions, and Challenges of Human Resource Management in Healthcare
CO2: Develop and Apply HR Practices and Programs in Healthcare Institutions
CO3: Evaluate and Implement Performance Management and Employee Engagement Strategies
CO4: Understand and Assess Organizational Behaviour and Its Impact on Healthcare Management
CO5: Apply Industrial Relations and Conflict Management Techniques in Healthcare Settings

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X	X	X				X			X
CO2	X	X	X			X	X			X
CO3	X	X	X	X	X				X	X
CO4	X		X					X	X	X
CO5	X	X	X			X		X		X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	12	**Human Resource in Hospital Management**: Scope, nature, and significance of HRM in healthcare. Need for effective HR practices and functions of HRM in hospitals. Challenges in healthcare HR and strategies for developing HRD programs, including competency mapping and Green HRM concepts. Organization and structure of the HR department in hospitals; roles and responsibilities of HR managers. **Recruitment and Selection:** Sources of recruitment, recruitment process, selection procedures, and types of selection tests. **Training and Development:** Training needs, objectives, types, stages, and methods. **Management Development**: Objectives, steps, and techniques of Management Development Programs (MDPs).	Case study analysis based on HR practices and challenges Ask students to develop a plan for implementing green HRM in hospital Design mock recruitment and selection process for a hospital Role play on different methods of training and development 6 hours	Written examination	Students should be able to develop an understanding about the functions of HRM To understand and appreciate the importance of the human resources vis-a-vis other resources of the organisation To familiarize the students with methods and techniques of HRM To equip them with the application of the HRM tools in real world business situations. To distinguish between Recruitment and Selection. To relate the various stages in Training cycle.
2	12	**Job rotation**: meaning, types, advantages, disadvantages. **Employee counselling:** meaning, definition- types of employee counselling. **Employee Engagement**: concept, importance and components.	Role play for employee counseling sessions : Develop scenarios where students take on the roles of HR professionals and employees	Written examination	Students should demonstrate a comprehensive understanding of the concept and types of job rotation. Define employee counseling and its significance in the workplace. To develop an understanding about basics

		Performance Appraisal ,objectives,uses, methods of performance appraisal, Process of performance appraisal **Human Resource Accounting (HRA):** Objectives, approaches, benefits of HRA-limitations. **Job evaluation:** Definition, objectives, methods **Wage-salary Administration**, Principles and techniques of wage fixation, factors influencing wage and salary administration, concept of wages and salary administration, methods of wage payment. **Incentives**: incentive schemes, Types, fringe benefits, objectives and types.	Ask students to prepare a performance appraisal form . Real world case studies of organizations that successfully implemented innovative wage system and incentive strategies. Ask the students to create a payroll budget for a hospital. 6 hours		of compensation management and Performance appraisal. To discuss about managing employee relations Design and administer competitive and equitable compensation packages. Manage payroll processes and compliance with compensation-related laws.
3	12	**Employee welfare and Benefits**-employee welfare measures and benefits employee health and working conditions, safety and accident prevention -accident records. **Social security-** social security schemes. **Industrial Relations**: concept, Trade unions, objectives, functions, Organizational disputes ,causes and effects. **Participative Management:** concept of employee participation in management-objectives, levels of participation, forms of participation, employee empowerment. **Collective Bargaining**: Concept, origin and development, process of	Divide students into groups and representing management and employee representatives . Provide case studies involving negotiation scenarios. Simulate common workplace scenarios, and have students identify potential hazards and propose	Written examination	Students should demonstrate a comprehensive understanding of social security principles and schemes. Categorize and explain various social security schemes, including pensions, healthcare, and unemployment benefits.. Identify and discuss the objectives of industrial relations. Analyze the functions of industrial relations in promoting harmonious workplace relations

		collective bargaining, collective bargaining ,techniques, joint consultation. **Grievance:** Causes, sources of grievances, grievance handling procedure, **Organizational exit:** planning for retirement, Industrial safety.	preventive measures Role plays for grievance handling and organizational exit 6 hours		Demonstrate an in-depth understanding of industrial relations concepts and theories.
4	12	**Organizational Behaviour in Healthcare Management:** Introduction to Organizational Behaviour (OB) – Nature, scope, and significance in the context of healthcare management. Challenges and opportunities of applying OB principles in healthcare settings. **Understanding Individual Behaviour:** Key components influencing individual behaviour: Personality and personality traits, perception, learning, and attitudes. **Motivation and Management:** Overview of motivation and major theories of motivation. Conflict management and stress management strategies within healthcare organizations.	Case Studies: Analyze real-life organizational scenarios to understand the nature, scope, and significance of OB. Engage students in role-playing activities to simulate workplace situations related to individual behavior, personality, stress management and conflict management. 6 hours	Written examination	Students should understand the key theories that underpin effective leadership and their application in different organizational contexts. Students should be able to define key performance indicators (KPIs) relevant to different organizational functions. Students should grasp the core concepts and definitions of Organizational Behavior and its relevance in healthcare settings. Relate OB concepts to real-world scenarios in healthcare, demonstrating an understanding of its practical application. Students should be able to analyze common challenges faced by healthcare organizations in implementing OB practices. Students should be able to emphasizes an interaction among cognitive, behavioural and environmental determinants of behaviour.

					Define personality, learning perception, attitudes and its components, emphasizing its impact on individual behavior. Introduce and discuss key motivation theories such as Maslow's Hierarchy, Herzberg's Two-Factor Theory, Expectancy Theory, and Goal-Setting Theory. Discuss strategies for identifying, addressing, and resolving conflicts in healthcare teams.
5	12	**Group behaviour** types, group process, Group Dynamics, Types, characteristics- group development process, **Leadership**: Concepts, theories, functions, Styles, factors influencing leadership. **Organizational Culture**, concept, factors, Creating and maintaining organizational culture. **Organizational Climate, Organizational Change, Organizational development**: Concept. Objectives, goals, process. Ergonomics, Mental and health problems in organization.	Management games and Team Building Activities on group dynamics and group decision making. Students are asked to play the Role of a leader they admire and their leadership styles. Students asked to conduct a survey within organization to gather information on mental health perceptions. 6hours	Written examination	Define and distinguish between formal and informal groups. Recognize the characteristics and purposes of various group types. Understand the core concept of leadership. Explain key leadership theories and their implications. Define organizational climate and differentiate it from culture. Discuss the factors contributing to organizational culture. Identify objectives and goals of organizational development. Describe the stages and methods of the

					organizational development process. Define ergonomics and its relevance in the workplace. Identify common mental health issues in the workplace.

Essential readings:

- Aswathappa K, Human Resource Management, Text and cases,MC graw Hill education private limited, Chennai
- Dipak Kumar Bhattacharya, Human Resource Management, excel books ,second edition
- Subba Rao, Essentials Of Human Resource Management and Industrial Relations,Text ,cases and games,Himalaya Publisihing House,3rd edition
- Gary Dessler and BijuVarkkey, Pearson Human Resource Management,: Prentice Hall, New Delhi.
- David A. DeCenzo& Stephen P. Robbins, Personnel/Human Resource Management, PHI/Pearson.
- VSP Rao, Human Resource Management: Text and cases, Excel Books, New Delhi – 2000.
- T.V. Rao, Sage ,Human resource Development: Experiences, Interventions and strategies, Publications, New Delhi.
- P.Subba Rao, Human Resource Management -3rd edition
- Aswathappa K, Human resource Management and Personnel Management- (Tata Mcgraw Hill, New Delhi.)
- Mamoria&Gankar, Personnel Management- (Himalaya Publication)
- P.C. Tripathi, Personnel Management and Industrial Relations, Sultan Chand & Sons, New Delhi.
- J Walter. Flynn, Mathis Robert L, H. Jackson John , Valentine R Sean , Healthcare Human Resource Management,3rd edition
- Fallon Flaming L,mc Connell R Charles,Human Resource Management in healthcare, principles and practice,second edition
- Niles J Nancy,Basic concepts of Healthcare Human Resource Management
- Fred Luthans: Organizational Behaviour McGraw Hills., New York
- Robbins S.P.: Organizational Behaviour., Eaglewood Cliffs., New Jersy, Prentice Hall Inc.
- Koreman: Organisational Behaviour at Work – Organizational Behaviour., McGrew Hill
- Hilt, Miller, Colella: Organisational Behaviour (A strategic Approach)
- Prasad L.M: Organisational Behaviour, Sultan Chand & Sons
- Aswathappa K: Organisational Behaviour

- Dwivedi: Human Relations and Organizational Behaviour., Macmillan India Ltd., Madras.
- Mizra. S. Saiyadain: Organizational Behaviour,Tata McGraw Hill Publishing Company Ltd, New Delhi,2003.
- Seven L McShane and Mary Ann Vouglinow,Organizational Behaviour,Tata McGraw Hill Publishing Company Ltd, New Delhi,2005.
- Borkowski Nancy and Meese A Katherine, Organizational Behaviour in Healthcare,Jones and Bartlett publishers,4th edition.
- Borkowski Nancy, Deckard Gloria,Case studies in Organizational behavior and Theory for Healthcare,Jones and Bartlett publishers
- Borkowski Nancy,Organizational Behaviour in Healthcare,Jones and Bartlett publishers,3rd edition.
- M Jennifer George,Understanding and Managing rganizationalBehaviour,Person education limited,6th revised edition, 2011

SECOND SEMESTER
PAPER -IV
HOSPITAL EQUIPMENT AND MATERIALS MANAGEMENT

Semester	**SECOND SEMESTER**
Course Title:	**Hospital Equipment and Materials Management**
Course Code	**HEM-1009**
Total Hours	**90 Hours**
Theory	**60 Hours**
Practice	**30 Hours**
Assessment Methods	**Written**

COURSE DESCRIPTION: The subject is intended to provide thorough knowledge and familiarity with the equipment in hospital. Equipment management processes such as methodical procedures of equipment planning and procuring including maintenance of the equipment in hospitals. In-depth knowledge about the scientific methods of purchasing, storing, dispensing and optimum utilization of materials.

COURSE OUTCOME:

CO1. Students will understand various diagnostic and therapeutic equipment in hospitals and its functions.

CO2. The hospital equipment planning process and various associated maintenance to hospital equipment and technology

CO 3. Students will learn the principles of materials management and how they apply to the procurement of materials in hospitals.

CO4. Students will learn to develop hospital inventory management system by managing lead time analysis, and maximum- minimum level, reorder level and safety positions of the inventory.

CO5: Students will understand and apply administrative control over inventory including cost management, value analysis and the condemnation process for materials in hospitals.

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1			X					X		
CO2	X			X	X			X	X	
CO3	X			X		X				X
CO4			X	X				X	X	
CO5				X		X	X			X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
Biomedical equipment					
1	2	**Introduction:** Bio-medical equipment, Classification of biomedical Equipments - Analytical, Diagnostic, Therapeutic and Surgical equipments- Electrical classification of Biomedical Equipments	Students shall visit the biomedical engineering department and get familiriazed with the different types of biomedical equipments. A report shall be submitted for the same. 3 hrs	Written examination	At the end of the lesson students will be able to: Classify the different types of biomedical equipments
2	5	**Radiology:** X-ray – fluoroscopy – CT – MRI-Cath Lab -PET SCAN- Gama camera- mammography	Students shall visit the Radiology, Laboratory, and Physiotherapy departments and	Written examination	At the end of the lesson students will be able to: Get familiarized with various

		Laboratory – Biochemistry auto analyser (Calorimeter – flame Photometry – Spectrometer), Haematology analyser (Coulter counter) – Arterial Blood gas analyser – Auto analyser-Electrophoresis **Physiotherapy:** Muscle stimulator – short wave diathermy – ultrasonic and microwave diathermy.	get familirized with the equipments. They shall prepare a chart or make a presentation on various diagnostic and therapeutic equipments with functions in these departments. 3 hrs		Radiology laboratory and physiotherapy equipment and their functions
3	6	**Urology** – Haemodialysis – RO plant, lithotripsy-uroflow meter **Cardiology** – ultrasound scanner and Echocardiogram Angiogram – Tread Mill – ECG monitor and recorder. Cardiac care Unit – pacemakers – defibrillator – ventilator – infusion pumps– patient monitoring system. **Neurology** – EEG – EMG – VEP. **ENT:** Audiometer. **Ophthalmology:** Fundus camera – Nd – YAG & argon lasers – perimeter-Lasik-phaco emulsifier-OCT	Students shall visit the Urology, Cardiology, Neurology, ENT, and Ophthalmology departments and get familirized with the equipments. They shall prepare a chart or make a presentation on various diagnostic and therapeutic equipments with their functions in these departments. 4 hrs	Written examination	At the end of the lesson students will be able to: Get familiarized with various Urology, Cardiology, Neurology, ENT, and Ophthalmology equipment and their functions
4	5	**Operation Theatre** – ECG monitor – anaesthesia machine – laminar air flow system in OT-pulse oxymeter suction apparatus– endoscopes – electrosurgical unit – heart lung machine – oxygenators-operating microscope-CUSA-navigation system, Intra-Aortic blood pump **Principles and techniques of sterilization**-Autoclaves-Plasma Sterilizer (STERAD)-ETO Sterilizer-Ultrasonic cleaner-Washer disinfector	Students shall visit the Operation Theater and get familirized with the equipments. They shall prepare a chart or make a presentation on various diagnostic and therapeutic equipments with functions in these departments. 3 hrs	Written examination	At the end of the lesson students will be able to: Get familiarized with the various types of equipments used in OT and their functions

5	4	• Installation & commissioning of medical equipment • Maintenance: Preventive & breakdown • Electrical & radiation safety: Effects, precautions, and protection • Calibration, AMC, CMC, and equipment insurance • Troubleshooting of biomedical equipment	Students shall visit the biomedical department and get familirized with the maintenance procedures. They shall prepare an agreement between supplier and the hospitals for maintenance contracts. Presentation on Various maintenance measures and conditions (refer the hospital AMC/CMC) 2 hrs	Written examination	At the end of the lesson students will be able to: Understand the role of engineering department in specification & guidelines, technical evaluation, custodianship of equipments.
Materials Management					
6	10	**Principles of Materials Management:** • Definition, objectives, and principles of materials management • Importance and functions in hospital settings • Organization of materials department and its link with administration • Role and responsibilities of the materials manager • Materials planning and budgeting in hospitals • Material Resource Planning (MRP) • Inventory cost considerations • Forecasting: sales, production, and pricing • Budget preparation and control	Students shall visit the materials department and understand the preparation of Tender notice, Quotation, Comparative analysis, and Purchase order -5 hrs	Written examination	At the end of the lesson students will be able to: Understand the functions of the department. Plan and procure the materials and biomedical equipment including price forecasting in the hospitals

		Procurement of materials in hospitals – • Types of materials: Medical, non-medical, and stationery • Classification and categorization of hospital materials • Procurement considerations for different material types • Steps in the purchase procedure & tendering process • Purchase systems: Centralized, decentralized, local purchase, and outsourcing • Principles of purchasing: Right quantity, quality, price, time, and source • Purchase of capital equipment • Overseas and online procurement methods			
7	10	**Hospital stores, Receipt of materials in hospitals and distribution channels**: • Definition, objectives, relevance, and functions of hospital stores • Types of stores and departmental sub-stores • Store layout and design • Goods receipt process: Medical, technical & administrative steps • Documentation during receipt of materials • Material inspection: Criteria, quality check, control, and assurance • Steps in inspection and preparation of inspection reports • Accounting of received materials	Students shall visit the materials department of the hospital and based on their study students shall prepare a GRN form, MIR and Issue form -2 hrs	Written examination	At the end of the lesson students will be able to: Understand the types of stores, sub stores and layout of stores. Good receipt methods. Documentation and inspection. Acquire knowledge in Distribution system, channels distribution methods.

		Distribution system: • Scope and objectives of distribution in hospitals • Indenting and various distribution channels • Scientific distribution methods: Push & pull systems, par-level system, cart exchange • Stock verification and pilferage control • Card systems: Bin cards and inventory control • Storage conditions and cold chain management • Security, control measures, and store indenting procedures			They will also be aware of control of pilferage, Storage conditions, Security control, and Intending of stores.

8	8	**Administrative control on inventory & cost**
		• **Inventory Control:** Administrative control over inventory and associated costs
		• Inventory control: Definition, scope, objectives, and functional role
		• Principles and factors influencing inventory control
		• Administrative aspects: Specification, codification, and standardization
		• Inventory control methods:
		  • **Time & Quantity-based:** Lead time, EOQ (with/without backorder), P & Q systems, ROP, ROL, JIT
		  • **Classification-based:** ABC, VED, FSN, SDE, HML
		  • **Other Methods:** Variety reduction, Two-bin system
			Students shall visit the materials department and gain knowledge on various inventory control methods and submit a report.
			
			3 hrs
				Written examination	At the end of the lesson students will be able to:
					
					Gain knowledge on inventory control, specification, codification, and various inventory control methods

9	3	**Value Analysis & Condemnation of materials in hospitals** **Value analysis:** • Meaning, objectives, steps in value analysis, techniques in value analysis **Condemnation:** • Meaning, Procedure for disposal of scrap & unserviceable materials, buy back procedures, scrap sale, Auction.	Students shall visit the hospital and learn condemnation procedures, buyback procedures and presentation with personal remarks. A report shall be submitted for the same. 2 hours	Written examination	At the end of the lesson, students will be able to: Be capable of value analysis, and learn the condemnation procedures and buyback procedures.
10	7	**Legal aspects:** **Commercial Laws & Trade Acts** • Sale of Goods Act, 1930 • Carriage of Goods Act • Conditions and warranties • Concept of agreement, contract, agency, arbitration, and damages **International & Domestic Trade Regulations** • Import & Export (I&E) trade control • Import cycle, FEMA, and EXIM policy • Customs and excise exemptions • Canalized agencies **Trade Documentation & Logistics** • Letter of credit • Bill of lading • Insurance and port formalities **Material Information System:** □ Scope, objectives, aims, and motives of computerization □ Applications in: • Material identification	Students shall review literature and do a Case study presentation on any major issues faced by the hospital (court case) The students shall visit the materials department and get familiarized with the material information system. 3 hrs	Written examination	At the end of the lesson students will be able to: Acquire knowledge on legal implications of materials management. Acquire knowledge on material information system.

		• Statistical analysis • Automated inventory control • E-commerce and online procurement • Interdepartmental communication • Barcoding and tracking systems			

Essential readings

1. Khandpur R.S. Hand Book of Biomedical instrumentation, Tata McGraw Hill Publishingco., Leslee Cromwell: Biomedical Instrumentation and Measurement
2. "The Physics of Medical Imaging", S. Webb, IOP Publishing Ltd., 1988.
3. "Handbook of Analytical Instruments", Khandpur R S, Tata McGraw Hill,1989
4. "Principles of Applied Biomedical Instrumentation",L.A.Geddes&L.E.Baker, Wiley India Pvt.Ltd, Third Edition, 1989.
5. Dutta A.K. Integrated Materials Management., S.Chand & Co. New Delhi 1989.
6. Dutta A.K. Materials Management Procedures, Text & Cases, Prentice Hall India Starr & Miller : Inventory Control – Theory & Practice, Prentice Hall India.
7. Gopalakrishnan, P & Sandila M.S. Stores Management and Logistics. Gopalakrishna P: Purchase & Materials Management, McGraw Hill
8. England W.B. & Leenders M.R. Purchasing & Materials Management Tarapore Vala & Sons. Lal A.B.:Inventory Models and the problems of price fluctuations, Sree Publishing Book House. Peekhar H.H: Effective materials Management Taraporewala D.B & co
9. Kunders, G D (2004)- Facilties Planning and Arrangement in Healthcare, Prism Books Pvt Ltd, bangalore.
10. Vagvala Venkat Reddy- Handbook of Materials Management in Healthcare Industry
11. Raje V.N- Drug store and business management
12. Charles E Housley- Strategies in hospital materials management: case studies and master planning

THIRD SEMESTER
PAPER -I
HEALTHCARE MARKETING MANAGEMENT AND INFORMATION SYSTEM

Semester	**THIRD SEMESTER**
Course Title:	**Healthcare Marketing Management and Information System**
Course Code	**HMI -1009**
Total Hours	**90 Hours**
Theory	**60 Hours**
Practice	**30 Hours**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION:
This comprehensive course provides an in-depth exploration of healthcare marketing and information systems, equipping students with essential knowledge and skills to navigate and excel in the modern healthcare environment. The course is designed for those interested in understanding and implementing marketing strategies and information systems within healthcare organizations.

COURSE OUTCOME:
CO1: Understand and Apply Core Marketing Concepts and Strategies in Healthcare
CO2: Analyze and Develop Healthcare Marketing Plans and Promotional Strategies
CO3: Evaluate and Implement Healthcare Information Systems for Decision Making and Operational Excellence
CO4: Assess and Manage Integrated Healthcare Information Systems and Technology Resources
CO5: Develop and Implement New Product and Service Innovations in Healthcare Marketing

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X		X				X		X	
CO2	X		X		X		X			
CO3		X	X	X		X		X		X
CO4			X	X				X		
CO5	X		X		X		X		X	X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	10	**Introduction to Healthcare Marketing** • Introduction to Healthcare Marketing • Definition and Core Concepts of Marketing • Functions of Marketing • Goods vs. Services; Service Marketing • Customer Relationship Management (CRM) in Healthcare • Marketing Environment and Market Analysis • Consumer Buyer Behavior • Marketing Mix: o 4Ps for Goods o 7Ps for Services	Provide case studies related to healthcare marketing. Students can analyze and discuss marketing strategies, challenges, and outcomes in the healthcare sector. Ask students to conduct a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis for a healthcare organization. Ask the students to develop a marketing plan for a healthcare organization. This could include identifying target audiences, setting marketing objectives, and outlining strategies for the 4Ps or 7Ps of marketing 6hours	Written examination	At the end of the lesson students will be able to: Define healthcare marketing and its significance in the industry. Introduce the elements of the marketing mix (product, price, place, promotion) in the context of healthcare. Explain the distinctive characteristics of services in the healthcare sector. Understand the role and importance of marketing in the healthcare industry.

2	12	**Healthcare Marketing Strategy, Mix, Research and Service** • Market Segmentation, Targeting & Positioning (STP) in healthcare • Marketing research, ethics, and Marketing Information Systems (MIS) • Product/Service management: o Product line, mix, and life cycle (PLC) o Branding in healthcare o New product development: opportunities, process, success & failure • Role & challenges for hospital administrators in marketing • Social responsibility in healthcare marketing • Planning and organizing medical camps	Case studies for market segmentation, Targeting and positioning. Marketing games: Students are asked to develop a new product and make a mock sale in classroom. 6hours	Written examination	At the end of the lesson students will be able to: Define market segmentation and its relevance in healthcare. Recognize the importance of marketing research in healthcare decision-making . Discuss the components and functions of a marketing information system. Identify and apply relevant segmentation variables in healthcare settings. Introduce the concepts of product/service, product line, and product mix in healthcare . Discuss the opportunities and challenges in developing new products/services in healthcare. Understand the key steps in planning and organizing a successful medical camp.
3	14	**Marketing Planning & Promotion:** • Healthcare marketing plan • Promotional mix and pricing strategies	Ask the students to develop a healthcare marketing plan.	Written examination	At the end of the lesson students will be able to:

		• Pricing: Meaning, importance, procedures, factors, policies **Advertising & Communication:** • Advertising, publicity, public relations • Direct marketing and marketing programs for hospital services **Emerging Trends in Healthcare Marketing:** • Green, event, digital, network, direct, social, and e-commerce marketing • Social media and global marketing • Cloud computing in healthcare marketing	This includes setting objectives, identifying target audiences, and outlining strategies for promotion. Provide case studies of real-world healthcare pricing scenarios. Have students create advertisements for healthcare services. This could be in various formats, including print, digital, or video. Assign students to research and present on existing healthcare marketing programs implemented by hospitals or healthcare organizations. 6hours		Discuss the importance of aligning marketing objectives with overall organizational goals. Identify and understand the elements of the promotional mix in healthcare. Define various pricing strategies and their relevance in healthcare. Introduce different types of advertising strategies used in healthcare. Discuss the uses and techniques of PR and publicity for healthcare organizations. Understand the considerations for selecting the appropriate advertising level in healthcare Analyze real-world examples to understand effective marketing approaches in healthcare.
4	12	**Healthcare Information Systems: Empowering Decision Making and Operational Excellence.**	Case studies: Analyze real-life scenarios where HIS played a crucial role in decision-	Written examination	At the end of the lesson students will be able to: Comprehend the role of HIS in facilitating

		HIS and Decision Making: • Role of HIS, Information Reporting Systems, and Decision Support Systems (DSS) • Clinical and Diagnostic Decision Support Systems **Information System Development:** • System analysis and design • Strategic, tactical, and operational planning **Implementation & Control of Information Systems:** • Database management • Input, process, output, and facility control • Privacy and system security **Analyzing HIS:** • Functions and evaluation of HIS	making processes within healthcare organizations. Role-playing exercises: Simulate decision-making situations where students act as healthcare administrators using HIS to make strategic decisions. Hands-on practice: Design and create information reports using HIS software tools. Decision support system simulation: Use mock patient data to demonstrate how decision support systems can aid clinicians in making informed medical decisions 6hours		decision-making processes within healthcare organizations Distinguish between information reporting systems and decision support systems. Gain knowledge of system analysis and design principles and apply them to develop information systems tailored to healthcare settings. Acquire skills in database management and understand the process of implementing information systems in healthcare organizations. Analyze the functions and features of hospital information systems, including clinical and diagnostic decision support systems, and evaluate the effectiveness of different information systems in supporting healthcare operations and decision making.

5	12	**Integrated Healthcare Information Systems and Technology Management** **Hospital Information Systems (HIS):** • Marketing Information System (MIS) • Human Resource Information System (HRIS) • Accounting and Financial Information Systems • Managing IT resources in hospitals **Computer Fundamentals & Applications:** • Basics of hardware and software • Applications of computers in hospitals • Programming, operating systems, da-tabase concepts and design **Productivity & ERP Tools:** • MS Office Suite, office automation, spreadsheet & database management • Enterprise Resource Planning (ERP) systems **Networking & Internet:** • Computer networks, internet basics, and hospital connectivity	Have students create employee profiles, manage attendance, and generate reports using HRIS software and also enter financial transactions, generate balance sheets, and analyze financial data using AIS software. Ask the students to create documents, spreadsheets, presentations, and databases using MS Office applications. Assign students to create a comprehensive patient report using MS Word, organize patient data in MS Excel, and design a presentation on a healthcare topic using MS PowerPoint. 6hours	Written examinati on	At the end of the lesson students will be able to: Comprehend the various types of information systems used in healthcare. Apply information systems effectively in healthcare environments, including managing resources, utilizing computer hardware and software, and leveraging Microsoft Office rative tasks. Acquire knowledge of database concepts and design principles, spreadsheet and database management techniques, and data analysis methods to support decision making in healthcare. Understand the integration of computer networks, internet technologies, and office automation software in healthcare settings to optimize operational efficiency and improve patient care. .

Essential readings:

- Kotler Philip : Marketing for Health Care Organizations.
- Chhabra T.N, Grover S.K, Marketing Management,Dhanpati Rai & CO Ltd,
- Saxena Rajan, Marketing Management ,5 th edition, MC graw hills publications
- Kotler Philip & Lane Kevin: Marketing Management, Pearson
- CZinkota R Michael,Ronkainen A Iikka,International Marketing,8 th edition
- Zeithaml A Valarie,Bitner Jo Mary,Pandit AJAY – Services Marketing, Integrating customer focus across the firm ,Mc Graw Hill Education Private Limited, New Delhi, 6th edition.
- Kotler Philip : Principles of Marketing, Prentice Hall, Eaglewood, Cliffs, NJ, 1980.
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- Iyer Seshab Subramaniam,Marketing Of Healthcare Services – A bok for healthcare professionals, Notion Press; 1st edition (14 September 2021)
- Franco Eugine C,(Thanaraj Antony X, Marketing Of Hospital services , Discovery Publishing Pvt.Ltd (1 January 2011)
- Dr. Gupta C B, Dr. Rajan Nair N: Marketing Management,Text And Cases, Sultan Chand And Sons, New Delhi.
- Madan Pankaj, Mittal Amit, VermaHemraj: Marketing Management, Second Edition, Global Academic Publications And Distributions.
- Jauhari Vinnie, Dutta Kirthi: Services Markeing, Second Edition, Oxford University-Press.
- Kotler Philip : Marketing Management – Analysis, Planning, Implementation and Control.
- James A O'Brien - Management Information Systems Galgotia Publishers.
- Bakkar A. R. & Mol. J.L.: Hospital Information System – Effective Health Care Vol. 1. Amsterdam.
- Davis G B & H Margrethe: Management Information System (Conceptual Foundations, Structure & Development), Tata McGraw Hill
- Griesser G. Et al Data Protection in Health Information System – Considerations and Guidelines.
- Goyal D.P: Management Information System, McGraw Hill.
- Murdick G Robert, Ross E Joel Ross & Clagget R James: Information Systems for Modern Management.
- Jawadekar S Waman: Management Information System managerial perspectives, Mac-millan.

THIRD SEMESTER
PAPER –II
OPERATIONS RESEARCH

Semester	THIRD SEMESTER
Course Title:	OPERATIONS RESEARCH
Course Code	OPR- 1010
Total Hours	90 Hours
Theory	60 Hours
Practice	30 Hours
Assessment Methods	Written, Practice, Oral

COURSE DESCRIPTION:
To understand the various operations research principles, techniques and their applications to the health care system which can help to improve the effectiveness and efficiency of the services in the hospital.

COURSE OUTCOME:
CO 1. Students will familiarize the Operations Management concepts and adapt new OR techniques, tools and methodologies to address evolving challenges and opportunities
CO 2. Students will be proficient in introducing various optimization techniques from a managerial perspective
CO 3. Students understand how to analyze the materials and machines that deteriorate with time and fix the optimal time for their replacement
CO 4. Students will be efficient in using Operations Research techniques in managerial decisions.
CO5: Students will familiarize themselves with network models,such as PERT and CPM,and their application in healthcare project management for efficient scheduling and coordination.

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X		X					X	X	
CO2		X		X	X			X		
CO3				X				X		
CO4			X		X	X	X			X
CO5			X					X		

Course Content

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	25	**Introduction**: Evolution of Operations Research - Models - Formulation of Models - Techniques of Operations Research - Limitations of Operations Research - Application of OR in the field of health care. **(04 Hours)**	Case study development for the applications of Operations Research in Healthcare **(02 Hours)**	Written examination	**End of the lesson the student can**: Understand the meaning, purpose and tools of Operations Research and describe the history of Operations Research, Stages of OR and the Applications of Operations Research.
		Linear Programming: Requirements and applications of L.P.P - – Mathematical formulation of a problem - Graphical methods and Simplex method of solving optimization problems **(10 Hours)**	Group Discussion - Students have to identify the objective function of any one of the hospital department, list out the constraints of the model and give the solution for the management **(05 Hours)**	Written examination	Formulate Linear Programming Problem and identify the characteristics of linear programming problem. Make a graphical analysis of the linear programming for problem solving.
		Transportation model - Balanced and Unbalanced problems - Initial basic feasible solution - North-West Corner rule –Least cost entry method - Vogel's Approximation method – moving towards optimality* **(07 Hours)** (**Only Theory**)	Individual Assignment - Students have to identify the demand and supply pattern of any one of the hospital department **(03 Hours)**	Written examination	Formulate Transportation Problem and determine basic feasible solution using various methods. Understand the MODI, Stepping Stone Methods for cost minimization. Make unbalanced Transportation Problem into balanced one using appropriate method
		Assignment model - Hungarian model – Routing problems. **(04 Hours)**	Seminar - Students have to develop assignment model **(02 Hours)**	Written examination	Know how to formulate assignment problems. Learn how to solve the balanced and unbalanced Assignment Problems

2	12	**Queuing Theory –** Operating Characteristics of a Queuing System - Constituents of a Queuing System - Service Facility - Queue Discipline - Mathematical Analysis of Queuing Process - Properties of Queuing System – Notations - Service System - Single Channel Models - Multiple Service Channels* - Applications of Queuing Theory - Limitations of Queuing Theory **(08 Hours)** *(**Only Theory**)	Individual Assignment - Students have to identify the queues inside the hospital and they have to find out the reasons of waiting time **(04 Hours)**	Written examination	End of the lesson the student can: Understand the the movement of people, objects, or information through a line inside the hospital
		Decision Theory – Decision making under certainty - uncertainty - conditions of risk **(04 Hours)**	Group Discussion - Students have to identify the process of making choices by identifying a decision, gathering information, and assessing alternative resolutions **(02 Hours)**	Written examination	Understand the steps of decision making to determine the best option or course of action
3	10	**Network models** – Introduction - Basic Difference between PERT and CPM - PERT/CPM Network Components and Precedence Relationship - Network construction and time analysis - cost time trade-off * **(10 Hours)** *(**Only Theory**)	Seminar - Students have to develop a statistical algorithm of a project which has a certain start and end time **(05 Hours)**	Written examination	**End of the lesson the student can**: Understand to optimize the longest time duration to minimize the total project cost and time
4	8	**Sequencing model**: Sequencing problem – processing through	Individual Assignment - Students have to describe how a	Written examination	**End of the lesson the student can**: learn the models designed for

		2 machines - processing through 3 machine – s jobs and k machines***(04 Hours)** ***(Only Theory)**	particular task which is composed of the activities, their steps, the associated intents and breakdowns **(02 Hours)**		tasks that involve sequential data
		Replacement model: Replacement of items that deteriorate gradually – with time, without time, that fails completely – individual replacement – group replacement* **(04 Hours)** ***(Only Theory)**	Group Discussion - Students have to determine the replacement decision-making process of equipment or material as a group or individual as they fail **(02 Hours)**		Understand to analyse the materials and machines which deteriorate with time and fix the optimal time of their replacement.
5	5	**Simulation**: Basic Concepts - Methodology of Simulation - Monte-carlo simulation - Simulation Procedure, Application of Simulation - Simple problems in inventory and queuing **(05 Hours)**	Seminar - Students have to simulate to find out the cost of any one material of hospital stores by designing ,constructing and manipulating the real system **(03 Hours)**	Written examination	**End of the lesson the student can**: learn the models designed for tasks that involve sequential data
The university examination question paper will be framed with 60% problems and 40 % theory					

Essential readings:

1. Hamdy A Taha, 1999. Introduction to Operations Research, PHI Limited, New Delhi.
2. Sharma, J.K., 1989. Mathematical Models in Operations Research, TMH
3. Beer, Stafford, 1966. Decision and Control, John Wiley & Sons, New York.
4. Levin, Rubin, Stinson, Gardner, 1992. Quantitative Approaches to Management, TMH
5. Wagner, Harvery M., 1975. Principles of Operations Research, PHI, Egnlewood Cliffs, N.J.
6. Dharani Venkatakrishnan S. Operations Research., Keerthi Publishing House., Coimbatore
   Israel Brosh : Quantitative Techniques for Managerial Decision Making., Prentice Hall Co.

THIRD SEMESTER
PAPER –III
HEALTH ECONOMICS AND FINANCE

Semester	**THIRD SEMESTER**
Course Title:	**HEALTH ECONOMICS AND FINANCE**
Course Code	**HEF -1011**
Total Hours	**90 Hours**
Theory	**60 Hours**
Practice	**30 Hours**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION:
Aim to enable students to apply economic principles and analytical tools to understand, analyze, and address complex challenges and issues in the healthcare delivery system. The course aims to equip students with the knowledge and skills to analyze, evaluate, and make informed financial decisions in various contexts, including corporate finance, investment management, and financial planning.

COURSE OUTCOMES:

CO1: Analyze the State and Scope of Health Economics and its Impact on Healthcare Utilization and Expenditure
CO2: Evaluate Economic Theories and Models Related to Healthcare Demand, Supply, and Market Imperfections
CO3: Apply Cost-Effectiveness and Cost-Benefit Analysis Methods to Evaluate Healthcare Interventions
CO4: Develop and Analyze Health Policy Frameworks and Their Impact on Health Systems and Governance
CO5: Implement Financial Management Techniques in Healthcare Settings, Including Working Capital Management and Capital Budgeting

Mapping of POs to COs:

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
CO1		X		X		X		X		
CO2	X			X		X	X			
CO3			X	X	X	X			X	X
CO4	X					X	X		X	X
CO5			X	X				X		

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	15 hours	**Economic Development and Health**: **Health Economics:** Scope and normative aspects. **Macro View:** • Cross-country comparisons • Rising healthcare costs • India's health expenditure: public vs. private **Micro View:** • Health service utilization • Preventive vs. curative care • Socio-economic determinants **Healthcare Market:** • Demand & supply, elasticity, and need • Supplier-induced demand • Grossman's health demand model • Market imperfections & externalities **Financing:** • Healthcare financing systems • Role of health insurance	Analyzing real-world case studies of healthcare systems and policies in different countries, allows students to apply economic principles to understand the complexities of healthcare provision, financing, and delivery. For instance, students can examine case studies on the impact of health insurance schemes on access to healthcare services or the effectiveness of public health interventions in addressing disease outbreaks. (6 Hours)	Written examination	Students should be able to identify and evaluate various factors influencing health care utilization.
2	15 hours	**Measurements**: • **Morbidity & Mortality** • **DALY & QALY** • **Cost Analyses:** Cost-effectiveness, Cost-benefit, Cost-utility, Efficiency **Health Policy** • **Public Health:** Causation, prevention, social determinants	Divide the class into groups and assign them different health policy topics or dilemmas to discuss or debate. Encourage critical thinking, perspective-taking, and	Written examination	Students should be able to understand the relationship between health system and health policy, including the foundation of health policy making.

		• **Policy Making:** Foundations, theories, health systems • **Core Focus:** Equity, access, quality • **Tools:** Policy analysis, policy brief	defending their arguments based on evidence and theory (6 hours)		
3	10 hours	**Health Policy & Systems** • Health institutions and governance • Overview of health services • Globalization and national health trends • Basics of healthcare systems and roles **Health Programs** • Planning, implementation, monitoring, and evaluation.	Debates and discussions encourage critical thinking and help students develop their argumentation skills. Topics for debate might include controversial health policies, ethical dilemmas in healthcare decision-making, or the role of the private sector in healthcare provision. (6 Hours)	Written examination	Students should be able to apply the theoretical knowledge to practical scenarios in health care program management
4	10Hours	**Financial Management** • **Introduction:** Meaning, concepts, objectives • **Importance & Scope** • **Functions of Financial Management** • **Time Value of Money:** Present Value, Net Present Value (theory only) **Working Capital Management** • Meaning & Concepts • Importance • Factors Influencing Working Capital Needs	Organizing debates or discussions on current financial management issues or controversial topics can stimulate critical thinking and encourage students to explore different viewpoints. Topics for debate could include the impact of technological advancements on financial management practices, the effectiveness of	Written examination	Students should have a solid understanding of Financial management principles, including time value of money, net present value, enabling them to make informed financial decision in organizational contexts.

			different working capital management strategies, or ethical considerations in financial decision-making. (6 Hours)		
5	10 Hours	**Capital Budgeting** • **Meaning, Importance & Process** • **Investment Analysis Methods:** *(Theory only)* o Payback Period o Net Present Value (NPV) o Internal Rate of Return (IRR) o Discounted Cash Flow o Profitability Index **Capital Structure** • Introduction & Meaning • Theories: NI, NOI, MM Approach • Cost of Capital: Meaning **Leverage** *(Theory only)* • Meaning & Concept • Types • Financial Leverage**:** Importance & Limitations	Organize role-playing activities where students take on different roles within a company, such as CFO, project manager, or shareholder. They can negotiate and debate various capital budgeting decisions or capital structure strategies based on their assigned roles, providing them with a deeper understanding of stakeholder perspectives. (6 Hours)	Written examination	Students should have a comprehensive understanding of capital budgeting techniques and capital structure theories, equipping them with a necessary knowledge to make informed financial decision in corporate settings.

Essential reading

- Health Economics for Hospital Management- Shuvendu Bikash Dutta- Jaypee Brothers Publication.
- Microeconomics Theory- A. koutsoyiannis, Economics- Asish Banerjee and Debasish Majumdar,
- Managerial Economics- D.N. Dwivedi ,
- Macroeconomics- H.L Ahuja,
- Health Economics- N.K Anand and S Goyel,
- Managerial Economics – Theory, Practice and Problems., Prentice Hall India-
- Even J. Douglas, Stills E. Addison: Managerial Economics.,
- Richard C. Irwin Inc. Verma J.C: Managerial Economics – Concepts and Analysis for Business Decisions in Indian Environment,
- Lawrence Publishing House., New Delhi. Varshey R.L & Maheswari K.L:

- Managerial Economics., Sultan Chand & Sons Publishers.
- Thomas P.C: Managerial Economics.
- Salratore Dominick : Managerial Economics in Global Economy,
- Thomson Dean Joel: Managerial Economics, Prentice – Hall India,
- Eastern Economy Edition Dwivedi D.N: Managerial Economics, Vikas
- Khan M.Y. & Jain PK : Financial Management, Tata Mc Grew Hill Publishing Co.
- Kuchhal S.K.: Financial Management, Cheritarry Publishing House., Allahabad
- Maheswari S.N.: Principles of Financial Management. Sulthan Chand & Sons., New Delhi
- Pandey IM: Financial Management, Vikas Publishing House Pvt.Ltd., Bombay
- Prasanna Chandra: Financial Management, Tata Mc Grew Hill., New Delhi.
- John Thampton : Financial Decision Making – Concepts, problems & cases., Prentice Hall
- B M Saharkar, Principles of hospital Administration and Planning- 2nd edition ,Jaypee

THIRD SEMESTER

PAPER - IV

HOSPITAL SUPPORTIVE SERVICES AND MEDICAL DOCUMENTATION

Semester	**THIRD SEMESTER**
Course Title:	**HOSPITAL SUPPORTIVE SERVICES AND MEDICAL DOCUMENTATION**
Course Code	**HSM -1012**
Total Hours	**90 Hours**
Theory	**60 Hours**
Practice	**30 Hours**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION:

This course is to support the students in understanding the planning, organization, designing and management of the different departments in the hospital. Identifying the critical problems in all the areas to suggest improvement solutions, learn the major considerations in designing the units, fixing locations, planning facilities and space requirements of the various units. Functions of the medical records department. Uses and values of medical records and coding and indexing of medical records.

COURSE OUTCOME:

CO1: Students will understand the principles and practices involved in planning and designing support, utility, and administrative services in hospitals.

CO2: Students will learn to apply strategic focus and operational management practices in various healthcare settings.

CO3. Students will understand the legal and regulatory requirements related to risk management in healthcare institutions.

CO4. Students will develop skills in managing patient complaints, measuring patient satisfaction, and understanding the voice of the customer.

CO5. Students will gain knowledge in health information management, including the storage, retrieval and use of medical records for patient care and legal purposes.

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X		X							
CO2	X	X	X	X				X		X
CO3						X	X		X	
CO4	X				X		X			X
CO5	X				X			X		X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	12	**Planning and Designing of Support and Utility Services:** • Planning and layout of essential hospital support services including Front Office, Admission & Registration, Medical Records, Public & Corporate Relations. • Design and management of utility services such as CSSD, Housekeeping, Linen & Laundry, Dietary & Cafeteria, Nutrition & Dietetics, and IT systems. • Operational planning for engineering and infrastructure services including STP, Incinerator, and Biomedical Waste Management.	Students shall visit various support and utility service departments in the hospital and study the planning, facilities requirement, and organization as well as identify the administrative work flow and issues in the departments.	Written examination	At the end of the lesson students will be able to: Understand the planning requirements of the support and utility services in the hospital. Relate theoretical knowledge with real-world scenarios in the hospitals

		• Organization of critical support functions like Ambulance, Security, Internal Transportation, Mortuary, and Central Stores.	A detailed report shall be submitted based on the study. 4 hours		Analyze common challenges faced in these departments from an administrative point of view.
2	4	**Administration Departments:** • Overview of Nursing Administration including organization and staffing. • Functions and management of Finance and Purchase Departments in hospitals.	Students shall visit the administration departments in the hospital and study the planning, facilities requirement, and organization as well as identify the administrative work flow and issues in the departments. A detailed report shall be submitted based on the study. 3 hours	Written examination	At the end of the lesson students will be able to: Understand the planning requirements of the administration departments in the hospital. Relate theoretical knowledge with real-world scenarios in the hospitals Analyze common challenges faced in these departments from an administrative point of view.
3	7	**Role of Risk Management Emergency Preparedness:** • Emergency codes and mock drills • Fire safety and general safety protocols **Hazard Identification & Risk Assessment:** • Chemical, electrical, and radiation hazards • Biosafety and occupational health risks	Students shall visit the project planning and facilities management department of the hospital and get an insight on the legal and practical aspects related to risk management and safety	Written examination	At the end of the lesson students will be able to: Develop a comprehensive understanding of the factors related to risk management in hospitals.

		Regulatory & Clinical Risk Management: • FDA regulations and compliance • Institutional pharmacovigilance • Clinical trial oversight • Adverse event reporting	concerns in a hospital. 3 hours.		Demonstrate an understanding about the various statutory regulations pertaining to patient safety in a hospital. Gain an overview of the factors related to patient and staff safety to be given due consideration while planning and in the operations stage of a hospital.
4	5	**Hospital Operations** • Meaning, definition and scope of hospital operations • Enhancing operational efficiency and competitiveness in the evolving healthcare market • Operational management practices in Indian Hospitals • Role of vertical and horizontal integration in improving care coordination and resource utilization	Students shall visit operations departments in the hospital and study the planning, facilities requirement, and organization as well as identify the administrative work flow and issues in the departments. They shall submit a report for the same. 4 hours	Written examination	At the end of the lesson students will be able to: Demonstrate an in-depth understanding of hospital operations. Gain a solid understanding of the functions of operations department
5	12	**Patient Relations Aspects** • Patient Safety and Rights • Voice of the Customer and Complaints Management	Students shall visit the patient relations/public	Written examination	At the end of the lesson

		• Measuring Patient Satisfaction • Time Management: Work and method study in critical processes (admission, discharge, turnaround time) **Patient care Management** • Performance Measurement Tools and Techniques • Quality Improvement Practices and Key Indicators • Measuring Operational and Cost Efficiency	relations/front office/admissions and IP departments as well as quality department in the hospital and study the administrative work flow and issues in the departments and their management. A detailed report shall be submitted based on the study. 5 hours		students will be able to: Understand the management of issues and the problem solving techniques that arise in the hospital. Relate theoretical knowledge with real-world scenarios in the hospitals Analyze common challenges faced in these departments from an administrative point of view.
6	10	**Medical Records & HIM** • **Functions:** Data collection, storage, retrieval, and confidentiality • **Uses:** Clinical care, legal, research, statistics • **Forms:** Basic (admission, discharge), Special (operative, lab) • **Flow:** Registration → Numbering → Deficiency check → Assembling • **Coding:** ICD-9, 10, 11 • **Indexing:** Master, patient, disease, physician, operative • **Filing:** Alphabetic, straight numeric, terminal digit, middle digit	Students shall visit medical records department in the hospital and study the functions, work flow, types of filing, and coding in the department. A detailed report shall be submitted based on the study. Students shall also refer literature regarding various types of coding and prepare a report based on it.	Written examination	At the end of the lesson students will be able to: Understand the functions and various forms of medical records department. Students shall be able to understand coding in medical records department. Relate theoretical knowledge with

			5 hours		real-world scenarios in the department Analyze common challenges faced in the Medical records department from an administrative point of view.
7	10	**Record Formats** • SOMR, POMR, Integrated • Mental Health Record **Record Analysis** • **Qualitative** (accuracy) • **Quantitative** (completeness) **Vital Statistics** • Births, deaths, morbidity data **Committees** • Executive, Credential, Safety • Infection Control, Medical Record, Audit **Legal Aspects** • Consent, information release, legal evidence, official documentation **EMR** • Digital patient records for efficiency and access **Quality Assurance** • Supports audits and improves care quality	Students shall visit medical records department in the hospital and study the formats used in the hospital, the analysis and controlling aspects as well as the legal aspects, EMR, and quality assurance in the hospital. A detailed report shall be submitted based on the study. 4 hours	Written examination	At the end of the lesson students will be able to: Understand the functions and various formats as well as controlling aspects followed in the medical records department Relate theoretical knowledge with real-world scenarios in the hospitals Understand the legal aspects pertaining to medical records. Understand the EMR functions as well as the quality aspects in medical records.

					Analyze common challenges faced in these departments from an administrative point of view.

Essential readings

- Humera Khan Mohd. Faisal Khan (2005) Management of Super specialty Hospitals,Deep & Deep Publications Pvt. Ltd
- Martin S. Feldstein "Hospital Costs and Health Insurance", Harvard University Press
- Hospital Operations: Principles of High Efficiency Health Care, by Wallace J. Hoppand Willian S. Lovejoy, Pearson FT Press; 1 edition (30 October 2012)
- Handbook of Healthcare Operations Management: Methods and Applications, by Brian T. Denton, Springer; 2013 edition (2013)
- Kunders, G.D: Facilities Planning and Arrangement in health care, Prism Books PvtLtd, Bangalore
- Sakharkar BM: Principles of Hospital Administration and Planning ,Jaypee Publishers, NewDelhi
- Davies Llewellyn R & Macaulay HMC (1995),Hospital planning and Administration, Jaypee Brothers, New Delhi
- D. C Joshi, MamtaJoshi: Hospital Administration, Jaypee Brothers Medical Publishers(P)Ltd, New Delhi, 2008
- Prof KshitijPatukale ,Mediclaim and Health insurance ,PrabhatPrakasan Publishers
- Brijesh C Purohit ,Economics Of Public and private health care, Health Insurance inIndia ,SAGE Publications India Pvt Ltd
- Michelle A Green ,Understanding Health Insurance .A Guide to billing and Reimbursement ,Cengage Learning Harish Sihare,S D Gupta ,Technicalities of Health Insurance ,Global AcademicPublishers and Distributors
- Hogarth .P. Glossary of Health care terminology., WHO Regional Office., Europe.
- Edna Huffman: Medical records Management Record company, Illinois., USA
- Park K: Park's Text Book of Preventive and Social Medicine., M/s Banaridas, Jabalpur. Khandpur R.S.
- Park K: Park's Text Book of Preventive and Social Medicine.,M/s Banaridas, Jabalpur.
- Neil S Skolnik: Electronic Medical Records A Practical Guide for Primary Care, Human press In

FOURTH SEMESTER
PAPER -1
ETHICAL AND LEGAL ASPECTS OF HEALTH CARE

Semester	**FOURTH SEMESTER**
Course Title:	**Ethical and legal aspects of health care**
Course Code	**ELA- 1013**
Total Hours	**90 Hours**
Theory	**60 Hours**
Practice	**30 Hours**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION:

Understanding the legal framework is important for efficient decision-making, relating to Health and hospital management. This paper aims to provide an understanding, application and interpretation of various Health-related laws, labour laws and their implications. The course will orient the students about the legal framework to be observed in hospital services and will help them to develop and control hospital programmes. It will also help to provide a thorough knowledge and familiarity with the importance of medical ethics.

COURSE OUTCOME:

CO1. Students will understand the basic principles of law and its application in the healthcare sector.

CO 2. Students will familiarize and develop understanding of the legal environment and regulations of statutory bodies for the sustenance of the health sector.

CO 3. Students will be familiar with ethical issues related to healthcare, including informed consent, patient confidentiality, and end-of-life care.

CO 4. Students familiar with the legal procedure involved in managing healthcare organizations

CO 5 . Students will understand the various regulatory legislations that govern the functioning of hospitals, ensuring compliance with legal standards and enhancing healthcare quality

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X					X		X		X
CO2			X			X	X			
CO3			X		X				X	
CO4		X	X	X		X			X	
CO5	X				X	X		X		X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	08	**Introduction to Law** – definitions – Kinds - source of Law. **Constitutional Provisions relating to health and medical practice**. 1. Basic tenants of Constitutional Law 2. Preamble to the Constitution 3. Fundamental Rights and their application 4. Article 21 and its Relevance in Health Care 5. Directive Principles of State Policy. Interpretation of Law - case handling procedures - police investigation - death certificates - Medico-legal problems: types. **Medical negligence**: – Ambit of negligence – Duty of care – Contractual duty – Tortious duty - Duty under Penal law - Duty under consumer law – Contributory negligence.	Provide students with case studies involving healthcare scenarios where Article 21 rights are implicated. Ask them to analyze the cases, identify the relevant Article 21 principles, and propose solutions or outcomes based on those principles. Assign students roles related to healthcare settings, such as patients, doctors' nurses, hospital administrators, and government officials. Ask them to enact scenarios that involve ethical dilemmas or conflicts related to healthcare rights protected under Article 21. 3 hrs	Written examination	At the end of the sessions, students develop a deeper understanding of constitutional provisions relating to hospitals the principles underlying Article 21 and its relevance in ensuring healthcare rights and access for all individuals. And also about the medical negligence.

2	08	**Medical ethics** Introduction – person-centred ethics – ethics and ethical codes – international code of medical ethics – code of medical council of India – services of life and death – duty of preserving life.- Medical experimentation in man – Drug Trial - Truth and professional secrecy. Duties and Obligations of Doctors Consent to treatment – Types of consent – Types of common complaints – Burden of proof & 'Res Ipsa Loquitor'. Withholding of life support in the Critically ill – Euthanasia – Dying declaration —Reasonable care Determination of liability and compensation A. Liability under the general law i. Individual liability ii. Vicarious liability B. Liability under the Consumer Law i. Professional service ii. Professional service free of cost iii. Contract of personal service iv. Deficiency in service	Present students with ethical dilemmas related to medical negligence and informed consent. Ask them to consider various factors on the Relevance of consent ii. Necessity of consent iii. Validity of consent iv. Refusal of treatment v. Consent – vulnerable group vi. Consent in an emergency 4 hrs	Written examination	The students develop a deep knoledge of medical negligence, informed consent, and the complex ethical, legal, and professional issues surrounding patient care and healthcare delivery.
3	8	Medical Termination of Pregnancy Act - The Transplantation of Human Organs Act 1994 –Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act 1994 - The National Medical Commission Act 2019 – The Indian Nursing Council Act 1947 Consumer Protection Act 1986 - The Pharmacy Act 1948 – The Environment Protection Act 1986 & Bio-medical Waste (Management and Handling Rules 1998) – Birth and Death Registration Act – Drugs	Facilitate debates on contentious issues related to abortion rights and access to reproductive healthcare. Divide students into teams representing different perspectives, such as pro-choice advocates, pro-life activists,	Written examination	The students will develop a deeper understanding of the legal framework governing the act about MTP, Human Organs Act, NMC Commission, INC and consumer rights in the context of healthcare services, as well as foster critical thinking and advocacy skills in promoting patient welfare and rights.

		and Cosmetics Act 1940. - Mental Health Act -Disability Act	healthcare professionals, and policymakers. Encourage them to argue their positions based on ethical principles, legal precedents, and public health considerations. 3 hrs		
4	7	**Regulatory Legislations** • The Kerala Shops and Commercial Establishment Act, 1960 – Registration of Shops / Establishments including hospitals – Regulations regarding the hours of work/holidays/leaves/health& safety – Prohibition of child labour & women employees. • The Kerala Industrial Establishments (National & Festival Holidays) Act, 1958 – National and Festival holidays – Rules regarding engaging employees on holidays – Wages during holidays. • The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Internal Complaints Committee – Constitution of Committee – Prevention – Prohibition – Redressal – Maintenance of records, registers and annual reports.	Provide students with case studies that involve real-world scenarios affected by regulatory legislation. Encourage them to analyze the cases, identify the relevant regulatory laws or statutes, and discuss how those laws impact the situation. Simulate regulatory hearings where students act as members of a regulatory body reviewing proposed regulations or enforcement actions, and have them make decisions based on legal requirements, scientific	Written examination	At the end of the sessions the students acquire a deeper knowledge of regulatory legislations, their practical implications, and in shaping health care.

			evidence, and public input. 4 hrs		
5	7	The Code on Wages, 2019 • Minimum Wages – Subsistence wage – Minimum wage – Fair wage – Living wage – Payment of minimum rate of wages – Components of minimum wages – Fixation of minimum wages – Procedure for fixing and revising minimum wages – Wages for overtime • Payment of Wages – Mode of payment of wages – Fixation of wage periods – Time limit for payment of wages – Legitimate deductions – Maintenance of records and registers.	Facilitate debates or discussions on controversial issues related to wage regulation and labour rights. Divide students into groups representing different viewpoints, such as workers' rights advocates, business owners, government policymakers, and labour economists. Encourage them to present arguments, propose solutions, and engage in constructive dialogue. 3 hrs	Written examination	The students will students develop a comprehensive understanding of the Code on Wages, its objectives, provisions, and practical implications for workers, employers, and the broader labour market.
6	8	The Code on Social Security, 2020, Employees' Provident Fund – Main features – Coverage – Rate of contributions – Benefits/schemes available for employees – EPF – EPS – EDLI – Non-applicability for certain establishments. • Employees' State Insurance – Major provisions – Coverage – Rate & Period of contributions – Employees State Insurance Fund – Benefits available for Insured persons & their dependants – Employee's compensation –Accidents/injury arising out of	The students have to analyze the Code of Social Security, breaking down its key provisions, objectives, and implications for workers' welfare. Have them summarize each section, identify the types of social security benefits	Written examination	At the end of the sessions, the students develop a comprehensive understanding of social security laws, ESI schemes, gratuity and maternity benefits as well as foster critical thinking and advocacy skills in promoting workers' welfare and financial security.

		& in the course of employment • Gratuity – Object and scope – Payment of gratuity – Continuous service – Nomination – Eligibility and determination of the gratuity amount – Ceiling – Forfeiture of gratuity. • Maternity Benefit – Scope and purpose – Prohibition of employment by women during a certain period – Benefits & eligibility for availing benefits under the act – Forfeiture of maternity benefit – Duties of employer	provided, and discuss the eligibility criteria and coverage under the code. Organize a simulated ESI registration process where students act as employers and employees applying for ESI coverage. Provide them with application forms, eligibility criteria, and guidance on the registration process. This activity helps students understand the administrative procedures involved in enrolling in ESI schemes. 3 hrs		
7	7	The Industrial Relations Code, 2020-Bi-Partite Forums – Works Committee – Grievance Redressal Committee – Constitutions & Functions. • Trade Unions – Main features – Registration of trade unions – Criminal conspiracy in trade disputes – Rights of registered trade unions. • Standing Orders – Standing orders – Model standing orders – Matters provided in standing orders – Certification of standing orders.	Organize simulation exercises where students participate in mock industrial relations negotiations, labor arbitration proceedings, or conciliation sessions. Provide them with case scenarios, negotiation	Written examination	students develop a comprehensive understanding of the Industrial Relations Code 2020, its objectives, provisions, and implications for labour relations and employment practices in India, as well as foster critical thinking and advocacy skills in promoting workers' rights and social

		• Industrial Relations & Industrial Dispute – Definition of industrial dispute – Strike/Lay-off/Lockout/ Retrenchment/Closure – Mechanism for resolution industrial dispute – Conciliation – Adjudication – Arbitration – Authorities – Conciliation officer – Arbitrator – Tribunals – Settlement & Awards – Prohibition of strike and lockout – Illegal strike & lockout – Procedure for retrenchment – Unfair labour practices	scripts, and role-playing instructions to simulate real-world interactions and decision-making processes in labour disputes and collective bargaining contexts. Visit a judicial court to observe how it functions 6 hrs		justice also able to maintain a healthy environment
8	7	The Occupational Safety, Health and Working Conditions Code, 2020 • Definitions – Contract Labour – Employer – Establishment – Industry – Occupier – Principal Employer – Wages – Workers. • Registration of Certain establishments – Duties of employer – Duties of employee – Rights of Employee – Occupational safety & health standards – Safety Committee & Safety Officers. • Health, Safety and Working Conditions – Responsibility of employer – Welfare provisions. • Hours of work – Working hours – Holidays – Maintenance of Registers, Records & Returns. • Contract Labour – Applicability – Licensing of contractors – Liability & Duties of principal employer – Responsibility for payment of wages – Prohibition of employment of contract labour	case studies on real-world workplace accidents, occupational diseases, or safety violations. Ask them to analyze the cases, identify the root causes of the incidents, and discuss the measures that could have been taken to prevent them in compliance with the OSHWC Code. Encourage critical thinking about the importance of proactive safety management and risk mitigation strategies in various industries and work settings. 4 hrs	Written examination	students develop a comprehensive knowledge on OSHWC Code 2020, its objectives, provisions, and implications for promoting workplace safety and health standards, as well as foster critical thinking and practical skills in implementing safety management systems and risk control measures in various occupational settings.

Essential readings:

- Kuchhal M C (2001) – Business Laws, Vikas Publishing House Pvt Ltd, Delhi
- Goswani V G (1999) – Labour & Industrial Laws, Central Law Agency, Allahabad.
- to hospitals in India
- Knight Bernard – Legal Aspects of Medical Practice.
- Bag R.K – Law of Medical Negligence and Compensation
- Cox H.W.V- Medical Jurisprudence and Toxicology , The Law Book Co.(p) Ltd
- WHO : Bioethics.
- WHO : Genetic, Ethics and Human Values Prabhakara G.N: Professional Medical Ethics 44
- Dominic Johnson, George Johnson (2019) – Kerala Shops and Commercial Establishment Act & Rules, 6th Edition, Em Tee En Publications, Kochi.
- Ashok B. Shenoy, Dominic Johnson, George Johnson (2007) – Manual of Labour and Industrial Laws in Kerala, Volume 2, Em Tee En Publications, Kochi.
- The Code on Wages, 2019 – http://egazette.nic.in/WriteReadData/2019/210356.pdf
- The Code on Social Security, 2020 – http://egazette.nic.in/WriteReadData/2020/222111.pdf
- The Industrial Relations Code, 2020 – http://egazette.nic.in/WriteReadData/2020/222118.pdf
- The Occupational Safety, Health and Working Conditions Code, 2020 – http://egazette.nic.in/WriteReadData/2020/222112.pdf

FOURTH SEMESTER
PAPER -II
QUALITY MANAGEMENT AND PATIENT SAFETY

Semester	**FOURTH SEMESTER**
Course Title:	**Quality Management and Patient Safety**
Course Code	**QMP -1014**
Total Hours	**90 Hours**
Theory	**60 Hours**
Practice	**30 Hours**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION:
Aim to develop the basic concepts of Total Quality (TQ) from design assurance to service assurance. To stretch on the International Quality Accreditation and Certification System. To understand the process approach for accreditation in hospitals.

COURSE OUTCOMES:

CO1. Understanding and Explaining Quality Management Concepts
CO 2. Applying Quality Management Tools and Techniques
CO 3. Analyzing Safety Risks and Implementing Risk Management Strategies
CO 4. Evaluating and Implementing Accreditation and Certification Standards

CO 5. Creating and Implementing Quality Improvement Plans

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X					X				
CO2			X		X			X		X
CO3		X	X	X	X				X	X
CO4				X		X	X		X	
CO5	X		X		X			X		X

Course Content

Unit No	Hours	Content	Practical learning & Hours	Assessment method	Teaching learning outcome
1	15	**Quality Management – Key Concepts** • **Evolution:** Inspection → QC → QA → QM • **Quality:** Definitions & service/product dimensions **Major Contributors:** • **Deming:** PDCA, 14 Points, 7 Diseases • **Juran:** Cost of Poor Quality, Pareto, Trilogy • **Crosby:** Zero Defects, 14 Steps, Quality Vaccine • **Taguchi:** Loss Function, Robust Design • **Feigenbaum:** Hidden Plant **Models:** • **Donabedian:** Structure–Process–Outcome • **SERVQUAL:** 5 Dimensions, Service Gaps	Divide students into groups, with each group assigned to one quality guru (Deming, Juran, Crosby, Taguchi). Have them present the contributions of their assigned guru, emphasizing key principles, philosophies, and methodologies. Cases studies for quality management concepts Assign students to conduct a service quality assessment using the SERVQUAL framework. 7hrs	Written examination	At the end of the lesson students will be able to: Understand the basic concepts and theories of Total quality Management. Get familiarized with the basic concept and framework of Total Quality management Understand the contribution of Quality Gurus in TQM Journey Define quality assurance and quality control. Describe the consequences of poor-quality management **Enable students to understand the importance of**

					quality in modern business scenarios. Identify and describe the key components and challenges of total quality management (TQM) .
2	15	**Quality Management Tools & Techniques** • **7 Basic Tools:** Cause & Effect, Check-sheet, Control Chart, Histogram, Pareto Chart, Scatter Diagram, Flow/Run Chart • **7 Management Tools:** Affinity, Relationship, Tree, Matrix, Prioritization Matrix, PDPC, Activity Network Diagram • **Approaches:** ○ **TQM:** Philosophy, principles, elements, barriers ○ **Six Sigma:** DMAIC, DMADV, implementation ○ **Lean:** Waste reduction ○ QFD, FMEA, Kaizen, JIT, 5S, Quality Circles, Benchmarking, Pokayoke, RCA	Organize case studies where students use Cause & Effect diagrams to analyze a quality issue in a healthcare organization and discuss the identified root causes and potential corrective actions. Organize a class discussion on the barriers to implementing TQM in organizations. Students can share insights and propose strategies for overcoming these barriers. Assign students to design and implement check-sheets in a real-world scenario. Case studies for quality tools and techniques. 8 hrs	Written examination	At the end of the lesson students will be able to: Describe and discuss the role of techniques used in TQM Grasp the nature and importance of various components that constitute TQM Enhance the knowledge in Tools and Techniques of quality management

3	15	**Healthcare Safety Overview** • Risk Management: Hazard identification, assessment, incident reporting • Patient Safety: International goals, near-miss, no-harm, sentinel events • Emergency Preparedness: Codes, mock drills, evacuation, disaster management **Hazard Types:** • Biological: HAIs, BMW, spills, exposures, disinfection, antibiotic policy • Physical: Heat, noise, falls, injuries • Chemical: Hazardous substances, MSDS, spill management • Radiation & Electrical Safety • Fire & Surgical Safety • Drug Safety: Medication errors, vulnerable patients • Gas, Water & Equipment Safety: Materiovigilance • Occupational Safety • Environmental Surveillance	Students can analyze case studies, discuss strategies for implementation, and create action plans on patient safety goals . Develop a simulation where students practice using an incident reporting system. They should report various incidents, and discussions afterward can focus on the importance of timely reporting Provide students with case studies involving sentinel events. They should analyze the root causes, consequences, and lessons learned from each event. Organize a training session on occupational safety 8 hrs	Written examination	At the end of the lesson students will be able to: Familiar with the issues of patient safety in ensuring quality in hospital services. Understand the concepts of hazards and risks in a healthcare setting. Identify potential hazards in clinical environments. Develop strategies for mitigating and managing identified risks. Understand the importance of international patient safety goals in healthcare. Grasp the significance of incident reporting in healthcare. Understand the purpose and significance of emergency codes.

					Understand the principles of disinfection and sterilization. Identify and assess physical hazards in healthcare settings. Understand electrical safety, fire safety, surgical safety, equipment safety and radiation safety principles in healthcare. Understand the principles of disaster management in healthcare.

4	15	**Quality Assessment & Accreditation**
		• **Accreditation:** NABH, JCI, NQAS, ISO 9001, 14001, 15189
		• **Audits:** Clinical, Nursing, Safety, Hand hygiene, Prescription, Records
		  ○ Types: Retrospective, Concurrent, Vertical, Horizontal
		  ○ Internal Audit: Cycle, Team, NC, CAPA
		• **Incident Reviews:** Mortality, Adverse events, Peer, Infection
			Case studies: Analyze audit cases, discussing the challenges faced and the solutions implemented. Assign each group a specific type of audit, and have them present the differences, advantages, and challenges associated with their assigned audit type Case-based discussions: Explore real-life incidents, discussing how reviews were conducted and the	Written examination	At the end of the lesson, students will be able to:
					
					Interpret and understand inspection requirements, certificates of compliance, and other means of quality verification.
					
					Understand the purpose and fundamentals of the auditing process and

		• **Key Terms:** Standards, KPIs, Vision, Mission, Quality Policy, Ethics • **Documentation:** Policies, Procedures, Formats, Control	improvements implemented. 7hrs		comprehend traceability and chain of custody advantages and disadvantages. Recognize the impact of documentation, reporting, inspecting, and auditing in product liability and costs to the individual and organization.

Essential readings:

1. Lock, D. (Ed.) 1994 Handbook of Quality Management – Bombay: Jaico Publishing House
2. Giridhar j gyani. Alexander Thomas (2017) , Handbook of health care quality and patient safety, jaypee brothers
3. Karun dev Sharma (2011), quality systems implementation in healthcare establishments, Jaypee brothers
4. Anjan Prakash (2011), Medical audit, Jaypee Brothers
5. Joint commission international (2017) JCI accreditation standards for hospitals, 6th edition,
6. Juran, J.M. 1989 Juran on Leadership for Quality: an executive Handbook, New Book.
7. Joint commission international (2017, Survey process guidelines for hospitals, 6th edition
8. John sandars, Gary cook , (2007), ABC of patient safety , Blackwell publishing,
9. NABH Standards for hospitals, (2015) , NABH , New Delhi,
10. Kunders, G D.(2002) - Designing for Total Quality in Healthcare, Prism Books Pvt Ltd, Bengaluru
11. Kunders, G D (2004) – Facilities Planning and Arrangement in Healthcare, Prism Books Pvt Ltd, Bengaluru. Davies Llewellyn R & Macaulay H M C(1995) – Hospital Planning and Administration, Jaypee Brothers, New Delhi
12. CharneyWilliam(1999)- Handbook of Modern Hospital Safety -Lewis Publishers Pvt Ltd, London.

13. Sakharkar B M(1998)- Principles of Hospital Admisnitration& Planning – Jaypee Publishers New Delhi
14. Desai VA ,Hospital Administration Vol -1,Madurai,1989
15. Sharma KR,SharmaYashpal(2003),A hand book on Hospital Administration ,Durga Printers ,Jammu
16. Francis CM,Hospital Administration,Jaypee publishers.
17. Joshy S.K, Quality management in hospitals – Jaypee publications.
18. Samuel Anand A & L Suganthi, Total Quality Management.
19. Paneerselvam R,Sivasankaran P,Quality Management,Eastern economy editionNew Delhi,2004.
20. Jan A Farooq, Step by step Quality Hospital Care,Jaypee publications.

FOURTH SEMESTER
PAPER -III
HOSPITAL INNOVATIONS AND STRATEGIC MANAGEMENT

Semester	**FOURTH SEMESTER**
Course Title:	**Hospital Innovations and Strategic Management**
Course Code	**ISM- 1016**
Total Hours	**90 Hours**
Theory	**60 Hours**
Practice	**30 Hours**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION:
This course provides a comprehensive exploration of strategic management and corporate social responsibility (CSR), essential for understanding and leading modern organizations effectively.

COURSE OUTCOMES:

CO1. Analyze and Apply Strategic Management Concepts
CO2. Evaluate and Develop Strategic Alternatives
CO3: Implement and Manage Strategic Plans
CO4: Assess Strategic Performance and Control
CO5: Understand and Apply Corporate Social Responsibility and Innovation Management

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X		X			X				X
CO2	X		X		X	X		X		X
CO3	X	X	X	X		X	X	X		X
CO4	X		X	X	X	X			X	X
CO5							X	X	X	X

Course Content

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	12	**Strategic Management** –Definition, Process, Role of top management in Strategic Management External environmental analysis, Dynamics of internal environment, Organizational appraisal	1.Case studies demonstrating role of top management in strategic management. 2. Making students to prepare Environmental analysis report	Written examination	Students should learn to interpret data, information, and market intelligence gathered through environmental scanning, research, and analysis, and use it to inform strategic decision-making. Also they should be able to generate strategic insights and recommendations based on their analysis of the business environment, and articulate the rationale behind their strategic recommendations clearly.
2	12	**Strategic alternatives** – Corporate level Strategies/Grand strategies-Stability strategies, Expansion strategies, Retrenchment strategies	Case studies of companies that have implemented various grand strategies should be given to students to gain insights into the challenges, successes, and failures associated with strategic decision-making.	Written examination	Students should develop a comprehensive understanding of the concept of grand strategies, including the various types, their objectives, and their implications for organizational performance. Students should be able to critically evaluate the suitability of different grand strategies in response to internal and external environmental factors. This involves analyzing complex situations, synthesizing information, and making informed strategic decisions.

3	12	**Strategic choice** - Corporate Portfolio Analysis, Industry-Competitor Analysis **Strategic implementation**- Resource Allocation, Structural, functional and behavioral implementation	Conducting Industry analysis exercises to identify strategic opportunities and threats within specific industries.	Written examination	Enables students to assess the competitive landscape, market trends, and industry dynamics to inform their strategic decision-making.
4	10	**Strategic evaluation and control**, Strategic management in healthcare. Management Audit, Human Resource Accounting	Analyze case studies of organizations that have succeeded or failed in executing their strategic plans. Encourage students to identify the factors that contributed to success or failure, including issues related to strategic evaluation and control.	Written examination	Students should be able to evaluate the extent to which strategic plans are aligned with organizational goals, mission, and values, and identify any discrepancies or misalignments that may need to be addressed. Students should develop decision-making abilities to make informed judgments and recommendations regarding strategic adjustments or corrective actions based on evaluation findings and analysis.
5	2	**Corporate Social Responsibilities** – Meaning, need for CSR, benefits of CSR Concept, The nature of corporate responsibility and corporate citizenship, Two opposing views, Need for CSR, Benefits of CSR, CSR in India, Relevance in the present-day business environment., Response of organization towards Corporate Social Responsibility- Popular Strategies for Non-Profit Organisations.	Use simulation games that simulate Hospital environments and allow students to make decisions regarding CSR issues and benefits	Written examination	Students will acquire knowledge on CSR, benefits and strategies for non profit organisation.
6	12	**Innovation**-Meaning, Concept, Characteristics, Importance, Principles	Conduct idea generation workshops where students collaborate	Written examination	Students will develop a comprehensive understanding of innovation concepts, including types of

		of Innovation, Process of Innovation. Innovation Management-Concept, Scope, Characteristics, Evolution of Innovation Management, Significance, Factors Influencing Innovation Areas of Innovation-Product Innovation, Process Innovation	to generate creative and innovative ideas. These workshops can use techniques such as brainstorming, mind mapping, or design thinking to stimulate creativity. Organize innovation challenges or competitions where students work in teams to develop solutions to specific business problems or opportunities.		innovation,and the role of innovation in driving organizational success. They should understand when and how to apply different innovation strategies based on organizational goals and market dynamics.

Essential readings:

- Kotler Philip &Anderson: Strategic Management for Non–non–profit organizations.
- Wheelen L Thomas, Hunger David, Rangarajan Krish: Concepts in Strategic Management &
- Business Policy
- Janet Reinestein Carpman., Myrona Gromt., Planning health facilities for patients
- and visitors.
- Chari S.N.: Modern production and operations management, Wilsey Eastern Ltd.New Delhi.
- Prasanna Chandra: Projects preparation, Appraisal, Budgeting and implementation, Tata
- Mac Grew Hills Publishing Co. Ltd., NewDelhi
- AzharKasmi : Business Policy,
- AzharKazmi& Adela Kazmi – Strategic Management
- Sreenivasan R: Strategic Management,The Indian Context, PHI Learning
- Srivastava R.M, Verma,Shubhra: Strategic Management: concepts, skills and practices,PHI Learning
- Innovation Management by C S G Krishnamacharyulu & Lalitha R, Himalaya Publishing House
- James A Christiansen, "Competitive Innovation Management", published by Macmillan Business, 2000.

B. ELECTIVE SUBJECTS

ELECTIVE COURSE
FIRST SEMESTER
Human Values and Ethics

Semester	**FIRST SEMESTER**
Course Title:	**Human Values and Ethics**
Course Code	**ELC-1-1018**
Total Hours	**40**
Theory	**20**
Practice	**20**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION: To create an awareness of Ethics and Human Values, to instil Moral and Social Values and Loyalty. Appreciate the rights of others and develop ethical decision-making skills.

COURSE OUTCOME:

CO 1. Students will learn moral values, and workplace ethics and develop commitment.
CO2. Understand the value of harmonious relationships based on trust, respect and other naturally acceptable feelings in human-human relationships.
CO3. The Students will equip themselves with a better understanding of themselves and the society they live in and the responsibilities they shoulder in creating a sustainable world.
CO4. The students will be able to understand the concept of personality and its influence on behavior, relationships, and career choices.
CO5. The students will develop the ability to evaluate the impact of ethical and unethical behavior on professional reputation, trust, and long-term success.

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1					X				X	
CO2	X				X			X		X
CO3			X	X			X	X		
CO4	X	X				X				
CO5					X	X			X	

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	4	**Morals, Values & Ethics** • **Core Values:** Integrity, Honesty, Courage, Empathy, Self-confidence, Character • **Workplace Ethics:** Work ethic, Commitment, Cooperation • **Social Virtues:** Civic virtue, Service learning, Respect, Caring, Sharing • **Peaceful Living:** Tolerance, Harmony, Non-violence	Role play on values and 4 hrs	Written examination	learn about morals, values & work ethics, learn to respect others and develop civic virtue, develop commitment and learn how to live peacefully
2	5	**Principles for Harmony** • **Core Values:** Truthfulness, Respect for customs, traditions, and human dignity • **Rights & Duties:** Human rights, fundamental duties • **Harmony:** Balance between self (I), society (We), and nature **Contemporary Issues** • **Gender Bias** • **Emotional Intelligence:** Mayer Model, emotional competencies, conscientiousness	GD on customs and traditions. self-assessment on EI. 5 hrs	Written examination	The end of the session the students will Distinguish between values and skills, happiness and accumulation of physical facilities, the Self and the Body, Intention and Competence of an individual, etc
3	6	**Personality** • **Definition & Types:** o *Eysenck:* Extrovert, Introvert, Ambient, Neurotic, Emotionally balanced o *Type A & B Personality* **Knowing Oneself** • **Self-Awareness:** Johari Window • **Rogers' Self:** Real vs. Ideal Self • **Maslow:** Self-actualization • **Rotter:** Internal vs. External Locus of Control **Etiquettes** • Importance in personal and social life • Etiquettes for: Meals, gatherings, phone calls, interviews, meetings, funerals, dressing	Self-assessment. roleplay on different etiquette 5 hrs	Written examination	Understand the significance of value inputs in a classroom and start applying them in their life and profession

4	5	**Harmony & Co-existence** • **Harmony:** With self, body, family, society, and nature • **Universal Human Values:** Truth, love, peace, non-violence, compassion • **Ethical Human Conduct:** Living with responsibility and mutual respect • **Holistic Vision:** Universal human order and sustainable living • **Pedagogies:** Value-based education and experiential learning for ethics	Visit old age homes and spend time with inmates 5 hrs	Written examination	Understand the value of harmonious relationships based on trust, respect and other naturally acceptable feelings in human-human relationships and explore their role in ensuring a harmonious society At the end of this course, learners will be able to: Equip themselves with an understanding of moral, professional and personal values
5	4	**Professional Ethics** • **Nature & Scope:** Standards guiding professional conduct • **Types:** Personal, workplace, managerial ethics **Professional Values** • Trusteeship, Inclusiveness, Commitment, Sustainability • Accountability, Transparency, Impartiality **Ethics in the Workplace** • Formulation of ethics, managing ethical behaviour • Ethical decision-making: Definition, roadmap, standards, obstacles (bias, lack of empathy) **Code of Ethics** and **Social Responsibility** • Encouraging ethical conduct and Social responsibility	G D on ethics and managerial decision-making or any related topics 5 hrs	Written examination	The students will understand the need of ethics in shaping their profession The learners will hone their decision-making skills The Students Equip themselves with a better understanding of themselves and the society they live in and the responsibilities they shoulder in creating a sustainable world

Essential readings:

1. R R Gaur, R Sangal & G P Bagaria A foundation course in Human Values and Professional Ethics Excel Books
2. Manuel G Velasquez Business Ethics – 7 th Edition Pearson
3. S B Gogate Human Values & Professional Ethics Vikas Publishing House Pvt. Ltd
4. B.N. Ghosh Business Ethics and Corporate Governance McGraw-Hill 2013
5. Richard T DeGeorge Business Ethics Pearson
6. Subramanian.R. Professional Ethics, Oxford Publication, 2013.
7. Nagarasan. R.S. Professional Ethics and Human Values. New Age International Publications, 2006.

8. Mike W Martin and Roland Schinzinger, Ethics in Engineering,4th edition, Tata McGraw Hill Publishing Company Pvt Ltd, New Delhi,2014
9. A. N. Tripathy, 2003, Human Values, New Age International Publishers.
10. BP Banerjee, 2005, Foundations of Ethics and Management, Excel Books
11. A.Alavudeen, R.KalilRahman and M.Jayakumaran "Professional Ethics and Human Values" -LaxmiPublications.
12. Prof.D.R.Kiran "Professional Ethics and Human Values"

ELECTIVE COURSE
FIRST SEMESTER

HEALTH PSYCHOLOGY AND COUNSELING

Semester	FIRST SEMESTER
Course Title:	HEALTH PSYCHOLOGY AND COUNSELING
Course Code	ELC-1-1018
Total Hours	40 Hours
Theory	20 Hours
Practice	20 Hours
Assessment Methods	Written, Practice, Oral

COURSE DESCRIPTION:
Identify the key concepts and theories of health psychology. Healthcare professionals need to understand the psychological factors that influence a patient's health, behaviour, and decision-making. To help in building trust, improving patient-provider communication, and facilitating better patient outcomes. Professionals work together more harmoniously, understand each other's perspectives, and provide coordinated care.

COURSE OUTCOME:

CO1: The students shall be able to explain how beliefs are formed and their influence on health behaviors and attitudes.

CO2: The students will be able to assess the impact of cultural, social, and individual beliefs on health practices and healthcare decision-making.

CO3. The students shall be able to understand that psychology can help them recognize and manage their own emotions, stressors, and coping mechanisms, thereby promoting their well-being and preventing burnout

CO4. The students will be able to understand the principles and techniques of counseling, and their application in promoting mental and physical health.

CO5. The students shall be able to develop effective communication skills for counseling individuals and groups on health-related issues

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1						X	X		X	
CO2			X	X		X		X		X
CO3	X	X			X					
CO4					X				X	X
CO5	X	X						X		X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	5	**Psychology & Behaviour Change** • Beliefs, attitudes, individual differences, stress, and stigma • Components, equality, and targets of health behaviour change	In small groups or individually, students analyze the case studies, identify psychological factors at play, and develop recommendations or interventions based on health psychology concepts. 4 hours	Written examination	Students will understand patient psychology and Enhance patient-provider communication and interpersonal skills.
2	5	**Behaviour & Health Models** • Personality, risk-taking, stress, emotions, and chronic illness adaptation • Health belief, stages of change, social cognitive, transtheoretical, and stress adaptation models	The students select a health behaviour they would like to change (e.g., exercise, diet, smoking). Over a specified period (e.g., 4-6 weeks), students design and implement a behavior change plan, incorporating strategies learned in the course. Students document their progress, challenges, and reflections throughout the period 5 hours	Written examination	Students will develop strategies for promoting healthy behaviors (e.g., goal setting, self-monitoring)
3	5	**Health Behavior & Psychology** • Behavior change theories, motivation, and strategies • Chronic illness impact, self-management, and adherence • Patient communication and shared decision-making	The students can identify any hypothetical ethical dilemmas related to health psychology (e.g., informed consent, confidentiality, cultural competence). In small groups or as a class, discuss and debate the ethical considerations, implications, and potential solutions for each dilemma. -5hrs	Written examination	The Students will develop a mind to manage the current scenario of the Hospitals

4	5	**Counselling** • Definition, purpose, goals, and ethics • Theories: Person-centered, cognitive, and behavioural counselling • Areas: Individual and group counselling • Stages of the counselling process • Basic counselling, communication, and relationship skills	In pairs or small groups, students role-play different scenarios involving patient-provider interactions (e.g., delivering bad news, discussing treatment options). After the role-play, facilitate a debriefing session where students reflect on their experiences, identify effective communication strategies, and discuss potential improvements in the class. -6 hrs	Written examination	The students will gain knowledge for being psychologically fit for their work and also can assess their issues

Essential readings

1. Bernard, L. C. & Krupat (1994). Health Psychology: biosocial factors in health and illness. New York: Harcourt Brace Publishers.
2. Igun (1979). Stages in health seeking: A descriptive model. *Social Science and Medicine, 13 (a*), 445-456.
3. Brannon, L. & Feist, J. (2000). *Health Psychology*. Australia: Brooks/Cole Thomson Learning.
4. Marks, D. F. (2002). The Health Psychology Reader. London: Sage Publications.
5. Elder, J. P. (2001). Behaviour change and public health in the developing world. Thousand Oaks, CA: Sage Publications.
6. Lovallo, W. R. (2005). Stress and Health: Biological and Psychological Interactions. Thousand Oaks, CA: Sage Publications.
7. Patterson, L. W. & Welfel, E. R. (2000). The Counselling Process. 5th ed. Belmount, CA: Brook/Cole.
8. Corey, G. (1996). Theory and Practice of Counselling and Psychotherapy. 5th ed. Belmount, CA: Brook/Col

ELECTIVE COURSE
SECOND SEMESTER
MANAGERIAL SKILLS & CORPORATE ETIQUETTE

Semester	**SECOND SEMESTER**
Course Title:	**Managerial Skill & Corporate Etiquettes**
Course Code	**ELC-2-1018**
Total Hours	**40**
Theory	**20**
Practice	**20**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION: Develop clear objectives, goals, strategies, and measures for integrating health, safety, and the environment into the culture of your organization Use the most appropriate management style for every situation. Understand the characteristics of both a transactional and transformational leader.

COURSE OUTCOME:

CO1. The students shall be able to analyze the power of language to create or destroy relationships
CO2. The students will be able to enhance self-awareness about their relationship-building skills and experiences;
CO3. The students will be able to reflect upon the effectiveness of different enabling strategies that they use with others
CO4. The students shall develop awareness and specific skills for effectively building high quality professional relationships
CO5. The students will create and awareness on good mannerism and body language.

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X				X				X	
CO2	X	X						X		
CO3	X		X	X	X	X	X	X		X
CO4	X					X			X	X
CO5	X	X								

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	5	**Personal Skills Development** • Importance of personal skills for effective managers • Self-awareness: Emotional intelligence, learning styles, values, attitude toward change • Skill development and application • Effective presentation: Key steps and content reduction techniques	Students can assess the EIQ. 5 hrs	Written examination	Students develop skills in self-presentation, aware of issues of emotional intelligence
2	5	**Power Dressing & Corporate Etiquette** • Dressing for various corporate occasions • Do's and don'ts of corporate dressing • Body language: Proxemics, posture, gestures, facial expressions, and cues	Mock events/situations to practice the corporate culture 5 hrs	Written examination	Students will develop a corporate mannerism and etiquette to follow the corporate culture

		• Mannerisms and etiquette in a corporate environment			
3	10	**Overview of Life Skills** • **Meaning and significance** of life skills • **WHO-identified life skills:** Self-awareness, empathy, critical & creative thinking, decision making, problem-solving, communication, interpersonal relationships, coping with stress and emotions • **Life skills for professionals:** Positive thinking, right attitude, attention to detail, big-picture thinking, learning & research skills, perseverance, goal setting, helping others, leadership, motivation, personality development • **Intelligence types:** IQ, EQ, SQ	Create different situations/problems/issues to develop the skill on overall development 10 hrs	Written examination	Students develop skill in decision-making, life skills and leadership styles

Essential readings:

1. Dr.V.K.Jain Om Prakash Biyani (2007) Business Communication S.Chand& Co
2. J.Priyadharshini(2010) Business Communication Charulatha Publications
3. P.Varsheny (2012) Managerial Skill Development Alfa Publications
4. Sarvesh Gulati (2012), Corporate grooming, Rupa publications.
5. A Handbook of Personality Development (2021) , Finger Print publishing
6. R.K.Madhukar (2018) Business Communication 3rd Edition Vikas Publishing House
7. ShikaKappor(2020) Personality Development and Soft skills Wiley Publications
8. Nancy R.Mitchell,(2021) Etiquette Rules A Field Guide to Modern Manners

ELECTIVE COURSE
SECOND SEMESTER
NUTRITION AND DIETETICS

Semester	SECOND SEMESTER
Course Title:	**NUTRITION & DIETETICS**
Course Code	**ELC-2-1018**

Total Hours	40
Theory	20
Practice	20
Assessment Methods	Written, Practice, Oral

Course Objectives:
The course is designed to assist the students to acquire basic knowledge and understanding of the principles of Nutrition and Dietetics and apply this knowledge in Administration.
To understand human nutrition and good dietary practices.

Course Outcomes:
CO1. The students shall acquire basic knowledge and understanding of the principles of Nutrition and Dietetics and apply this knowledge in Administration.
CO2. The students shall understand human nutrition and good dietary practices
CO3. The students will be aware of balanced diet plans for patients with varying health conditions, considering their metabolic needs.
CO4. The students will be able to understand the principles of food safety and the importance of hygiene in food preparation and storage.
CO5. The students will be able to implement quality control measures to monitor and improve the nutritional value and safety of food in healthcare and commercial settings.

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1		X	X		X			X		
CO2					X			X	X	
CO3	X									X
CO4				X		X	X		X	
CO5	X				X		X	X		

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	5	**Introduction to Nutrition** • **Basics:** o Definition of nutrition and health o Role of nutrition in maintaining health o Malnutrition: Under-nutrition and over-nutrition	Students can prepare and presentation on the Nutrient chart -5 hrs	written exam	At the end of the session, the students will be familiar with Nutrition and the classification of nutrients

		○ Factors affecting food and nutrition • **Nutrients:** ○ Classification of nutrients ○ Macro and micronutrients ○ Organic and inorganic nutrients			
2	5	**Metabolism & Balanced Diet for Patients** • Overview of metabolism and its role in health • Balanced diet: Food selection and cooking methods • Dietary planning for patients: ○ Tasty and nutritious food ○ Foods to include or avoid ○ Importance of complementary foods	The students can prepare different diet plans and organize the presentation 5 hrs	Written exam	The students will gain knowledge of Diet
3	5	**Therapeutic Diets** • Definition, Objectives & Principles • Diet Modifications: ○ Consistency and nutrient content ○ Feeding techniques • **Disease-Specific Diets:** ○ Obesity, Diabetes Mellitus, Cardiovascular Diseases (CVD) ○ Underweight, Renal and Hepatic disorders ○ Constipation, Diarrhea, etc.	students can arrange exhibitions on nutrients and therapeutic diets. 5 hrs	Written Exam	Students will gain knowledge in Therapeutic diets for diseases
4	5	**Food Safety & Clinical Dietetics** • Food safety: Key measures, regulations in India, and adulteration laws • Clinical dietetics: Overview, quality control, hygiene in hospital kitchens • Hospital diet services: Management and role of the dietitian	discussion on food safety and the role of dietitian 5 hrs	Written Exam	Students acquire knowledge of Food safety and familiar with act related to it

Essential readings:

1. Guptha L C. Gupta K & Gupta A. Food and Nutrition- Facts and Figures, Jaypee Brothers Medical Publishers, New Delhi.

2. Lutz and Prazytalski. Nutrition and Diet Theory –Evidence based applications, Jaypee Brothers Medical Publishers, New Delhi.
3. Reheena Beegum M A. Text book of Foods, Nutrition and Dietetics, Sterling Publishers Pvt Ltd, New Delhi.
4. Swaminathan M. Hand book of Food and Nutrition. The Bangalore Printing and Publishing Company Ltd, Bangalore.
5. Anjana Agarwal, Shobha A Udipi. Text book of Human Nutrition, Jaypee Brothers, New Delhi.
6. Sreemathy, Venkatrraman. Nutrition for Nurses, Elsevier.
7. Nix S. Williams' Basic Nutrition & Diet Therapy. South Asia Edition, Elsevier.
8. Text Book of Social and Preventive Medicine – K Park
9. Preventive and Social Medicine – Prabhakar Rao

ELECTIVE COURSE
THIRD SEMESTER
HEALTH CARE ENTREPRENEURSHIP

Semester	THIRD SEMESTER
Course Title:	Health care Entrepreneurship
Course Code	ELC- 3-1018
Total Hours	40
Theory	20
Practice	20
Assessment Methods	Written, Practice, Oral

COURSE DESCRIPTION:

Understand the healthcare industry landscape, including key stakeholders and challenges. Identify opportunities for innovation and entrepreneurship within healthcare. Develop business models and strategies for healthcare ventures. Navigate regulatory and ethical considerations in healthcare entrepreneurship. Gain practical skills in pitching ideas, securing funding, and managing healthcare startups.

COURSE OUTCOME

CO1: Understand and describe the fundamental concepts of entrepreneurship.

CO2: Identify and analyze trends and opportunities in healthcare innovation by conducting needs assessments and market analyses.

CO3: Conduct feasibility studies, including operational, technical, market, and financial feasibility, and evaluate the potential for new healthcare enterprises through economic forecasting.

CO4: Develop strategies for new healthcare enterprise creation.

CO5: Plan and implement strategies for scaling healthcare ventures, addressing challenges, and leveraging partnership and collaboration opportunities to manage growth and ensure sustainability in healthcare startups.

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X								X	
CO2					X	X	X			
CO3	X			X		X				X
CO4	X	X	X	X					X	X
CO5	X		X	X				X		X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	4	**Healthcare Entrepreneurship** • Definition, meaning, and characteristics of an entrepreneur • Importance and limitations of entrepreneurship • Introduction to entrepreneurship in the healthcare industry • Trends and opportunities in healthcare innovation	discussion on entrepreneurship in healthcare. 4hrs	written examination	Students will learn the intersection of entrepreneurship.
2	4	**Identifying Opportunities in Healthcare** • Needs assessment and market analysis • Identifying unmet needs and pain points • Feasibility study: o Operational, technical, market, and financial feasibility o Economic forecasting	Students can do the feasibility study and market analysis on opportunities in health care. 4 hrs	written examination	At the end of the session, students will be able to do a need assessment analysis and feasibility study
3	4	**Enterprise Creation** • Support systems for new ventures • Enterprise identification, selection, and establishment • Enterprise management and team development • Identifying sources of finance	Students develop a business plan or pitch deck for a healthcare venture 4 hrs	written examination	Acquire basic knowledge of enterprise creation
4	4	**Regulatory and Legal Considerations** • FDA regulations: Medical devices and pharmaceuticals • HIPAA and patient privacy laws	discussion on FDA regulations 4 hrs	written examination	Acquire basic knowledge of regulations and Legal considerations

		• Intellectual property protection in healthcare			
5	4	**Scaling Healthcare Ventures** • Challenges and strategies for scaling startups • Partnerships and collaboration in healthcare • Managing growth and ensuring sustainability	Analysis of Successful Healthcare Startups 4 hrs	written examination	The students will be aware of the challenges and strategies om healthcare startups

Essential readings:

1. Edward Bono, Lateral Thinking, Penguin Books, London 1990.
2. Holt H. David, Entrepreneurship, Prentice Hall India Publishers, New Delhi 2001
3. Anil Kumar S., Entrepreneurship Development, New Age Publications, New Delhi, 2003
4. Management consulting: Milankubr (A guide to the profession (3rd revised edition) published by ILO
5. .B.Patel and D.G.Allampally, A Manual on How to Prepare a Project Report, Entrepreneurship Development Institute, Ahmedabad.
6. J.B. Patel and S.S. Modi, A Manual on Business Opportunity Identification & Selection, Entrepreneurship Development Institute, Ahmedabad.

ELECTIVE COURSE
THIRD SEMESTER
MEDICAL TOURISM

Semester	**THIRD SEMESTER**
Course Title:	**Medical Tourism**
Course Code	**ELC-3-1018**
Total Hours	**40**
Theory	**20**
Practice	**20**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION:

The course typically covers an overview of healthcare systems, medical treatments and procedures, travel logistics, cultural awareness, business and marketing skills, and regulatory and legal considerations. To gain Knowledge of medical treatments and procedures: Students should be familiar with different medical treatments and procedures that are commonly offered to medical tourists. This includes an understanding of the risks and benefits of these treatments, as well as their costs.

COURSE OUTCOME:

CO 1: Understand and define medical tourism, describe its history, and explain the significance and components of medical tourism within the global tourism industry.

CO 2: Classify and analyze the different types of medical tourism and analyze its effects on a nation's economy, including the development of supporting services and the roles of government and private sectors.

CO 3: Evaluate and apply the ethical, legal, economic, and environmental issues related to medical tourism, including medical malpractice, and apply this understanding to real-world scenarios within the industry.

CO 4: Assess and critique the importance of certification and accreditation in medical tourism, and critique the various promotion strategies, including branding, digital marketing, and public relations, used by hospitals to attract medical tourists.

CO 5: Create and design a comprehensive promotion strategy for a healthcare facility targeting medical tourists, recommending effective use of digital marketing, branding, and public relations tools to enhance visibility and reputation in the global market.

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X								X	X
CO2	X	X		X	X	X			X	X
CO3	X		X		X	X			X	X
CO4	X			X	X	X	X	X	X	X
CO5	X				X		X	X		X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	5	**Medical Tourism** • **Definition** • **Importance** • **Types**: Domestic and international. • **Components**: Healthcare, hospitality, logistics, wellness. **Economic Impact**: Generates revenue, jobs, and foreign exchange. **Support & Promotion**: • **Government**: Policies, visas, infrastructure. • **Private Sector**: Investment, services, marketing. .	Visit a hospital that has a medical tourism department and prepare a report on the importance of starting a medical tourism department. 5 hrs	Written examination	Students will gain knowledge on
2.	7	• **Certification & Accreditation**: • **Issues**: o Ethical*:* Patient rights, equity o Legal*:* Liability, malpractice o Economic*:* Revenue vs. local strain	Prepare a note on various Certifications and accreditations in medical tourism.	Written examination	The students will be familiar with Certification and accreditation in medical tourism – Ethical, Legal Economic and

		○ Environmental*:* Waste, resource use • **Malpractice**: Legal risks, post-care gaps .	Presentation on legal and ethical issues of medical tourism in India. 6 hrs		environmental issues in medical tourism- medical malpractice.
3.	8	**Medical Tourism Promotion** • Branding • Digital Marketing. • PR: Media and events. • Patient referrals. • Hospital Strategies: Packages, international help desks, accreditations. .	Visit a hospital that has a full-fledged medical tourism department and prepare a proposal on various medical tourism promotion strategies. 9 hrs	Written examination	The students will learn Medical Tourism Promotion strategies adopted by various Hospitals.

Essential readings:

- P.N. Girija Prasad, Medical Tourism New Directions, Adhyayan Publishers & Distributors
- Amitabha Ghose Health Tourism: A Case for India, SBS Publishers and Distributors Pvt Ltd.
- Bezbaruah M.P. (New Delhi) Indian Tourism Beyond the Millennium
- Dixit. Medical Tourism Geography and trends, Royal Publication
- Gupta, Ambuj& Sharma, Vinay, Medical Tourism: On the Growth Track in India
- Kumar, Medical Tourism in India (Management and Promotion)
- Michael D. et.al., Medical Tourism – Health Care in The Global Economy (Trends), Americal College of Physician Executive, 2007.
- Milica Z.,et. Al., Medical Tourism in Developing Countries, Palgrave Macmillan, 2007.
- Opportunities in Medical Tourism in India, RNCOS E-Services Pvt. Ltd, 2007
- Raj Pruthi., Medical Tourism in India , Arise Publishers & Distributors, 2006.
- Reisman, David, Health Tourism: Social Welfare Through International Trade
- Sarngadharan, M. &Sunanda, V.S., Health Tourism in India
- Smith, Melanie; &Puczko, Laszlo, Health and Wellness Tourism
- Todd, Maria, Handbook of Medical Tourism Programme Development ASSOCHM, Health Tourism: The Great Indian Advantage.

ELECTIVE COURSE

FOURTH SEMESTER
BIG DATA ANALYTICS

Semester	**FOURTH SEMESTER**
Course Title:	**BIG DATA ANALYTICS**
Course Code	**ELC- 4-1018**
Total Hours	**40 Hours**
Theory	**20 Hours**
Practice	**20 Hours**
Assessment Methods	**Written, Practice, Oral**

COURSE DESCRIPTION:
Big data analysis is a comprehensive course designed to equip students with the knowledge and skills necessary to process, analyze, and derive actionable insights from large volumes of data. The course covers fundamental concepts, tools, and techniques used in big data analytics, focusing on both theoretical foundations and practical applications. Students will learn how to harness the power of big data to solve real-world problems across various domains such as finance, healthcare, marketing, and more.

COURSE OUTCOME:
CO1: Understand and differentiate the fundamental concepts of management analytics
CO2: Identify and evaluate various types of analytics such as predictive, marketing, healthcare, social media, supply chain, and epidemiological analytics
CO3: Analyze and apply Big Data sources and tools.
CO4: Utilize data analysis tools
CO5: Create and Interpret data visualizations.

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X					X			X	X
CO2	X			X	X	X	X	X	X	X
CO3	X				X			X		X
CO4	X	X	X	X				X		X
CO5	X		X		X		X	X		X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	5	• Importance and applications of analytics: Predictive, marketing, healthcare, social media, supply chain, retail, epidemiology, and finance • OLTP vs. OLAP; MIS vs. Analytics • Data Warehouse, Big Data, MapReduce • Hospital analytics: Revenue, spend, and operational analysis • Key indicators: Clinical, outcome, marketing, HR, supply chain, financial, patient satisfaction, service volumes, and quality • Fundamentals of predictive analytics	Group discussion on real-world applications of big data analytics. Invite industry professionals to discuss real-world big data analytics projects. 5 hrs	Written Examination	Students understand the significance of big data and its applications.
2	5	• Big Data sources, tools (XLMiner, R) • Data issues and quality • HIS, LIS, RIS, SAP systems • Data mining techniques in healthcare	Preprocessing a dataset and documenting the steps taken 5 hours	Written Examination	Students gain practical skills in preparing data for analysis.
3	5	• Basic & Advanced Excel • R / SAS for statistical analysis • Data visualization: Power BI, Tableau, QlikView, Gephi • Basic statistics for healthcare data • Problem solving using decision trees (McKinsey approach)	Designing a schema for a big data storage system based on a given scenario. 5 hours	Written Examination	Students understand different data analysis and their suitability for various data types.

4	5	• Dashboards, reports, and data representation • Marketing analytics using MEX	Evaluate based on the clarity of visualization, choice of charts, interactivity, and relevance of insights. 5 hours.	Written Examination	Students will develop essential skills for analyzing and interpreting data to drive business decisions.

Essential readings:

1. Big Data: Concepts, Technology and Architecture, Balamarugan Balusamy, Nandhini Abirami R, Seifedine Kadry and Amir Gandomi, Publisher: Wiley
2. Big Data For Beginners, Vince Reynolds, Createspace Independent Publishing Platform
3. Big Data in Practice: How 45 Successful Companies Used Big Data Analytics to Deliver Extraordinary Results, Bernard Marr, Publisher: Wiley
4. Ethics of Big Data: Balancing Risk and Innovation, Kord Davis with Dong Patterson, O'Reilly Media
5. Big Data and Analytics, 2ed, Subhashini Chellappan and Seema Acharya, Publisher: Wiley
6. Big Data Analytics, 2ed, Radha Shankarmani and M. Vijayalakshmi, Publisher: Wiley
7. Big Data Analytics, Venkat Ankam, Packt Publishing
8. Big Data Analytics with SAS: Get actionable insights from your Big Data using the power of SAS, David Pope, 1st Edition, Packt Publishing
9. Big Data Marketing: Engage Your Customers More Effectively and Drive Value, Lisa Arthur, Publisher: Wiley
10. Thomas H Davenport 2014 "Big data @work" Harvard Business Review Press, Bosten
11. Thomas H Davenport and Jeanne G Harries 2007 "competing on analystics – the new science of winning" Harvard Business Review Press, Bosten
12. Wullianallur Raghupathi and Viju Raghupathi 2014 "Big data analytics in healthcare: promise and potential" - http://www.hissjournal.com/content/2/1/3
13. Thomas H Davenport 2013 "Analytics 3.0" Harvard Business Review Press, Bosten

FOURTH SEMESTER
ELECTIVE COURSE
PHARMACEUTICAL MANAGEMENT

Semester	FOURTH SEMESTER
Course Title:	**Pharmaceutical Management**
Course Code	**PHM**
Total Hours	**40**
Theory	**20**

Practice	20
Assessment Methods	**Written, Practice, Oral**

Course Description:
Overview of pharmaceutical management, Importance of pharmaceutical management in healthcare. The students also gain knowledge about the national and international guidelines for the pharmaceutical regulatory framework. The students can perform the patent search and know patent drafting, the students also learn about managing the documents related to CTD, DMF and dossier as per the regulatory guidelines

Course outcome

CO1: Understand the fundamentals of pharmaceutical science, including pharmacodynamics and pharmacokinetics, and their relevance to hospital administration.
CO2: Analyse and evaluate drug formulations, dosage forms, and their implications for patient care and hospital operations.
CO3: Understand the economic aspects of drug development, including the cost-effectiveness and financial impact on hospital management.
CO4: Navigate pharmacy legislation, regulations, and compliance, ensuring adherence to legal standards in hospital settings.
CO5: Analyse the principles of quality control in pharmaceutical packaging and understand the regulatory framework governing drug pricing in India, including the Drugs Price Control Order (DPCO) 2013 and the National List of Essential Medicines (NLEM).

Mapping of Pos to COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X		X							X
CO2						X		X		X
CO3				X		X			X	
CO4		X	X		X		X	X		X
CO5					X	X			X	X

Course Content

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	4 hrs	**Foundations of Pharmaceutical Science** • Introduction to Pharmaceutical Science • Basic Principles of Pharmacodynamics and Pharmacokinetics • Drug-Receptor Interactions and Mechanisms • Therapeutic Index and Drug Safety	Case studies on drug mechanisms and therapeutic outcomes Group discussion on the importance of pharmacokinetics in patient management - 4 hrs	Written Examination	Understand the fundamentals of pharmaceutical science, including pharmacodynamics and pharmacokinetics, and their relevance to hospital administration
2	4	**Drug Formulations and Dosage Forms** • Overview of Drug Formulations: • Powders, Tablets, Syrups, Elixirs, Suspensions, Capsules, Topical Preparations • Slow and Sustained Release Preparations • Factors Affecting Drug Formulation and Quality Control	Discussion on the impact of drug formulation choices on hospital operations and patient care - 4 hrs	Written Examination	Students will able to analyze and evaluate drug formulations, dosage forms, and their implications for patient care and hospital operations.
3	4	**Economics of New Drug Development** • Phases of Drug Development and Regulatory Pathways • Cost Analysis in Drug Development • Market Access, Pricing Strategies, and Challenges • Impact on Hospital Budgets and Healthcare Costs	Group activity on developing a cost-benefit analysis for a new drug - 4 hrs	Written Examination	Students will able to understand the phases of drug development. They shall be able to do the cost-benefit analysis and be aware of the marketing aspects as well as their impact on hospital budget.
4	4	**Pharmacy Legislation and Compliance (overview)** • **Regulators**: FDA, EMA, CDSCO • **Standards**: GMP & GDP • **Hospital Pharmacy**: Legal compliance • **IND**: Application process • **Ethics**: Safety & consent	Role-playing activity on ensuring compliance in a hospital pharmacy setting - 4 hrs	Written Examination	Students will Navigate pharmacy legislation, regulations, and compliance, ensuring adherence to legal standards in hospital settings.
5	4	**Quality Control & Drug Pricing** • **Quality Control**: Tests for containers, rubber closures, and packaging materials. • **NPPA & DPCO 2013**:	Conduct a case study analysis where students evaluate the quality control processes	Written Examination	Understand and apply the principles of quality control in pharmaceutical packaging and gain insights into

		○ **Objectives**: Regulate drug prices. ○ **Key Terms**: Bulk drug, formulation, ceiling price. ○ **Pricing**: Retail & ceiling prices, NLEM-based control.	for pharmaceutical packaging materials (e.g., containers and rubber closures) and then simulate a role-play exercise where they are responsible for determining the retail price of a new drug formulation under the guidelines of the DPCO 2013 and NLEM.		drug pricing regulations under the Drugs Price Control Order (DPCO) 2013, including the impact of the National List of Essential Medicines (NLEM) on drug pricing.

Essential Readings

- Joshi. S. K (2010). Law and practice of Medicine. Jaypee Brothers Medical publications
- Liz Haggard, Sarah Hosking, Healing the Hospital Environment: Design, Maintenance, and Management of Healthcare Premises
- S.L.Goel, Healthcare Management and Administration, Deep & Deep Publications Pvt. Ltd., New Delhi.
- Joshi' D C & Joshi, Mamta. (2009). Hospital administration. Jaypee Brothers Medical Publications.
- Intellectual Property Rights and Drug Regulatory Affairs, Ruchi Tiwari and Gaurav Tiwari, 2020
- Intellectual Property Rights in Pharma Indus, Subba Rao, 2018 3.
- New Drug Approval Process: Accelerating Global Registrations By Richard A Guarino, MD, 5th edition, Drugs and the Pharmaceutical Sciences, Vol.190
- Patent Management, Oliver Gassmann, Martin A. Bader, Mark James Thompson. Sprinzer Nature Publisher

C. FOUNDATION COURSE

FOUNDATION COURSE
FIRST SEMESTER
HOSPITAL ENVIRONMENT

Semester	FIRST SEMESTER
Course Title:	HOSPITAL ENVIRONMENT
Course Code	FOC – I- 1019
Total Hours	40
Theory	20
Practice	20
Assessment Methods	Written, Practice, Oral

COURSE OBJECTIVES:

To Develop the foundation of health. Understanding the issues involved in Physical, Biological, Social and cultural and economic environmental, Political and Legal, Technological and natural factors in health care. Develop clear objectives, goals, strategies, and measures for integrating health, safety, and the environment into the culture of the hospital

COURSE OUTCOME

CO1. The student will be able to understand the foundations of environmental health
CO2. The student will be able to apply the knowledge of environmental science in health and disease
CO3. The student will understand the factors that can adversely affect the environment.
CO4. The student will identify the environmental factors affecting the business
CO5. The student shall develop skills in environmental remediation

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1					X				X	
CO2			X			X		X		X
CO3							X		X	
CO4	X	X		X			X			
CO5	X				X			X		X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	4	• Meaning and relevance of environment in healthcare • Importance of environmental health for hospital administrators • Concepts of environment and ecology • Environment in action: types and components	Case study regarding the health hazards and environmental pollution 4hrs	Written examination	the students understand the foundation of environmental health
2	4	• Definition and scope of environmental health and environmental health science • Ecosystems and their role in health • Environmental impacts on human health • Major current environmental health issues • Global environmental challenges	Discussion on Major Current Environmental Health Problems 4hrs	Written examination	The students gain knowledge of environmental science in health and disease
3	4	• Environmental contributors to health • Factors affecting human health • Hygiene and sanitation • Components of hygiene and environmental health	Critically analyse and prepare the reports on the environmental remediation plan and policies 4hrs	Written examination	The students gain knowledge of Environmental hygiene, sanitation and environmental health
4	4	• Environmental health and disease transmission • Healthy environment and its impact • Environmental nutrition • Relationship between food, diet, and the environment • Emerging issues: Slums, global warming	Review and prepare the reports on Global Warming 4hrs	Written examination	The students are familiar with the environmental role in disease transmission and emerging issues in Environmental Health
5	4	• Types of environment: Natural, economic, political, social, technical, cultural, educational, legal, cross-cultural • Key factors:	Discussion on Environmental factors that influence hospitals to	Written examination	The Students will gain knowledge and practice in environmental

		○ **Physical:** Topography, climate, minerals, water ○ **Cultural:** Infrastructure, technology, tradition, politics, society, education	provide services and procedures 4 hrs		factors and service/ treatment

Essential readings:

- Liz Haggard, Sarah Hosking, Healing the Hospital Environment: Design, Maintenance, and Management of Healthcare Premises
- Wisner B., Adams J. (2002). A Practical Guide: Environmental health in emergencies and disasters. World Health Organization.
- Dade W. Moeller (2005). Environmental Health, Cambridge, MA: Harvard University Press.
- Brulle, R. J., & Pellow, D. N. (2006). Environmental justice: human health and environmental inequalities. Annu. Rev. Public Health, 27, 103-124.
- Salvendy, G. (2012). Handbook of human factors and ergonomics. John Wiley & Sons

SECOND SEMESTER
FOUNDATION COURSE
BUSINESS COMMUNICATION

Semester	SECOND SEMESTER
Course Title:	BUSINESS COMMUNICATION
Course Code	FOC – II- 1019
Total Hours	40
Theory	20
Practice	20
Assessment Methods	Written, Practice, Oral

COURSE OBJECTIVES: Communication is a thread used to connect the strewn activities of any modern organization. A healthy organization today attaches paramount importance to the role of perfect and effective communication for internal and public relations activities. This course is an attempt to impart good managerial communication skills to the students.

COURSE OUTCOME:

CO1. The students will be able to understand the fundamental principles of communication, including verbal and non-verbal communication, and their relevance in professional settings.

CO2: The students shall develop effective communication skills for clear and concise information exchange in various healthcare contexts.

CO3. The students shall apply managerial communication techniques to lead teams, manage conflicts, and facilitate decision-making in healthcare settings

CO4. The students will develop skills in writing reports, conducting meetings, and delivering presentations for effective managerial communication.

CO5. The students shall develop skills in designing and implementing mass communication campaigns for patient education, public relations, and crisis management in hospitals.

Mapping of POs to Cos:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X							X	X	X
CO2	X	X		X			X	X		
CO3	X		X		X					X
CO4			X			X	X			
CO5	X						X	X	X	X

Course Content:

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	5	**Basics of Communication** • Communication process and principles of effective communication • Barriers to communication • Media: Types and selection • Organizational communication: Formal, informal, vertical, horizontal • Group communication: Methods and overview • Mass communication • Nonverbal communication and body language	Prepare and deliver a speech to address a given audience for a given purpose. Proforma for Performance Appraisals, Letters of Appointment 5 hrs	Written examination	students will know types of communication, group communication and methods
2	5	**Managerial Communication** • **Business Correspondence:** Letters, circulars, notes, orders, memos • **Group Communication Methods:** Group discussions, brainstorming, panel discussions, webinars, video conferencing	Draft Circulars, Notices, Handling Complaints, Evaluating Interview Performance, Articles, Formal Invitations 5	Written examination	Evaluate personal communication, verbal and non-verbal, formal and informal, to identify specific areas for improvement.

		• **Meetings:** Conducting meetings, statutory meetings, notice, agenda, quorum, minutes (types & structure) • **Hospital Committees:** Structure, bylaws, documentation, roles of chairman & secretary • **Interviews:** Types, structure, and interviewer skills • **Reports:** Types, structure, and drafting • **Research Communication:** Essentials of communicating research findings			
3	10	**Mass Communication in Hospital Management (10hrs)** **Media & Publicity in Hospitals:** • Media types and selection • Social media in healthcare • Internal mass communication • Safety & hazard communication: Emergency codes, signage (fire, radiation) **Oral Communication:** • Structure and delivery of speeches • Speeches for various occasions • Techniques of effective oral communication • Promotional health communication **Patient Communication:** • Effective vs. ineffective communication • Barriers, language choice, listening & observation skills • Health education, informed consent, and confidentiality • Patient feedback, complaints, satisfaction surveys, discharge summary • Continuity of care & communication in sensitive situations (e.g., breaking bad news, 5 stages of grief)	Prepare Captions for Advertising, Company Notice related to Shares/dividends, MoA, AoA, Annual Reports, Minutes of Meetings, Actions taken on Previous Resolution. Preparing job applications. 10 hrs	Written examination	Students will develop different internal communication types that can be used in hospitals. Communication with patients and barriers of communication and various written communication and its confidentiality

Essential readings:

- Krishna Mohan and Meera Banerji: Developing Communication skills, MacMillan

- R.K .Madhukar –Business Communication ,Vikas Publishing House
- Rajendra Pal and J.S .Korlahalli, Essentials of Business Communication, Sulthan Chand & Sons
- Lysbeth A Wool Cott,Mastering Business Communication , Macmillan Master Series,bloomsburry Publishing
- Krishna Mohan and MeeraBanerji: Developing Communication skills, Laxmi Publication

- R.K .Madhukar –Business Communication ,Vikas Publishing House

THIRD SEMESTER
FOUNDATION COURSE
HEALTH CARE INSURANCE

Semester	THIRD SEMESTER
Course Title:	HEALTH CARE INSURANCE
Course Code	FOC – III- 1019
Total Hours	40
Theory	20
Practice	20
Assessment Methods	Written, Practice, Oral

COURSE DESCRIPTION:

It aims to provide students with a comprehensive understanding of health insurance and its implications for hospital operations and patient care. This course provides students with an in-depth understanding of health insurance systems, policies, and practices.

COURSE OUTCOME

CO1: Understand and explain the fundamental concepts, scope, and principles of health insurance

CO2: Identify and analyze the insurance claims process, including adjudication, documentation, claims reserving, and the management of rejections and denials in health insurance.

CO3: Evaluate the legal and regulatory framework governing health insurance.

CO4: Assess and mitigate the risks and identify common frauds in health insurance

CO5: Research and discuss current trends in health insurance

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X					X			X	X
CO2	X	X			X	X		X	X	X
CO3	X		X	X	X			X	X	X

CO4	X		X		X	X	X	X	X	X
CO5	X				X		X		X	X

Course Content

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	2	**Health Insurance** • **Concept, Scope & Need** • **Benefits**: Cashless care, reduced costs. • **Principles**: Risk pooling, indemnity, good faith. • **Types & coverage options**: Individual, family, group, critical illness, top-up.	The students can analyze the impact of health insurance on hospital revenue cycles, financial management, and billing practices. 5 hrs	Written examination	Students will be familiar with the principles of health insurance- Types of Health Insurance Plans and Coverage Options
2	8	**Insurance Claims:** • Concept • Adjudication • Procedure & Process for claim • Documentation • Claims reserving • Management of Rejection/denial of Claims • Reimbursement Mechanisms • TPA	Visit the insurance department and Identify challenges and opportunities in health insurance administration within hospital settings, such as insurance verification, claims processing, and denial management. 10 hrs	Written examination	The students will learn insurance claims documentation and TPA
3	10	**Health Insurance Law & Regulations**: • Insurance Regulatory and Development Authority (IRDA) • Health Insurance Advisory Committee, Ombudsman • Regulations relating to the intermediaries, Insurance Councils in India. • Health Insurance Frauds • Trends in Health Insurance	GD on recent trends in Health insurance and challenges 5 hrs	Written examination	Students will be familiar with the legal aspects of insurance and recent trends in healthcare insurance.

Essential readings

- Introduction to Health Insurance, Thomas Carroll and Kevin Kimball
- Health Insurance in India: A Study of Awareness and Preferences" , Sanjay Tiwari
- Kshijit Patukale, Mediclaim Aur Swasthya Beema, 2012.

- Michael A Green. Understanding Health Insurance: A Guide to Billing and Reimbursement 2022.
- Peter Kongstvedt. Health Insurance and Managed care: What they are and How they work. 2015
- Health Insurance, Michael A. Morrisey, AUPHA/HAP Book, 3 rd Edition, 2020

FOURTH SEMESTER
FOUNDATION COURSE
HOSPITAL ENTERPRISE RESOURCE PLANNING

Semester	FOURTH SEMESTER
Course Title:	HOSPITAL ENTERPRISE RESOURCE PLANNING
Course Code	FOC – IV- 1019
Total Hours	40
Theory	20
Practice	20
Assessment Methods	Written, Practice, Oral

COURSE OBJECTIVES:
The course is designed to assist the students to acquire basic knowledge and understanding of the principles of Nutrition and Dietetics and apply this knowledge in Administration.
To understand human nutrition and good dietary practices. This course and activities are designed to provide students with practical experience, foster critical thinking, promote collaboration, and enhance their understanding of Hospital Enterprise Resource Planning (ERP) systems and their applications in healthcare setting

COURSE OUTCOME:
CO1: Understand and explain the evolution, risks, benefits, and fundamental technologies of enterprise systems
CO2: Analyse the strategic options for ERP identification and adoption
CO3: Design the ERP implementation strategies.
CO4: Assess the impact of Business Process Reengineering (BPR) on ERP implementation
CO5: Evaluate the post-implementation phase of ERP systems

Mapping of POs to COs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X		X					X	X	X
CO2	X	X	X		X	X		X		X
CO3	X		X	X	X	X		X		X
CO4	X		X	X	X	X	X	X		X

CO5	X		X	X	X	X		X	X	X

Course Content

Unit No	Hours	Content	Practical Learning & Hours	Assessment method	Teaching learning outcome
1	5	**Introduction to Enterprise system:** • Overview, Evolution • Risks and benefits • Fundamental technology • Issues to be considered in planning design and implementation of cross-functional integrated ERP systems	Organize live demonstrations or virtual sessions with different Hospital ERP software vendors to familiarize students with the features, functionalities, and user interfaces of various ERP systems. 5 hrs	Written examination	Students will be familiar with the basics of ERP and learn issues to be considered in planning the implementation of an integrated ERP system.
2	5	**ERP Systems** • Introduction • Role of Information System • Understanding ERP Systems	Students are divided into groups and assigned different Hospital ERP software solutions to evaluate. Groups prepare a comprehensive report comparing the features, functionalities, advantages, and disadvantages of their assigned ERP software solutions and present their findings to the class. 5hrs	Written examination	Students learn the role of information system
3	5	**ERP Implementation** • Planning Evaluation and selection of ERP systems, Package Selection • Project Management Role. • BPR & ERP: BPR, Role of IT in BPR, Gap Analysis, ERP Security, Change Management. • Trends in ERP Deployment Model and Cloud. • TCO and Cost Benefit Analysis	To develop an ERP implementat6on plan for a hypothetical or real hospital setting. Including planning, execution, and post-implementation strategies. 5hrs	Written examination	Students will learn about ERP implementation process
4	5	**Post Implementation:** • Maintenance	Organize interactive discussions or debates on controversial or trending topics related to Hospital ERP, such as data	Written examination	Students will be confident on the management of the post-

		• Organizational and Industrial impact • Success and Failure and risk assessment	privacy, interoperability, cloud-based vs. on-premises solutions, or the role of AI and machine learning. 5 hrs		implementation process

Essential readings

1. Jagan Nathan Vaman, ERP in Practice, Tata McGraw-Hill, 2008
2. Alexis Leon, Enterprise Resource Planning, second edition, Tata McGraw-Hill, 2008.
3. Mahadeo Jaiswal and Ganesh Vanapalli, ERP Macmillan India, 2009.
4. Vinod Kumar Grag and N.K. Venkita 124rishnan, ERP- Concepts and Practice, Prentice Hall of India,2nd edition, 2006.
5. Summer, ERP, Pearson Education, 2008.

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RESEARCH PROJECT

Semester	**FOURTH SEMESTER**
Course Title:	**RESEARCH PROJECT**
Course Code	**RPW-1016**
Total Hours	**280 Hours**
Theory	**----**
Practice	**280 Hours**
Assessment Methods	**Presentation, Oral**

COURSE DESCRIPTION:

The Research Project is a key component of the Master of Hospital Administration (MHA) syllabus, aimed at fostering in-depth understanding and practical application of research methodologies within the context of healthcare administration. It provides students with the opportunity to explore and analyze specific issues or challenges facing healthcare organizations through rigorous research.

COURSE OUTCOME (CO):

On the successful completion of the course, the student will be able to

CO 1. Students will recall and describe key research methodologies and theoretical frameworks relevant to healthcare administration research.

CO 2. Students will apply appropriate research methods to design and develop a research proposal addressing a specific healthcare administration issue.

CO 3. Students will apply research methodologies to collect and analyze the data with statistical tools.

CO 4. Students will critically assess research findings, comparing them against existing

literature to evaluate their implications for healthcare practice. They will critically analyze the effectiveness of different research approaches in solving real-world issues

CO 5. Students will synthesize research findings into a comprehensive report, providing evidence-based recommendations for improving healthcare administration practices.

Mapping PO's to CO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	X	X	X	X					X	
CO2	X	X	X		X					
CO3			X	X				X	X	
CO4	X	X	X	X	X	X	X			X
CO5	X	X	X	X	X	X	X	X		X

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HOSPITAL TRAINING AND FIELD VISITS

Semester	**First semester - Fourth Semester**
Course Title:	**Hospital training and Field visits**
Course Code	**HTF-1020**
Total Hours	**960 Hours**
Theory	**----**
Practice	**960 Hours**
Assessment Methods	**Presentation**

COURSE DESCRIPTION:

The Hospital Training module is an integral part of the MHA program, providing students with practical exposure to the operational, administrative, and clinical functions of a hospital. The primary objective is to immerse students in the daily workings of a hospital, enabling them to apply theoretical concepts to real-world scenarios, develop essential management skills, and gain a deeper understanding of hospital administration.

COURSE OUTCOME (CO):

On the successful completion of the course, the student will be able to

CO 1. Students will recall the functions of various clinical and non-clinical departments in the hospital setting

CO 2. Students will describe how different departments function together to ensure seamless patient care from admission to discharge.

CO 3. Students will apply leadership theories to manage a multidisciplinary team during their hospital posting, focusing on enhancing team collaboration and patient outcomes.

CO 4. Students will analyze hospital incident reports to identify common causes of errors and develop strategies to mitigate these risks.

CO 5. Students will evaluate the impact of recent policy changes on hospital workflow and patient care, providing evidence-based recommendations for further improvements.

CO.6. Students will create a strategic plan for the adoption of new technologies and address the potential challenges and ensure alignment with hospital goals.

Hours	**Content**	**Practical Learning & Hours**	**Assessment method**
960hrs	Hospital training & Field Visits The students will have a departmental posting from the first semester to the fourth semester in the MHA program under the supervision of the concerned department HOD and faculty. Focusing on hospital training within an MHA course ensures that students not only understand the theoretical aspects of hospital administration but also gain practical experience in managing clinical operations Hospital training ensures that MHA students receive comprehensive, hands-on training that covers all critical aspects of hospital administration. By rotating through different departments focusing on key areas and engaging in quality and safety initiatives, students are well-prepared to handle the complexities of clinical and non-clinical management in their future careers. Field Visits Apart from Hospital training students have to undergo observation visits to various related fields/units such as CHC, PHC, District hospitals, TB centres, Mental health hospitals, Waste disposal plants (IMAGE), oncology centres, IMA, Courts etc.	240 hrs/semester	Students will have to maintain a log book / Training record and visit record. Individual / group Presentation after the activity

Mapping of PO's to CO's

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
CO1	X	X	X		X				X	
CO2			X				X			X
CO3		X	X							X
CO4			X	X	X					
CO5			X			X	X			X
CO6		X					X	X		

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2.7 Total number of hours

Duration of the program: Two Years (4 Semesters)

Semester I to Semester IV

Weeks available for Instruction per Semester: 20 Weeks (120 working days)

Total hours per semester @ 36 Hours per week: 720 Hours

2.8 Branches if any with definition

Not applicable

2.9 Teaching learning methods

As given under section 2.6 Syllabus

2.10 Content of each subject in each year

As given under section 2.6 Syllabus

2.11 No: of hours per subject

As given under section 2.6 Syllabus

2.12 Practical training

As given under clause "Content of each subject in each semester " & "Teaching learning methods ".

2.13 Records

The student will have two records, one will maintain a brief training report at the end of each posting and will be countersigned by the faculty/HOD. In another record, the students shall maintain an observation visit/industrial visit report A maximum of 80 marks (skill development) are allotted for each semester.

2.14 Dissertation: As per Dissertation Regulations of KUHS

2.15 Specialty training if any

As given under clauses "Content of each subject in each semester " & "Teaching learning methods ".

2.16 Research Project to be done if any

Each candidate pursuing an MHA Course is required to carry out an individual Research Project on a selected topic of Hospital / Health Care under the guidance of a recognized postgraduate teacher after the approval of the project proposal.

The Professor, Associate Prof & Asst. prof only guides the students for the Research Project. The ratio is limited to 1:5. The maximum number of faculty could guide at a time is limited to five.

The topic for the Research Project Work should be chosen by the candidate in the 2nd semester based on an area of interest and should be completed in the 4th semester as described in the University guidelines. The work extends over 45 days (280 hrs.) and is done in major hospitals with a minimum of 200 beds. The students are expected to study a particular problem or issue relating to hospital administration. The satisfactory completion of project placement and presentation in the form of a project report as per the format given in the annexure is mandatory for appearing in the viva voce examination in the final semester. Both internal and university marks will be awarded for the Research Project

Three copies of the Research Project shall be submitted to the institution along with a soft copy (CD) two months before the fourth-semester examination. The Research Project need not be submitted to the University and the copy can be stored at the Institution.

The examiner/evaluator for Research Project and viva voce will be the Professor / Associate professor/ Min of 5 years of teaching experience.

2.17 Any other requirements [CME, Paper Publishing etc.]

As per KUHS norms

2.18 Prescribed/recommended textbooks for each subject

As given under "Content of each subject in each semester".

2.19 Reference books

As given under "Content of each subject in each semester".

2.20 Journals

As given under "Content of each subject in each semester".

2.21 Logbook

To be maintained and countersigned by the HOD.

)Log Book

The log book is a record of the important activities of the candidates during the course period. The marks for skill development should be based on the evaluation of the log book. A log book has to be maintained by all students reviewed periodically by the faculty and countersigned by the HOD of the department. Every student shall attend at least one annual national conference. Periodic assessment has also to be done in the department by the teachers. The skills development will be awarded internally based on the performance and participation of the student in all the programs (Conferences, seminars assignments, academic presentations and other presentations) undertaken in each semester.

2.21. Distribution of Skill development marks

The maximum mark will be 80 and the internal marks will be awarded based on the criteria fixed, the evaluation will be done by the HOD & staff concerned who will award the marks in I, II& III semesters.

Skill assessment – Max marks: 80	**Marks secured**
Attendance -10 marks 95-100 – 10 marks, 90-94 – 5 marks, 85-89 – 3 marks, 80-84 -01 marks, <80: 0 – Zero	
Written assignment – 10 marks	
Seminar/ Individual presentation/ Micro teaching- 10 marks	
Group activities -20 marks Coordinating programmes,- Camp, academic, and non-academic programmes	
Clinical activities/training - 20 marks	
Communication & attitude-10 marks	

3. EXAMINATIONS

3.1 Eligibility to appear for exams

i) A candidate must have a minimum of 80% attendance in theory and practical in each course/subject to appear for University Examination. A minimum of 80% attendance in all the non-exam going courses/ subjects in the concerned semester also is essential for registering a candidate for the university examination.

ii) A candidate must have completed 80% attendance in each of the theory and 100% attendance in each of the practical areas.

iii) The candidate must secure 50% marks for internal assessment in theory and practical, wherever applicable to be eligible to appear in the university examination of the subject.

iv) The minimum pass mark shall be 40% for foundation and Elective modules.

v) The candidate shall appear for the University examinations at the end of each semester.

vi) The candidate should clear all the previous examinations before appearing for the final Semester / (fourth Semester) examination.

vii) The maximum period to complete the course successfully should not exceed 4 years.

viii) The Principal / Head of the institution shall submit an Attendance Certificate of eligible candidates at the time of registration for examinations in each semester.

3.2 Schedule of Regular/Supplementary Examinations

Examinations shall be conducted as per the schedule approved by the Board of Examinations. Regular University examinations will be conducted at the end of each Semester. Supplementary examinations shall be conducted along with the end Semester University examinations. However, for ensuring the supplementary chances for failed students, University examinations of different subjects shall not be scheduled on the same date.

A student who failed in a subject/ subjects may be permitted to reappear in the end semester university examination.

3.3 Scheme of examination showing maximum marks and minimum marks

- Candidate who has secured a minimum of 50% marks in theory (for internal and university examinations separately) in a subject, shall be declared to have passed in that subject/course.
- A minimum of 40% marks shall be the pass mark in the Internal / College examination for foundation and Elective modules.
- A candidate who passed all the subjects from Semester I to semester IV and completed 80% of attendance in theory and 100% of Attendance in hospital training shall be declared to have passed the MHA Course

3.4 Papers in each year

Semester-wise distribution of papers with marks in internal assessment, End of Semester College Exam, and End of Semester University Exam for each Course / Subject is shown below.

SEMESTER I

Sl no	Course code	Course	Assessment Marks				
			Internal marks	**End-semester college examination**	**End-semester univ examination**	**Duration of examination**	**Total Marks**
	PPM1001	Principles & Practice of Management in Health Care	20	-	100	3 Hrs	120
	PHE-1002	Public health administration and epidemiology	20	-	100	3 Hrs	120
	RMB-1003	Research Methodology & Biostatistics	20	-	100	3 Hrs	120
	MAP-1004	Medical terminology and Basics of anatomy and physiology	20	-	100	3 Hrs	120
	SKD 1-1020	Skill development in Hospital Administration -1	80	-	-	-	80
	ELC-1-1017	Elective course	20	30		2 hrs	50
	FOD-1-1018	Foundation Course	20	30		2 hrs	50

SEMESTER II

Sl no	Course code	Course	Assessment Marks				
			Internal marks	**End-semester college examination**	**End-semester univ examination**	**Duration of examination**	**Total Marks**
	HPC-1005	Hospital planning and design of clinical services	20	-	100	3 Hrs	120
	AFH-1006	Accounting for Hospitals	20	-	100	3 Hrs	120
	HOB-1007	Human Resource Management & Organisational Behaviour	20	-	100	3 Hrs	120
	MEM-1008	Medical equipment and materials management	20	-	100	3 Hrs	120
	SKD - 2-1020	Skill development in hospital administration	80	-	-	-	80
	ELC 2-1018	Elective courses	20	30	-	2 hrs	50
	FOC-2-1019	Foundation course	20	30	-	2 hrs	50

SEMESTER III

Sl no	Course code	Course	Assessment Marks				
			Internal marks	**End-semester college examination**	**End-semester univ examination**	**Duration of examination**	**Total Marks**
	HMI-1009	Healthcare Marketing Management and Information System	20	-	100	3 Hrs	120
	OPR-1010	Operations research	20	-	100	3 Hrs	120
	HEF-1011	Health Economics & Finance	20	-	100	3 Hrs	120
	HSM-1012	Hospital supportive services and medical documentation	20	-	100	3 Hrs	120
	SKD 3-1020	Skill development in hospital administration	80	-	-	-	80
	ELC-3-1018	Elective courses	20	30		2 hrs	50
	FOD-3-1019	Foundation course	20	30		2 hrs	50

SEMESTER IV

Sl no	Course code	Course	Assessment Marks				
			Internal marks	End-semester college examination	End-semester univ examination	Duration of examination	Total Marks
	ELA - 1013	Ethical and Legal aspects of healthcare	20	-	100	3 Hrs	120
	QMP-1014	Quality Management and patient safety	20	-	100	3 Hrs	120
	ISM-1015	Hospital Innovations and Strategic Management	20	-	100	3 Hrs	120
	PRW - 1016	Research Project	100	-	100	15 min /student	200
	VIV - 1017	Viva Voce	-	-	100	10 min/ student	100
	SKD 4-1020	Skill development in hospital administration	80	-	-	-	80
	ELC-3-1018	Elective course	20	30		2 hrs.	50
	FOD-3-1019	Foundation course	20	30		2 hrs	50

Examinations for the Electives subjects and foundation courses shall be conducted as college exams and the marks obtained shall be sent to the University for Inclusion in the mark list.

Based on the performance, each student shall be awarded a final grade at the end of the semester for each course/subject. Absolute grading is used by converting the marks to grades, based on predetermined class intervals.

Grading of performance

UGC 10-point grading system is used with pass grade modified.

Percentage of marks obtained	Letter Grade	Performance	Grade Point
95.00-100	O	Outstanding	10
90-94.99%	A+	Excellent	9
80-89.99%	A	Very Good	8
70-79.99%	B+	Good	7
60-69.99%	B	Fair	6
50-59.99%	C	Average	5
Below 50.00	F	Fail	0
Absent	AB	Absent	0
For Electives – Pass will be P Grade (4 grade point) 40% and above			

The student obtaining Grade F or AB shall be considered failed and will be required to reappear in the examination after registering as a re-examination course.

Computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

a. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e.,

$$\textbf{SGPA } (Si) = \Sigma (Ci \times Gi) / \Sigma Ci$$

where Ci is the number of credits of the course and Gi is the grade point scored by the student in the course.

b. The CGPA is also calculated in the same manner considering all the courses undergone by a student over all the semesters of a programme, i.e.,

$$\textbf{CGPA} = \Sigma(Ci \times Si) / \Sigma Ci .$$

where Si is the SGPA of the particular semester and Ci is the total number of credits in that semester.

c. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

COMPUTATION OF SGPA AND CGPA

Example

COMPUTATION OF SGPA

Course Number	Credits	Letter Grade	Grade point	Credit point
1	5 (C1)	A	8 (G1)	5x8= 40
2	C(C2)	B+	7 (G2)	5x7=35
3	5(C3)	B	6 (G3)	5x6=30
4	5(C4)	C	5(G4)	5x5=25

SGPA	6.000	Σ (No. of Credits x Grade Points) …… Σ (No. of Credits)	(C1xG1+ C2xG2 + C3xG3) +C4xG4 …… (C1 + C2 + C3+C4)

COMPUTATION OF CGPA

	Semester I	Semester II	Semester III	Semester IV
Credit	**Cr (SI) 28**	**Cr(SII) 25**	**Cr(SIII) 20**	**Cr(SIV)30**
SGPA	**SGPA (I) 6.00**	**SGPA (II) 7.00**	**SGPA (III)6.500**	**SGPA IV 7.00**
Credit x SGPA	**28x6.00**	**25x7.00**	**20x6.500**	**30x7.00**

CGPA	7.205	Σ (No. of Credits x SGPA) …… Σ (No. of Credits)	C1xSGPA(I) +C2xSGPA(II) +C3xSGPA(III) +C4xSGPA(IV) …… CR(S I) + CR(S II) + CR(S III) + CR(S IV)

Transcript or Grade Card or Certificate:

A grade certificate shall be issued to all the registered students after every semester based on the grades earned. The grade certificate will display the course details (code, title, number of credits, grade secured) along with the SGPA of that semester and CGPA earned till that semester.

Separate Grade Card and transcript certificates shall be issued for the courses, which are not counted for the computation of SGPA/CGPA

Declaration of Pass

- A first class with distinction is awarded to all candidates who scored a **CGPA of 7.500 and above.**
- A First class is awarded to all candidates who scored a **CGPA of 6.000 to 7.499**
- A Second class is awarded to all candidates who scored a **CGPA of 5.000 to 5.999**
- CGPA shall be reflected as **failed** for a student in case of failure, till he/ she passes the subject.

First Class/ Distinction may be awarded irrespective of whether the candidate has appeared for regular/ supplementary examinations. Ranks shall be awarded based on Final CGPA and aggregate of marks.

3.5 Details of theory exams

Semester-wise distribution of marks in internal assessment, End Semester College Exam, and End Semester University Exam for each Course / Subject as shown in **Section 3.4** above.

3.6 Model question paper for each subject with question paper pattern

University Theory Question Paper Patterns

Type of Question	No	Mark	Total
Long Essay	2	20	40
Short essay	2	10	20
Short notes	8	5	40

(2026 Scheme)

QP Code: PPM1001 **Reg. No.…….**

First Semester MHA Degree Regular Examinations

Paper I – Principles and Practices of Management in Healthcare

Time: 3 Hours **Max Marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. Describe management functions at different organizational levels. Add a brief note on managerial skills and the organizational hierarchy.

2. Elaborate on the environmental factors involved in organizational planning.

Short Essays: **(2x10=20)**

3. Brief on the management by objectives with advantages and disadvantages.

4. Define decision making. Explain the various decision making techniques.

Short Notes: **(8x5=40)**

5. Steps in Controlling

6. Employee Morale

7. Manpower planning

8. Decentralization of authority

9. Types of plans

10. Contingency Approach

11. Time Management

12. Directing process

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(2026 Scheme)

QP Code: PHE 1002 **Reg. No…….**

First Semester MHA Degree Regular Examinations

PAPER II PUBLIC HEALTH ADMINISTRATION AND EPIDEMIOLOGY

Time: 3 Hours **Max Marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. What are the national health policies? Discuss the role of national health policies in achieving health for all millennium development goals.

2. Steps in the investigation of epidemics, Role of hospitals in control of epidemics

Short Essays: **(2x10=20)**

3. Briefly describe the classification of communicable diseases.

4. Fundamental and applied measures of disease frequency.

Short Notes: **(8x5=40)**

5. Critically evaluate the effectiveness of public health interventions aimed at reducing tobacco use, alcohol consumption, or substance abuse.

6. Surveillance

7. Bhore committee.

8. Rockefeller Foundation

9. Indian public health standards for Primary health centers

10. Fundamental measures of disease frequency

11. Evaluate the effectiveness of health education programs in promoting healthy behaviours and preventing chronic diseases

12. What is the difference between incidence and prevalence

****

(2026 Scheme)

QP Code: RMB 1003 **Reg. No.……**

First Semester MHA Degree Regular Examinations
Paper – Research Methodology and Biostatistics

Time: 3 Hours **Max Marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. Define Research. List the significance of research in various fields. Explain different types of research.

2. Discuss various steps of testing of hypothesis. In an anti-malaria campaign in a certain area, quinine was administered to 812 persons of a population of 3248. The number of fever cases is shown below.

Treatment	Fever	Non-fever
Quinine	20	792
Non-Quinine	220	2216

Discuss the usefulness of quinine in checking malaria.

Short Essays: **(2x10=20)**

3. What you mean by data analysis. Explain the process of inferences planning evaluation.
4. Define correlation. Mention different methods of measuring the correlation between the variables

Short Notes: **(8x5=40)**

5. Types of data.
6. General rules of tabulation..
7. Parametric and Non-parametric test .
8. Interpretation and Report Writing..
9. Estimation
10. ANOVA test
11. Normal distribution.
12. Sample size determination.


KERALA UNIVERSITY OF HEALTH SCIENCES
सर्वे भवन्तु सुखिनः

(2026 Scheme)

QP Code: MAP 1004 **Reg. No.…….**

Semester MHA Degree Regular Examinations

Paper – Medical Terminology and Basics of Anatomy and Physiology

Time: 3 Hours **Max Marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. Describe the anatomy and functions of cardiovascular system. Write in brief the types of blood group.

2. Describe the anatomy and functions of stomach. Discuss hereditary and congenital conditions associated with gastro-intestinal system..

Short Essays:

(2x10=20)

3. Describe spinal cord with its tracts using a proper diagram

4. Describe the anatomy and physiology of kidney

Short Notes: **(8x5=40)**

5. Lung volume and lung capacities
6. Composition and functions of CSF
7. Properties of cardiac muscle
8. Mention the types of cartilage
9. Describe the lymph nodes
10. Describe thyroid and pituitary gland
11. What are meanings of following suffixes –scopy, logy, itis, ectomy, pathy?
12. What are meanings of following terms- arthroscopy, angiography, cardiomegaly, tonsillectomy, radiology

(2026 Scheme)

QP Code: HPC 1005 **Register Number:**

Second Semester

Master of Hospital Administration Regular / Supplementary Degree Examination,

PAPER-I

HOSPITAL PLANNING AND DESIGN OF CLINICAL SERVICES

Time: 3 hrs **Max marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. "Well organised outpatient department will increase the goodwill of the Hospital." Comment on the statement.
2. "Sun Grace Hospital is a 500-bed facility offering a wide range of medical services, including emergency care, surgical procedures, and specialized treatments. Despite having some security measures in place, the hospital experienced incidents of violence, theft of medical supplies, and instances of unauthorized individuals gaining access to restricted areas." Analyse the case study and write down the steps to be taken, as a manager of the hospital, right from the planning stage onwards to prevent such untoward incidents.

Short Essay: **(2x10=20)**

3. Explain the indices for the measurement of hospital utilization.
4. Discuss the factors to be considered while organising a Urology department in a tertiary-level hospital.

Short Notes: **(8x5=40)**

5. Architects brief
6. Medical gas supply service
7. Discuss Disaster preparedness in a hospital.
8. Biomedical waste management with special reference to radioactive wastes
9. Briefly discuss the Physical planning of the Nuclear Medicine department.
10. Site selection process for setting up a hospital.
11. Classification of hospitals
12. Measuring community needs for new hospital.

****

(2026 Scheme)

QP Code:AFH1006 **Reg. No.…….**

Second Semester MHA Degree Regular Examinations

Paper II –ACCOUNTING FOR HOSPITALS

Time: 3 Hours Max Marks: 100

Answer all questions to the point neatly and legibly• Do not leave any blank pages between answers• Indicate the question number correctly for the answer in the margin space Answer all parts of a single question together• Leave sufficient space between answers. Draw table/diagrams/flow charts wherever necessary

Essays: (2x20=40)

1. From the following trial balance of Mr. Kumar prepare trading account, profit and loss account and balance sheet as on 31st march 2012.

Trial balance as on 31st march 2012

particulars	Debit amount	Credit amount
Capital	-	71000
Cash	3900	-
Purchases	41600	-
Sales	-	99300
Wages	10500	-
Power	4000	-
Salary	15000	-
Carriage outward	3200	-
Carriage inward	2000	-
Opening stock	5800	-
Building	40000	-
Plant and machinery	20000	-
Furniture	7500	-
Debtor	14500	-
Creditors	-	6300
General expenses	3000	-
Insurance	600	-
Drawings	5000	-
Total	176600	176600

Adjustments

- Stock on 31st march 2012 was RS.15000
- Outstanding salary Rs.2000
- Insurance prepaid Rs.250
- Depreciation building 10%
- Further bad debt Rs.500
- New provision 5% on debtors

2. Define Overheads. And also explain allocation and apportionment of overheads.

Short Essays: (2x10=20)

3. From the following particulars ascertain the balance that would appear the pass book as 31st march 2018
    - The bank balance as per cash book as on 1st march 2018 was Rs. 18500
    - Interest of Rs.1200 is debited only in the passbook
    - Bank charges debited in the passbook only amounted to Rs.150
    - Cheque issued but not cashed prior to 31st march 2018 amounted to Rs.1500
    - Interest on investment collected by the bank and credited in the passbook only amounted to Rs.1000
    - Cheque paid into the bank but not cleared before 31st march 2018 were Rs.2000
    - Direct deposit made by the customer in the bank account Rs.2000

4. Calculate breakeven units, breakeven sales in rupees, p/v ratio (profit volume ratio), and margin of safety. And also calculate new breakeven point if selling price is reduced by 10% from the following particulars;

Fixed cost	Rs.240000
Variable cost per unit	Rs.15
Selling price per unit	Rs.30
Number of units sold	30000

Short Notes: (8x5=40)

5. Receipt and payment account
6. Ratio analysis
7. Depreciation
8. Theory of double entry
9. Just in time
10. Maximum and minimum stock levels
11. Idle time and over time
12. Marginal costing

****

(2026 Scheme)

QP Code: HOB1007 **Reg. No.…….**

Second Semester MHA Degree Regular Examinations
Paper III – Human Resource Management &Organizational Behavior

Time: 3 Hours **Max Marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. Explain in detail about the recruitment and selection process in hospitals.
2. Define organizational development process and explain the strategies and techniques used in the process with suitable case illustrations from hospital management in Kerala.

3. Short Essays: **(2x10=20**

4. What are the sources of grievances. Explain the grievance handling procedure.
5. Explain the concept of stress at work. As a manager, what steps you will take to prevent and manage stress in hospital.

6. Short Notes: **(8x5=40)**

7. Write a note on any two modern techniques to employees' performance appraisal.
8. Factors influencing leadership.
9. Role of human resource managers in hospitals.
10. What are the sources of power.
11. Brief on collective bargaining techniques.
12. 10 Factors affecting organizational climate.
13. Brief on the green HRM concepts.
14. Challenges and opportunities of OB in Health Care.

****

(2026 Scheme)

QP Code: MEM 1008 **Reg. No.…….**

Second Semester MHA Degree Regular Examinations

Paper IV – Hospital Equipment and Materials Management

Time: 3 Hours **Max Marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. Elaborate on stores keeping in a 200-bed hospital. Describe its location, layout, man-power required, types and inventory management techniques you can use.
2. Department of imaging services is said to be highly equipment intensive – Discuss.

Short Essays: **(2x10=20)**

3. Why is just-in-time considered as one of the best methods of purchasing in hospitals? Discuss on different types of tender systems.
4. Discuss the process for ensuring preventive maintenance of equipment in a tertiary care hospital

Short Notes: **(8x5=40)**

5. Discuss on control of pilferage in hospital stores.
6. Major capital equipment is largely imported in India. Discuss the important processes and procedures that you will follow while initiating an international capital purchase.
7. What is ABC analysis? Discuss with examples.
8. The standardization and codification of materials in a hospital.
9. Calibration
10. Defibrillators
11. MRI PET Scan
12. Audiometer

****

(2026 Scheme)

QP Code: HMI- 1009 **Reg. No.…….**

Third Semester MHA Degree Regular Examinations

PAPER I
HEALTHCARE MARKETING MANAGEMENT AND INFORMATION SYSTEM

Time: 3 Hours **Max Marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. Identify and explain the opportunities and challenges faced by the hospital administrators of a corporate hospital.
2. Explain the hospital marketing information system in a 300 bedded hospital.

Short Essays: **(2x10=20)**

3. Discuss the possible pricing policies for new service of a hospital. What factors will you consider in formulating a pricing strategy?
4. Explain Office automation software.

Short Notes: **(8x5=40)**

5. Describe the scope of marketing research in healthcare.
6. Explain cloud computing in healthcare.
7. Discuss about diagnostic decision support system.
8. What are the functions of a hospital information system?
9. Explain psychological factors affecting consumer behavior.
10. 10 Elaborate advertising in health care.
11. What are the applications of computers in hospitals?
12. Discuss 7 Ps in service marketing.

****

QP Code: OPR 1010 **(2026 Scheme)** **Reg. No.:……**

MHA Degree Regular/Supplementary Examinations

Model Question

Operations Research

Time: 3 Hours **Max Marks: 100**

 Answer all questions to the point neatly and legibly - Do not leave any blank pages between answers -

Indicate the question number correctly for the answer in the margin space

 Answer all parts of a single question together • Leave sufficient space between answers

 Draw table/diagrams/flow charts wherever necessary • Ordinary calculator can be used

Essays: **(2x20=40)**

1. The following mortality rates have been observed for a certain type of light bulbs.

Week	1	2	3	4	5
Percent failing by the end of week	10	25	50	80	100

There are 1000 bulbs in use and it costs Rs.2 to replace an individual bulb, which has burnt out. If all the bulbs were replaced simultaneously, it would cost 50 paise per bulb. Find the average cost of group replacement policy.

2. For the project below, a) Identify the various paths. b) Identify the critical path c) What is the shortest completion time of project d) Compute path slack.

Activity	Preceding activities	Duration (days)
A	---	4
B	---	7
C	---	6
D	A, B	5
E	A, B	7
F	C, D, E	6
G	C, D, E	5

Short Essays: **(2x10=20)**

3 The service time of the OPD staff follows the exponential distribution with mean four minutes and patients arrive for service in a Poisson process at the rate of 10 patients per hour. Find the probability that a patient has to wait for service. What proportion of time do the OPD remain idle?

4. Obtain an initial basic feasible solution to the following transportation problem.

	$D1$	$D2$	$D3$	$D4$	Supplies
$S1$	20	25	28	31	200
$S2$	32	28	32	41	180
$S3$	18	35	24	32	110
Demands	150	40	180	170	

Short notes: **(8x5=40)**

5. Write the applications of Operations Research in healthcare management.
6. Outline the basic structure of a typical queuing system seen in hospitals.
7. How does Monte Carlo simulation come up with possible predictions of future scenarios?
8. Write down the steps involved in solving Assignment problem using Hungarian Method.
9. What insight does duality and sensitivity analysis give in Linear programming.
10. How do you deal with uncertainty in decision making?
11. Discuss the application of simulation in healthcare management.
12. What are the assumptions of sequencing in operation research?

(2026 SCHEME)

QP CODE: HEF 1011 **REG. NO…….**

THIRD SEMESTER MHA DEGREE REGULAR/ SUPPLEMENTARY EXAMINATIONS

PAPER III – HEALTH ECONOMICS AND FINANCE

Time: 3 Hours Max Marks: 100

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. Explain Demand analysis in Health care market.
2. Define working capital management and explain factors affecting working capital.

Short Essays: **(2x10=20)**

3. Explain cost-benefit analysis and cost effectiveness analysis.
4. Define leverage and explain its types.

Short Notes: **(8x5=40)**

5. Elasticity of supply.
6. Scope of Health economics.
7. Social determinants of Health policy.
8. Net Present Value Method.
9. Capital budgeting.
10. Cost of capital.
11. Functions of health care manager.
12. MM approach

****

2026 scheme

QP Code: HSM 1012 **Register Number:**

Third Semester Master of Hospital Administration Degree Examination, month<year>
PAPER- IV – HOSPITAL SUPPORTIVE SERVICES AND MEDICAL DOCUMENTATION

Time: 3 hrs **Max marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. "A well planned CSSD helps in infection control." Comment.
2. "RAG Hospital, a large tertiary care facility, is conducting a comprehensive review of its emergency preparedness protocols and risk management strategies." As a manager you shall analyse the case study and discuss the importance of conducting regular mock drills and emergency codes in a hospital setting. Outline the key objectives of these drills and codes and explain how they contribute to effective emergency preparedness and risk management.

Short Essay: **(2x10=20)**

3. Briefly explain the instances in which medical records are used as legal evidence.
4. What is the significance of indexing in medical records? Describe any four indexes used in indexing of patient records in a medical record department.

Short Notes: **(8x5=40)**

5. Comment on nursing administration.
6. Explain Mortuary services
7. Explain mental health record.
8. Discuss the functions of finance department in a hospital.
9. Briefly explain Fire safety in hospital.
10. Scope of hospital operations.
11. Patient safety in hospital.
12. Source oriented medical record (SOMR).

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(2026 Scheme)

QP Code: ELA 1013 **Reg. No.…….**

Fourth Semester MHA Degree Regular Examinations

Paper I Ethical and legal aspects of healthcare

Time: 3 Hours **Max Marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. Explain the salient features of the Consumer Protection Act 1986
2. What do you understand by the term unethical act. List the actions that come under this as per the medical code of ethics in India.

Short Essays: **(2x10=20)**

3. "A brought dead instance to the casualty" Write detailed steps and legal procedures to be carried out by the Hospital.
4. Recent amendments in the Medical Termination of Pregnancy Act, 1973.

Short Notes: **(8x5=40)**

5. Medical Termination of Pregnancy Act, 1971and its recent amendment
6. Euthanasia.
7. Contributory negligence.
8. malpractice and negligence.
9. Characteristics of torts
10. Types of consent
11. Provisions under the Bonus Act
12. Benefits of Gratuity Act 1972.

****

(2026 Scheme)

QP Code: QMP1014 **Reg. No.……**

Fourth Semester MHA Degree Regular Examinations

PAPER II – QUALITY MANAGEMENT AND PATIENT SAFETY

Time: 3 Hours **Max Marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. Discuss how Quality Management philosophies have impacted the delivery of healthcare services.
2. Explain the details about the different audits in a hospital for the evaluation of health care performance.

Short Essays: **(2x10=20)**

3. What are principles of TQM. Explain the seven tools of quality management
4. Discuss the disaster planning for a tertiary care hospital

Short Notes: **(8x5=40)**

5. Briefly explain International Patient Safety Goals.
6. Why is ISO 9000 important. Explain briefly.
7. Discuss on Donabedian model of quality management.
8. Use of control charts in healthcare.
9. Brief on near-miss & sentinel events.
10. 10 Explain Incident Reporting system.
11. Briefly explain hazards in hospitals.
12. Explain the barriers in TQM implementation.

****

(2026 Scheme)

QP Code: ISM 1015 **Reg. No…….**

Fourth Semester MHA Degree Regular Examinations

Paper III – Hospital Innovation and Strategic Management

Time: 3 Hours **Max Marks: 100**

- **Answer all questions to the point neatly and legibly**
- **Do not leave any blank pages between answers**
- **Indicate the question number correctly for the answer in the margin space**
- **Answer all parts of a single question together**
- **Leave sufficient space between answers**
- **Draw table/ diagrams/ flow charts wherever necessary**

Essays: **(2x20=40)**

1. Explain how you will identify corporate capability factors of different functional areas with examples.

2. Describe in detail the strategic management process in non-profit organisations.

Short Essays: **(2x10=20)**

3. Explain Innovation management. Briefly explain the areas of Innovation..

4. Explain Corporate Portfolio Analysis and its importance.

Short Notes: **(8x5=40)**

5. Dynamics of internal environment

6. Retrenchment strategies

7. Resource Allocation

8. Human Resource Accounting

9. Strategic evaluation

10. Principles of innovation

11. Role of Top management in Strategic Management

12. Behavioral implementation

****

3.7 Internal assessment component

Semester	Subjects	Total Internal Marks Max. Marks
I	Principles and Practices of Management Human Resource Management	20
	Public Health Administration and Epidemiology	20
	Research Methodology & Biostatistics	20
	Medical terminology and Basics of anatomy and physiology	20
	Skill development in Hospital administration	80
II	Hospital Planning and design of clinical Services	20
	Accounting for Hospitals	20
	Human resource management & organizational behaviour	20
	Medical Equipment and materials management	20
	Skill development in Hospital administration	80
III	Healthcare marketing management and information system	20
	Operations Research	20
	Hospital Economics & Finance	20
	Hospital Supportive Services and Medical Documentation	20
	Skill Development in Hospital administration	80
IV	Ethical and legal aspects of health care	20
	Quality management and Patient safety	20
	Hospital Innovations and Strategic Management	20
	Skill Development	80
	Research Project	100

The class average of Internal Marks of the students uploaded by an institution shall not be more than 75% (i.e. the average of internal mark of all the students shall not exceed 75% of Maximum internal marks).

The student has to pass in all mandatory modules placed within courses and the pass mark for each module is 50% (C Grade). The marks as per weightage will be included in the internal assessment and College / University Examinations as applicable. The elective modules should be selected at the commencement of the concerned semesters by the student/institution.

Project Defense and Viva Voce

Project Defense:

The student has to present their study and the viva will be conducted based on the study. Project presentation can be a maximum of 15 min and followed by project Defense viva. The evaluation will be by both internal and external examiners based on the criteria and is annexed.

Subject Viva Voce:

Subject viva will be based on any of the core subjects and marks will be awarded by both internal and external examiners based on the criteria and are annexed.

The maximum number of candidates for the practical examination should not exceed 20 per day. All the candidates in a particular year and of the same institution/batch shall be examined by the same set of examiners.

Details of practical/clinical practical exams.

As per the Scheme of Examinations

3.8 Number of examiners (Internal & External) and their qualifications

Two internal and one external examiner should jointly conduct the practical examination for each student. The examiner/evaluator for the Project Defense and viva voce examination can be Professor/ Associate professor/ faculty with a minimum of 5 years of teaching experience in the MHA course (core faculty qualification)

An evaluator for the answer script should be an Assistant Professor / minimum of 3 years of teaching experience or above with MHA concerned subject (as per the core faculty qualification mentioned in the faculty details) as mentioned in the regulation.

The other subjects can be evaluated by the teachers who are involved in teaching basic subjects (minimum of 3 years of teaching experience) and can be the evaluator for the program (basic staff) as mentioned in the regulation.

3.9 Details of viva:

Project Defense and Viva Voce

Project Defense:

The student has to present their study and the viva will be conducted based on the study. Project presentation can be a maximum of 15 min and followed by project Defense viva. The evaluation will be by both internal and external examiners based on the criteria and is annexed.

Subject Viva Voce:

Subject viva will be based on any of the core subjects and marks will be awarded by both internal and external examiners based on the criteria and are annexed.

The maximum number of candidates for the practical examination should not exceed 20 per day. All the candidates in a particular year and of the same institution/batch shall be examined by the same set of examiners.

4. INTERNSHIP

4.1 Eligibility for internship

Not applicable

4.2 Details of Internship Training

Not applicable

4.3 Model of Internship Mark lists

Not applicable

4.4 Extension rules

Not applicable

4.5 Details of training given

Not applicable

5. ANNEXURES

5.1 Check Lists for Monitoring: Log Book, Seminar Assessment etc. to be formulated by the curriculum committee of the concerned Institution

5.2 Template for Research Project Proposal

The students have to submit a brief intended of their study (format annexed) in the second semester, The proposal will be approved by the expert panel after successful completion of presentation in the college level. Once the proposal is approved students can complete their data collection and project work in the fourth semester.

KERALA UNIVERSITY OF HEALTH SCIENCE

(KUHS) THRISSUR, KERALA

PERFORMA FOR APPROVAL OF SUBJECT FOR THE RESEARCH PROJECT

Name Of the Student & Address	
Name Of the Institution	
Course Of Study	
Reg No:	
Date Of Admission to Course	
Title of The Topic:	
BRIEF RESUME OF THE INTENDED WORK **NEED FOR THE STUDY**	
REVIEW OF LITERATURE	

OBJECTIVES OF THE STUDY.

General objectives

Specific objectives

HYPOTHESIS

RESEARCH DESIGN AND METHODOLOGY

Population of the study

Primary Sources

Secondary Sources

METHOD OF COLLECTION OF DATA (Including sampling procedure if any)

INCLUSION CRITERIA:

EXCLUSION CRITERIA:

Sampling Frame

Sample Size:

Method of Sampling:

Measurement and scale:

Statistical tool for data analysis

Duration of the study:

• **DOES THE STUDY REQUIRE ANY INVESTIGATION OR INTERVENTIONS TO BE CONDUCTED ON PATIENTS OR OTHER HUMANS OR ANIMALS? IF SO, PLEASE DESCRIBE BRIEFLY.**
• **HAS ETHICAL CLEARANCE BEEN OBTAINED FROM YOUR INSTITUTION IN THE CASE OF ABOVE**
REFERENCES.
SIGNATURE OF THE CANDIDATE:
REMARKS OF THE GUIDE
NAME AND DESIGNATION OF GUIDE **SIGNATURE**
REMARKS OF THE HOD: **SIGNATURE**
PRINCIPAL **SIGNATURE**

5.3 Template for Research project

FORMAT OF MHA PROJECT REPORT

CHAPTER 1: INTRODUCTION

CHAPTER 2: REVIEW OF LITERATURE

CHAPTER 3: METHODOLOGY

- Problem statement/ Scope of the study
- Objectives of the study
- Hypothesis
- Theoretical & operational definitions
- Research setting

- Research Design
- Sample design
- Source of data
- Tools & techniques
- Pilot study
- Tool Validation
- Data processing & analysis
- Time budget

CHAPTER 4: ANALYSIS AND INTERPRETATION OF DATA

CHAPTER 5: DISCUSSION

CHAPTER 6: CONCLUSION

CHAPTER 7: STUDY LIMITATIONS & SUGGESTIONS
BIBLIOGRAPHY

APPENDIX

The details of the format to be followed for the Report are as follows:

The Report shall be typed on white paper, size 210 X 297 mm, 7 kg, bond, for the original type script and others shall be photocopied.

1. TYPING

- The typing shall be in standard letter size, double-spaced on one side of the paper only, using a black ribbon.

2. MARGIN

- The typed sheet shall have the margins: Left 35 mm, Right 20 mm, Bottom 20 mm.

3. BINDING

- The report shall be rexin bound.

4. LETTERING

- The lettering shall be inscribed, on the bound back and the front cover.
- The bound back shall contain the title and the name of the student in 3 mm size letters.

5. FRONT COVER

The front cover shall contain the following details:

- Top: The title in block capitals of 6 mm size letters, properly centered.
- Full name of the candidate in block capitals of 3 mm size letters, properly centered.
- Purpose of the work and University name in block letters properly centered
- Bottom: Name of the Institution, year of submission - all in block capitals of 3 mm size letters in separate lines with spacing and properly centered. (This is a standard format)

6. BLANK SHEET

- At the beginning and the end of the report two white blank sheets of 7 kg. The bond paper shall be provided one for the purpose of binding and another to be left blank.

7. TITLE SHEET

- The title sheet shall be the first typed sheet and shall follow immediately the blank sheet.

8. CONTENTS

- The contents shall indicate the title of Chapters, Sections and sub-sections etc., using the decimal notation with corresponding page numbers against them.

11. LIST OF TABLES

- The 'contents' shall be followed by a 'List of Tables' indicating the Table number, Table title and the corresponding page number. The Table number shall be in decimal notation indicating the Chapter number and the Table number in that Chapter.
- Any reference within the text shall be given by quoting the relevant number, e.g. Table 2.2.

12. LIST OF FIGURES

- The 'List of Figures' shall follow the 'List of Tables' indicating the Figure numbers, Figure titles and the corresponding page numbers. The Figure shall be in decimal notation indicating the Chapter number and the figure number in that Chapter. For e.g., 6.4 refers to Fig.4 in Chapter 6.
- Any reference within the text shall be given by quoting the relevant number, e.g. 'Fig. 6.4.'

13. ABBREVIATION /NOMENCLATURE

- The 'Nomenclature' follows the 'List of Figures' and contains the list of symbols used. They shall be arranged alphabetically in order of Latin letters, Greek letters, superscripts and subscripts. As far as possible generally accepted symbols shall be used. Symbols not available in typewriters shall be written in permanent black ink.

15. CHAPTER NUMBERING

- The Chapter shall be numbered in Arabic numerals, Section and sub-section of any chapter shall be in decimal notation. All chapters shall begin on a new page. The titles for chapters, sections, and sub-sections shall be in block capitals. The chapter number and title shall be properly centered at the top of the page and have three spaces between them.

16. INTRODUCTION TO THE PROJECT

- The first chapter will be introductory Chapter. These chapter shall highlight the importance of the investigation and also define the topic and scope of the work envisaged.

17. REVIEW OF LITERATURE

- It shall present a critical appraisal of the previous work done on the topic. The extend of emphasis on this chapter shall depend on the nature of the investigation.

18. WORK DONE

- The work carried out by the student shall be presented in one or more chapters depending on the type of work. A typical format will be a chapter each on Data Collection, Analysis of Data formations
- Each chapter may have several sections and sub-sections with suitable titles.
- Important and short derivations, and representative data in tables and Figures, shall be presented in these chapters. Information such as lengthy derivations, voluminous tables and a large number of figures shall be presented in the appendix.
- Figures and tables shall be on separate sheets and not inserted on the papers with running text. Depending on the size, figures and table shall be accommodated on sheets of size 210 x 297 mm 197 x 450 or 297 x 625 mm. If there are longer tables that cannot be accommodated on these sheets, there shall be a continuation table. Very large figures shall be placed in a pouch at the end of the report. All figures and tables included in the Appendices shall be accordingly mentioned in the text, Lettering on figures shall be uniform either in engineering letters or typed. Each figure should be self-sufficient to provide all the information. There must be a title for every figure and table.
- Mathematical portions of the text shall preferably be typed. Where it is not possible, ample space shall be left, and equations and symbols shall be inserted clearly in permanent black ink.

CONCLUDING CHAPTERS

19. DISCUSSION AND CONCLUSION

- This should include a thorough evaluation of the investigation carried out and shall bring out the contribution, if any. The discussion shall logically lead to certain conclusions and inferences. A suggested scheme of implementation should also be included.

20. REFERENCES

Bibliography shall follow the last chapter. If shall give a list of works (papers, books, etc.) APA style format shall be used in the bibliography.

For example: Journal:

Eg: Alibali,M.W.,Philips,K.M.,& Fisher,A.D (2009).Learning new problem- solving strategies leads to changes in problem representation, *cognitive development,24, 89-101*

Books:

Eg: Robert,T. (2013) Research methodology3rd edition. New York, Routledge.

Website:

Vikas.S(2020)A guide to solve geriatric problem, retrived from http://www.vikaskeralam.com

21. APPENDICES

Appendices will be numbered in Roman capitals. The appendices shall normally contain detailed or lengthy derivations, sample calculations, voluminous, large figures and calculations

A Study

On----------at

----------Hospital

Submitted to

Kerala University of Health Sciences, Thrissur

In partial fulfilment of the requirement for the Award of the Degree of
MASTER OF HOSPITAL ADMINISTRATION

For the academic session 2024-25

By

Reg.No.----------
Under the Guidance of
(Name of the Guide
Designation
College name

----------, Kerala, India

(Page 2)

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Under the Guidance of

(Name of the Guide

Designation

College Name & Address

----------, Kerala, India)

Examiner I **Examiner II** **Examiner III**

DECLARATION

I hereby declare that the Research project entitled " ----------", is an authentic record of the original work done by me under the guidance of ----------and further that no part of this work has been presented for any other degree or diploma earlier.

Place: **Signature of the student**

Name of the student

Date: **Reg.No.**

CERTIFICATE

This is to certify that ------- is a student of this institute. He/She has successfully completed the ------- Year Research Project on "---------- at ---------- Hospital," as partial fulfillment of the course MASTER OF HOSPITAL ADMINISTRATION affiliated to Kerala University of Health Sciences, Thrissur during the academic year ---------.

Head of the department **Project Guide**

Date: **Principal**

Place:

(Page 5)

(Copy of the certificate of the Hospital where the student did her/his project)

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Date: **Signature of the candidate,**

Place: **Name of the student**

ACKNOWLEDGEMENT

Name of the Student

Preface

Place: **Name**

Date: **Regn.No**

LIST OF ABBREVIATIONS USED

(Page 10&11)

EXECUTIVE SUMMARY (In 2 pages)

BACKGROUND OF THE STUDY

OBJECTIVE

METHODOLOGY

RESULT

CONCLUSION

KEY WORDS

TABLE OF CONTENTS

Chapters Number	Contents	Page

LIST OF TABLES

Sl.No.	Tables	Page Number

LIST OF FIGURES



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CHAPTER 1 Onwards

5.4 Project evaluation format

Kerala University of Health Sciences, Thrissur
Evaluation format – Research Project

Name of the examination:
QP Code:
Name of the candidate:
Register number: Date:
Title of the study:

Sl no	Criteria	Out of 10	Remarks
1	Title (title framing and clarity)		
2	Introduction & Objectives (Clear introduction and research objectives)		
3	Review of Literature (Relevance and comprehensiveness of the literature review)		
4	Methodology and research design (Appropriateness of research design and methodology)		
5	Analysis and Interpretation (Clarity and coherence of data analysis and soundness of interpretation)		
6	Discussion and Conclusion (Critical reflection on findings and implications Justification of conclusions and recommendations)		
7	Writing style (Grammar, spelling, and language proficiency Use of citations, referencing style)		
8	Ethical consideration (Protection of participants' rights and confidentiality		
9	Presentation (Clarity of verbal communication and articulation Engaging delivery style and audience interaction Effective use of visual aids (slides, props, etc))		
10	Knowledge Depth of knowledge and insights into the subject matter Ability to answer questions and address queries:		
	Total marks		

Evaluator's Name: [Insert Evaluator's Name]
Evaluator's Signature: [Insert Evaluator's Signature]
Date of Evaluation: [Insert Date]

Evaluator's Name: [Insert Evaluator's Name]
Evaluator's Signature: [Insert Evaluator's Signature]
Date of Evaluation: [Insert Date]

Evaluator's Name: [Insert Evaluator's Name]
Evaluator's Signature: [Insert Evaluator's Signature]
Date of Evaluation: [Insert Date]

5.5 Template for Mark List showing Maximum & Minimum

